



October 29, 2018

Reference No. 11135250-11

Mr. Mike Bratcher
New Mexico Oil Conservation Division
Energy, Minerals, and Natural Resources Department
District 2
811 S. First Street
Artesia, New Mexico 88210

Mr. Ryan Mann
New Mexico State Land Office
1001 S. Atkinson
Roswell, New Mexico 88203

Dear Mr. Bratcher and Mr. Mann:

**Re: Closure Request
James Ranch Compressor Station (2RP-4679)
ETC Texas Pipeline, Ltd
Site Location: Unit E, Sec. 16, T 23-S, R 31-E
(Lat 32.30538N°, Long -103.78808W°)
Eddy County, New Mexico**

On behalf of ETC Texas Pipeline, Ltd. (formerly ETC Field Services LLC), GHD Services, Inc. is requesting that no further action status be granted for the James Ranch Compressor Station (hereafter referred to as the "Site").

In an Assessment Report dated May 26, 2018 (attached) GHD recommended the following scope items be completed in order to achieve no further action:

- Micro-Blaze® will be applied to the pasture area to remediate any residual petroleum hydrocarbon 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 including carbon dioxide, water, and trace salts.

The work scope was approved by Mr. Bratcher with the New Mexico Oil Conservation Division and Mr. Mann of the New Mexico State Land Office on March 27, 2018. The application of Micro-Blaze® was completed on August 23, 2018 and is documented in the attached completion photos and final C-141 for the Site; therefore, No Further Action status is being requested for the Site.



Your timely response to this requested is greatly appreciated. Should you have any questions, or require additional information regarding this submittal, please feel free to contact myself or Alan Brandon at (505) 884-0672.

Sincerely,

GHD

A handwritten signature in blue ink, appearing to read "Christine Mathews". The signature is fluid and cursive, with the first name "Christine" written in a larger, more prominent script than the last name "Mathews".

Christine Mathews

Project Manager

CM/ji/1

Encl.

A handwritten signature in blue ink, appearing to read "Alan Brandon". The signature is written in a cursive style, with the first name "Alan" and last name "Brandon" clearly distinguishable.

Alan Brandon

Senior Project Manager

Appendices

Appendix A

Photo Log



Photo 1 - Micro-Blaze® application



Site Photographs



Photo 2 - Micro-Blaze® application



Site Photographs

Appendix B

Form C-141

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural
Resources Department
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party ETC Texas Pipeline, Ltd (Formerly ETC Field Services LLC)	OGRID
Contact Name Dean Ericson	Contact Telephone (817) 302-9758
Contact email Dean.Ericson@energyTransfer.com	Incident # (assigned by OCD) 2RP-4679
Contact mailing address 600 N. Marienfeld, Suite 700, Midland, TX 79701	

Location of Release Source

Latitude 32.30538 Longitude -103.78808
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: James Ranch	Site Type: Compressor Station
Date Release Discovered: 12/15/2017	API# (if applicable)

Unit Letter	Section	Township	Range	County
E	16	23S	31E	Eddy

Surface Owner: ☒ State ☐ Federal ☐ Tribal ☐ Private (Name: _____)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 13.7 mix of produced water and condensate	Volume Recovered (bbls) 0
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<input checked="" type="checkbox"/> Condensate	Volume Released (bbls) 13.7 mix of produced water and condensate	Volume Recovered (bbls) 0
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: Pipeline Relief Valve (PRV) relieved due to low fuel header pressure. Compressor Station fuel froze (ie JT Effect) causing the compressor to go off-line. Compressor placed back on-line. Area of release was delineated and found to be approximately 412'x47'. A previously submitted assessment report and remedial plan (attached) was submitted to the NMOCD and NMSLO and approved for remediation of the area with Micro-Blaze as of March 27, 2018. Subsequent application of Micro-Blaze was completed and no further action is now being requested.

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Although not considered a major release by current 19.15.29.7 rules, notification was give via phone and email to Olivia Yu on 12/15/17 at 7:49pm	

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

- ☒ The source of the release has been stopped.
- ☒ The impacted area has been secured to protect human health and the environment.
- ☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
- ☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Dean Ericson Title: Sr. Environmental Specialist

Signature:  Date: 10/23/2018

email: Dean.ericson@energytransfer.com Telephone: (817) 302-9758

OCD Only

Received by: _____ Date: _____

Incident ID	
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	Estimated 110 (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: *Each of the following items must be included in the report.*

- ☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☒ Field data
- ☒ Data table of soil contaminant concentration data
- ☒ Depth to water determination
- ☒ Determination of water sources and significant watercourses within 1/2-mile of the lateral extents of the release
- ☐ Boring or excavation logs
- ☒ Photographs including date and GIS information
- ☒ Topographic/Aerial maps
- ☒ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

Incident ID	
District RP	
Facility ID	
Application ID	

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Printed Name: Dean Ericson Title: Sr. Environmental Specialist

Signature:  Date: 10/23/2018

email: Dean.ericson@energytransfer.com Telephone: (817) 302-9758

OCD Only

Received by: _____ Date: _____

Incident ID	
District RP	
Facility ID	
Application ID	

Remediation Plan

Remediation Plan Checklist: *Each of the following items must be included in the plan.*

- ☒ Detailed description of proposed remediation technique
- ☒ Scaled sitemap with GPS coordinates showing delineation points
- ☒ Estimated volume of material to be remediated
- ☒ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☒ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: *Each of the following items must be confirmed as part of any request for deferral of remediation.*

- ☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- ☐ Extents of contamination must be fully delineated.
- ☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Dean Ericson Title: Sr. Environmental Specialist

Signature:  Date: 10/23/2018

email: Dean.ericson@energytransfer.com Telephone: (817) 302-9758

OCD Only

Received by: _____ Date: _____

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: _____ Date: _____

Incident ID	
District RP	
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: *Each of the following items must be included in the closure report.*

- ☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Dean Ericson Title: Sr. Environmental Specialist

Signature:  Date: 10/23/2018

email: Dean.ericson@energytransfer.com Telephone: (817) 302-9758

OCD Only

Received by: _____ Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

Appendix C Assessment Report



March 26, 2018

Reference No. 11135250-11

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

Dear Mr. Ericson:

**Re: Site Assessment Summary and Remediation Work Plan
James Ranch Compressor Station
2RP-4679
ETC Field Services LLC
Site Location: Unit E, Sec. 16, T 23-S, R 31-E
(Lat 32.30538N°, Long -103.78808W°)
Eddy County, New Mexico**

GHD Services, Inc. (GHD) is pleased to present this summary of assessment activities and recommendations for remediation for the above referenced site to ETC Field Services, LLC (ETC). The James Ranch Compressor Station (hereafter referred to as the "Site") is located within Unit E, Section 16, Township 23 South, Range 31 East, in Eddy County, New Mexico (see Figure 1). The site is owned by the New Mexico State Land Office (NMSLO).

On December 18, 2017, a release of approximately 13.7 barrels of water/condensate was reported to the State of New Mexico Oil Conservation Division (NMOCD) and the NMSLO via Form C-141. A pipeline relief valve failed due to low fuel header pressure. Release number 2RP-4679 was assigned by NMOCD for this event. The affected pad area was scraped with earth moving equipment to an approximate depth of 1 foot and the soils stockpiled on site.

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 110 ft. below ground surface (bgs). This is based on a water well located approximately 1.1 mile west-south west of the Site (see Attachment A, Water Well Reports for depth to water). Additionally, there are no wellhead protection areas or surface water bodies within 1,000 feet (ft.) of the Site. Therefore, the preliminary total ranking score is 0 (see Table below).

Based on this score, the applicable NMOCD Site specific Recommended Remediation Action Limits (RRALs) are defined as follows:



New Mexico Oil Conservation Division Site Assessment	
Ranking Criteria	Score
Depth to Ground Water (>100 ft. bgs)	0
Wellhead Protection Area (> 1000 ft. from water source, > 200 ft. from domestic source)	0
Distance to Surface Body Water (>1000 ft.)	0
Ranking Criteria Total Score	0*
Notes:	
* Because the ranking criteria total score is 0, NMOCD established RRALs are 10 mg/kg for benzene, 50 mg/kg for total BTEX, 5,000 mg/kg for total TPH and 600 ppm for chlorides ¹ .	
¹ NMOCD Guidelines for Remediation of Leaks, Spills and Releases, August 13, 1993 and recent discussions with Mr. Jim Griswold with the NMOCD.	

2. Assessment Activities

Ms. Amber Groves with the NMSLO, in an email communication dated December 18, 2017, granted permission to begin remediation activities before a NMSLO issued Right of Entry permit had been obtained. ETC initiated remediation activities within the pad area that included scraping and stockpiling stained soil. GHD submitted an application for a Right of Entry permit on January 9, 2018.

GHD personnel performed limited soil sampling at the site on January 5, 2018. 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 analyses for petroleum hydrocarbons and chloride (see Figure 2 for locations). Eleven soil samples were collected from 10 hand augured locations (HA-1 through HA-10). Samples were collected from a depth of 6 inches at all of the locations, and a sample was also collected from a depth of one foot in HA-1. The samples were submitted to Hall Environmental Analysis Laboratory located in Albuquerque, New Mexico. The samples were analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method 8021, total petroleum hydrocarbons (TPH) by EPA Method 8015, and chloride by EPA 300.0 analysis.

Toluene and ethylbenzene were detected in sample HA-1 6" at a concentration of 3.5 milligrams per kilogram (mg/kg) and xylenes were detected in this sample at a concentration of 20 mg/kg. BTEX constituents were not detected above the laboratory reporting limits (LRLs) in the remainder of the samples. Total TPH concentrations ranged from below LRLs to 3,270 mg/kg, and chloride concentrations ranged from below the LRL to 460 mg/kg. The laboratory report is included in Appendix B and the results are summarized on Figure 2 and in Table 1.

The only sample that contained concentrations above the LRLs was collected from HA-1 at a depth of 6 inches. The sample collected at a depth of one foot from HA-1 did not contain any of the analytes above the LRLs. None of the detected concentrations exceeded the RRALs.



3. Summary and Recommendations

Soil samples were collected from the release area within the pad and from the adjoining pasture (see Figure 2) and submitted for laboratory analyses. Based on the laboratory results, the vertical and horizontal extent of petroleum hydrocarbons and chloride impacted soil has been assessed to below the RRALs in both areas.

Based on the results of the assessment activities, GHD proposes the following remedial action:

- Micro-Blaze® will be applied to the pasture area to remediate any residual petroleum hydrocarbon 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 including carbon dioxide, water, and trace salts.

Following completion of the above activities, a request for no further action will be submitted to the NMOCD 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

A handwritten signature in black ink that reads "Alan Brandon".

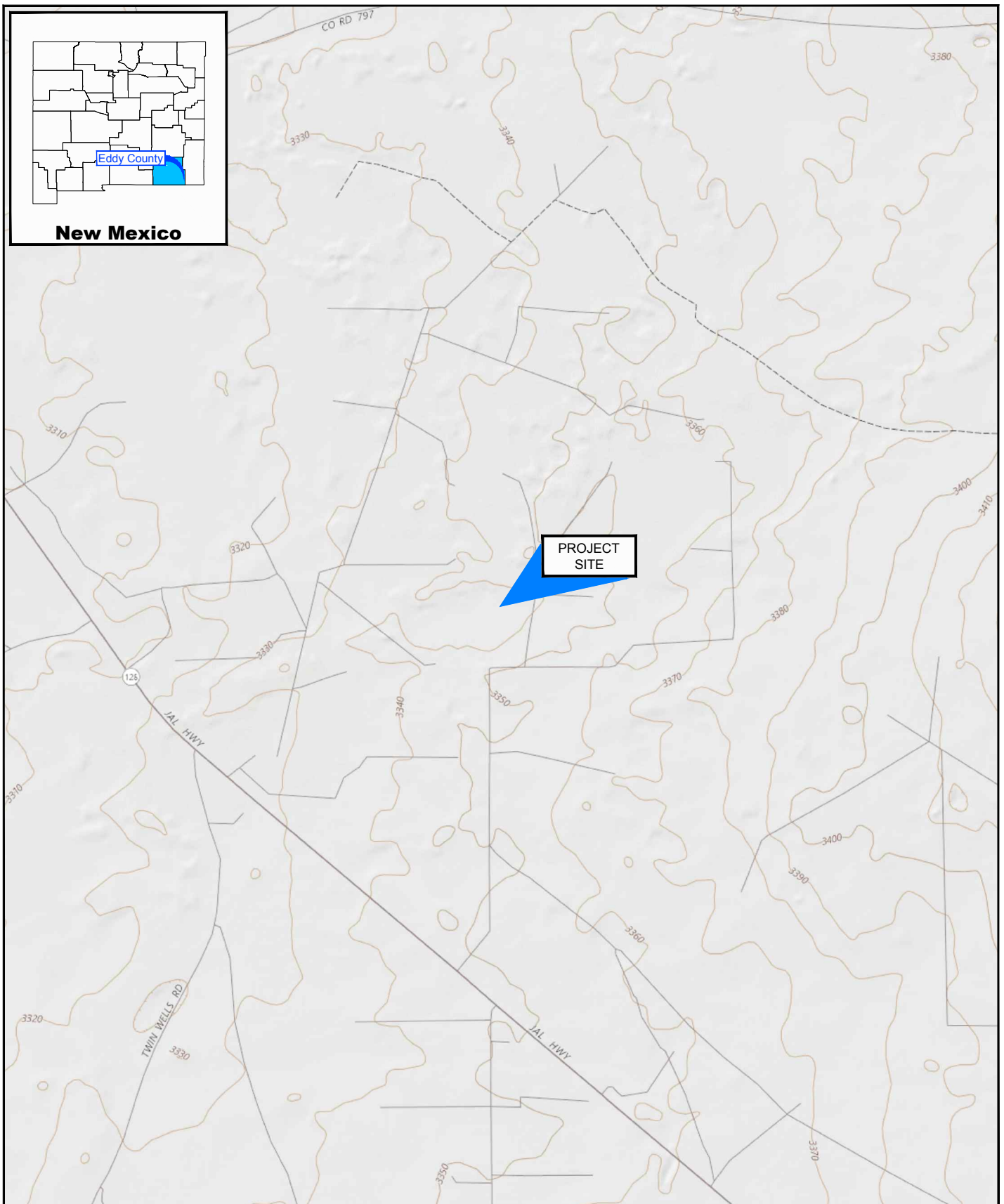
Alan Brandon
Senior Project Manager

AB/md/1

Encl.

A handwritten signature in blue ink that reads "Jeffrey Walker".

Jeffrey Walker
Senior Project Manager



Source: USGS 7.5 Minute Quad "Los Medanos and Bootleg Ridge, New Mexico"

Lat/Long: 32.304726° North, 103.790291° West

0 1000 2000ft

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



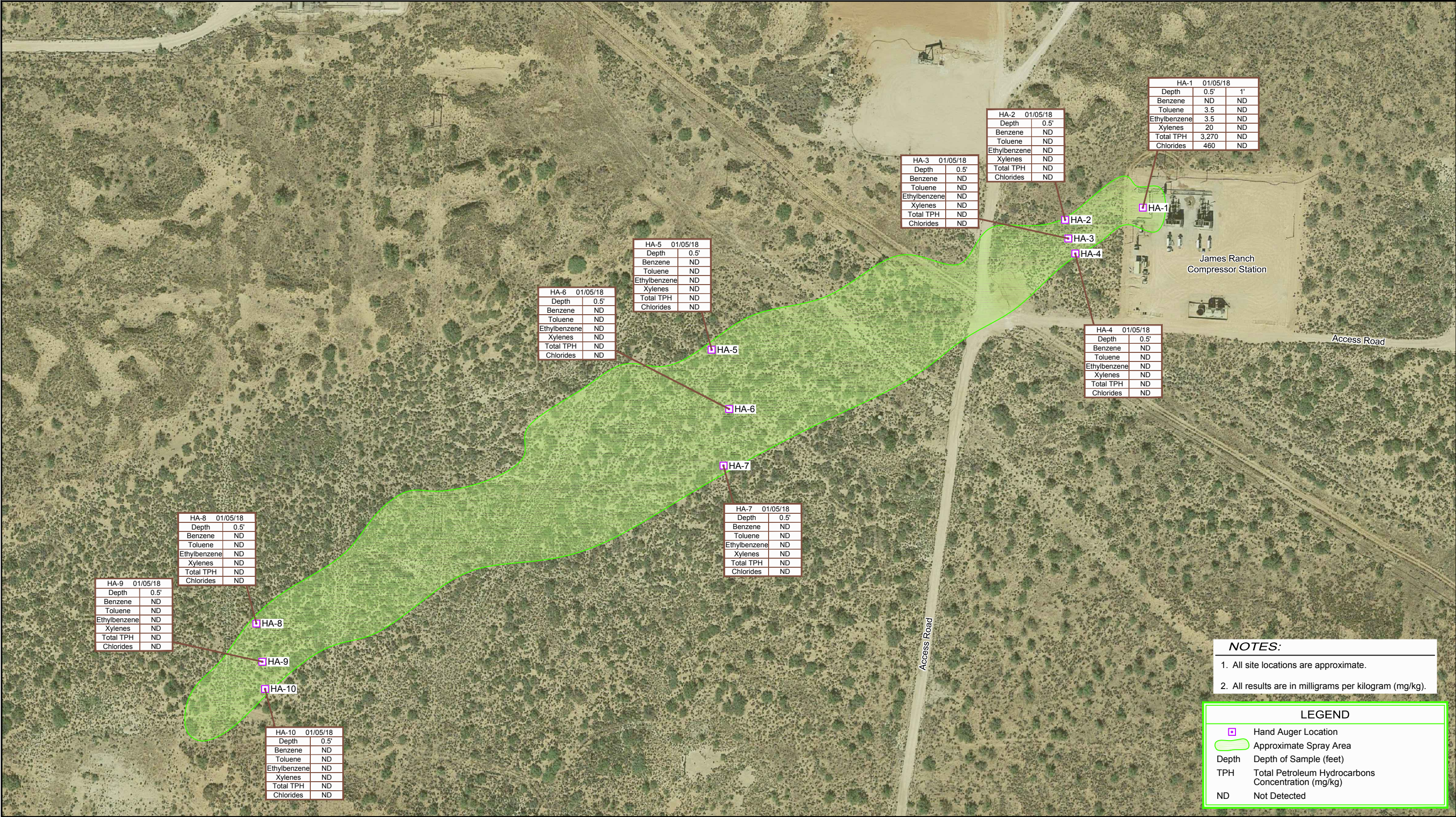
ETC FIELD SERVICES, LLC
EDDY COUNTY, NEW MEXICO
JAMES RANCH COMPRESSOR STATION

11135250-11

Feb 1, 2018

SITE LOCATION MAP

FIGURE 1



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

Lat/Long: 32.304726° North, 103.790291° West

075150ft

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

ETC FIELD SERVICES, LLC
EDDY COUNTY, NEW MEXICO
JAMES RANCH COMPRESSOR STATION

11135250-11

Feb 26, 2018

SOIL SAMPLE LOCATION

FIGURE 2

Table 1

ETC Field Services LLC - James Ranch Compressor Station
Section 16, Township 23 South, Range 31 East
Eddy County, New Mexico
Soil Analytical Results Summary

Sample ID	Date	Sample Depth	Chlorides	Benzene	Toluene	Ethylbenzene	Xylenes	Total BTEX	TPH GRO (C6-C10)	TPH DRO (C10-C28)	TPH EXT DRO (C28-C36)	Total TPH GRO/DRO
		(ft.)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
NMOCD Remediation Action Levels			600	10	NE	NE	NE	50	NE	NE	NE	5,000
	ASSESSMENT SOIL SAMPLES											
S-11135250-11-010518-MG-HA-1-6"	1/5/2018	0.5	460	<0.23	3.5	3.5	20	27	420	2,100	750	3,270
S-11135250-11-010518-MG-HA-1-12"	1/5/2018	1	<30	<0.023	<0.046	<0.046	<0.092	<0.207	<4.6	<10	<51	<65.6
S-11135250-11-010518-MG-HA-2-6"	1/5/2018	0.5	<30	<0.024	<0.048	<0.048	<0.097	<0.217	<4.8	<9.5	<48	<62.3
S-11135250-11-010518-MG-HA-3-6"	1/5/2018	0.5	<30	<0.025	<0.050	<0.050	<0.099	<0.224	<5.0	<9.7	<48	<62.7
S-11135250-11-010518-MG-HA-4-6"	1/5/2018	0.5	<30	<0.023	<0.047	<0.047	<0.093	<0.210	<4.7	<9.9	<49	<63.6
S-11135250-11-010518-MG-HA-5-6"	1/5/2018	0.5	<30	<0.025	<0.050	<0.050	<0.099	<0.224	<5.0	<9.2	<46	<60.2
S-11135250-11-010518-MG-HA-6-6"	1/5/2018	0.5	<30	<0.023	<0.046	<0.046	<0.092	<0.207	<4.6	<9.4	<47	<61.0
S-11135250-11-010518-MG-HA-7-6"	1/5/2018	0.5	<30	<0.024	<0.047	<0.047	<0.094	<0.212	<4.7	<9.1	<46	<59.8
S-11135250-11-010518-MG-HA-8-6"	1/5/2018	0.5	<30	<0.024	<0.048	<0.048	<0.096	<0.216	<4.8	<9.7	<48	<62.5
S-11135250-11-010518-MG-HA-9-6"	1/5/2018	0.5	<30	<0.024	<0.049	<0.049	<0.097	<0.219	<4.9	<9.4	<47	<61.3
S-11135250-11-010518-MG-HA-10-6"	1/5/2018	0.5	<30	<0.024	<0.048	<0.048	<0.095	<0.215	<4.8	<9.5	<48	<62.3

Note:

Concentrations in yellow exceed the NMOCD Remediation Action Level

NE = Not Established

mg/Kg = milligrams per Kilogram

TPH = Total Petroleum Hydrocarbons

GRO = Gasoline Range Organics

DRO = Diesel Range Organics

MRO = Motor Oil Range Organics

NMOCD = New Mexico Oil Conservation Division

Attachment A Water Well Reports



USGS Home
Contact USGS
Search USGS

National Water Information System: Web Interface

[USGS Water Resources](#)

Data Category: Geographic Area:

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 =

- 321809103481801

Minimum number of levels = 1

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

USGS 321809103481801 23S.31E.17.31141

Eddy County, New Mexico

Latitude 32°18'11.3", Longitude 103°48'23.4" NAD83

Land-surface elevation 3,326.00 feet above NGVD29

The depth of the well is 354 feet below land surface.

This well is completed in the Rustler Formation (312RSLR) local aquifer.

Output formats

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

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurment
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
1959-02-04		D	110.84			2	P		U	
1987-10-15		D	111.20			2			U	
1992-11-04		D	109.68			2			S	
2013-01-16	16:30 MST	m	128.64			2	R		S	USGS

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level date-time accuracy	m	Date is accurate to the Minute
Water-level accuracy	2	Water level accuracy to nearest hundredth of a foot
Status		The reported water-level measurement represents a static level
Status	P	Site was being pumped.
Status	R	Site had been pumped recently.
Method of measurement	S	Steel-tape measurement.
Method of measurement	U	Unknown method.
Measuring agency		Not determined
Measuring agency	USGS	U.S. Geological Survey
Source of measurement	S	Measured by personnel of reporting agency.
Source of measurement	U	Source is unknown.
Water-level approval status	A	Approved for publication -- Processing and review completed.

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Title: Groundwater for USA: Water Levels

URL: <https://nwis.waterdata.usgs.gov/nwis/gwlevels?>

Page Contact Information: [USGS Water Data Support Team](#)

Page Last Modified: 2017-12-18 10:11:14 EST

0.74 0.66 nadww01



Attachment B

Certified Laboratory Reports



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

January 15, 2018

Bernie Bockisch

GHD

6121 Indian School Road, NE #200

Albuquerque, NM 87110

TEL: (505) 884-0672

FAX

RE: James Ranch

OrderNo.: 1801310

Dear Bernie Bockisch:

Hall Environmental Analysis Laboratory received 11 sample(s) on 1/6/2018 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order: 1801310

Date Reported: 1/15/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Project: James Ranch

Lab Order: 1801310

Lab ID: 1801310-001

Collection Date: 1/5/2018 10:20:00 AM

Client Sample ID: S-11135250-11-010518-MG-HA-1-6"

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	460	30		mg/Kg	20	1/14/2018 9:41:41 PM	36012
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	2100	94		mg/Kg	10	1/10/2018 12:45:32 PM	35932
Motor Oil Range Organics (MRO)	750	470		mg/Kg	10	1/10/2018 12:45:32 PM	35932
Surr: DNOP	0	70-130	S	%Rec	10	1/10/2018 12:45:32 PM	35932
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	420	47		mg/Kg	10	1/10/2018 12:45:11 PM	35910
Surr: BFB	265	15-316		%Rec	10	1/10/2018 12:45:11 PM	35910
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.23		mg/Kg	10	1/10/2018 12:45:11 PM	35910
Toluene	3.5	0.47		mg/Kg	10	1/10/2018 12:45:11 PM	35910
Ethylbenzene	3.5	0.47		mg/Kg	10	1/10/2018 12:45:11 PM	35910
Xylenes, Total	20	0.93		mg/Kg	10	1/10/2018 12:45:11 PM	35910
Surr: 4-Bromofluorobenzene	132	80-120	S	%Rec	10	1/10/2018 12:45:11 PM	35910

Lab ID: 1801310-002

Collection Date: 1/5/2018 10:22:00 AM

Client Sample ID: S-11135250-11-010518-MG-HA-1-12"

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	30		mg/Kg	20	1/14/2018 9:54:06 PM	36012
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	1/10/2018 1:09:49 PM	35932
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	1/10/2018 1:09:49 PM	35932
Surr: DNOP	104	70-130		%Rec	1	1/10/2018 1:09:49 PM	35932
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	1/10/2018 1:56:46 PM	35910
Surr: BFB	91.6	15-316		%Rec	1	1/10/2018 1:56:46 PM	35910
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	1/10/2018 1:56:46 PM	35910
Toluene	ND	0.046		mg/Kg	1	1/10/2018 1:56:46 PM	35910
Ethylbenzene	ND	0.046		mg/Kg	1	1/10/2018 1:56:46 PM	35910
Xylenes, Total	ND	0.092		mg/Kg	1	1/10/2018 1:56:46 PM	35910
Surr: 4-Bromofluorobenzene	112	80-120		%Rec	1	1/10/2018 1:56:46 PM	35910

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order: 1801310

Date Reported: 1/15/2018

CLIENT: GHD
Project: James Ranch

Lab Order: 1801310

Lab ID: 1801310-003

Collection Date: 1/5/2018 10:30:00 AM

Client Sample ID: S-11135250-11-010518-MG-HA-2-6"

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	30		mg/Kg	20	1/14/2018 10:31:21 PM	36012
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	1/10/2018 1:34:12 PM	35932
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	1/10/2018 1:34:12 PM	35932
Surr: DNOP	103	70-130		%Rec	1	1/10/2018 1:34:12 PM	35932
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/10/2018 3:08:18 PM	35910
Surr: BFB	90.8	15-316		%Rec	1	1/10/2018 3:08:18 PM	35910
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	1/10/2018 3:08:18 PM	35910
Toluene	ND	0.048		mg/Kg	1	1/10/2018 3:08:18 PM	35910
Ethylbenzene	ND	0.048		mg/Kg	1	1/10/2018 3:08:18 PM	35910
Xylenes, Total	ND	0.097		mg/Kg	1	1/10/2018 3:08:18 PM	35910
Surr: 4-Bromofluorobenzene	114	80-120		%Rec	1	1/10/2018 3:08:18 PM	35910

Lab ID: 1801310-004

Collection Date: 1/5/2018 10:32:00 AM

Client Sample ID: S-11135250-11-010518-MG-HA-3-6"

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	30		mg/Kg	20	1/14/2018 11:08:35 PM	36012
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	1/10/2018 1:58:25 PM	35932
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	1/10/2018 1:58:25 PM	35932
Surr: DNOP	102	70-130		%Rec	1	1/10/2018 1:58:25 PM	35932
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	1/10/2018 3:32:01 PM	35910
Surr: BFB	90.1	15-316		%Rec	1	1/10/2018 3:32:01 PM	35910
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	1/10/2018 3:32:01 PM	35910
Toluene	ND	0.050		mg/Kg	1	1/10/2018 3:32:01 PM	35910
Ethylbenzene	ND	0.050		mg/Kg	1	1/10/2018 3:32:01 PM	35910
Xylenes, Total	ND	0.099		mg/Kg	1	1/10/2018 3:32:01 PM	35910
Surr: 4-Bromofluorobenzene	111	80-120		%Rec	1	1/10/2018 3:32:01 PM	35910

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

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

Analytical Report

Lab Order: 1801310

Date Reported: 1/15/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Project: James Ranch

Lab Order: 1801310

Lab ID: 1801310-005

Collection Date: 1/5/2018 10:35:00 AM

Client Sample ID: S-11135250-11-010518-MG-HA-4-6"

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	30		mg/Kg	20	1/14/2018 11:20:59 PM	36012
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	1/10/2018 2:22:51 PM	35932
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/10/2018 2:22:51 PM	35932
Surr: DNOP	100	70-130		%Rec	1	1/10/2018 2:22:51 PM	35932
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	1/10/2018 3:55:55 PM	35910
Surr: BFB	89.4	15-316		%Rec	1	1/10/2018 3:55:55 PM	35910
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	1/10/2018 3:55:55 PM	35910
Toluene	ND	0.047		mg/Kg	1	1/10/2018 3:55:55 PM	35910
Ethylbenzene	ND	0.047		mg/Kg	1	1/10/2018 3:55:55 PM	35910
Xylenes, Total	ND	0.093		mg/Kg	1	1/10/2018 3:55:55 PM	35910
Surr: 4-Bromofluorobenzene	110	80-120		%Rec	1	1/10/2018 3:55:55 PM	35910

Lab ID: 1801310-006

Collection Date: 1/5/2018 10:50:00 AM

Client Sample ID: S-11135250-11-010518-MG-HA-5-6"

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	30		mg/Kg	20	1/14/2018 11:33:24 PM	36012
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	1/10/2018 2:47:07 PM	35932
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	1/10/2018 2:47:07 PM	35932
Surr: DNOP	90.6	70-130		%Rec	1	1/10/2018 2:47:07 PM	35932
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	1/10/2018 4:19:47 PM	35910
Surr: BFB	90.5	15-316		%Rec	1	1/10/2018 4:19:47 PM	35910
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	1/10/2018 4:19:47 PM	35910
Toluene	ND	0.050		mg/Kg	1	1/10/2018 4:19:47 PM	35910
Ethylbenzene	ND	0.050		mg/Kg	1	1/10/2018 4:19:47 PM	35910
Xylenes, Total	ND	0.099		mg/Kg	1	1/10/2018 4:19:47 PM	35910
Surr: 4-Bromofluorobenzene	110	80-120		%Rec	1	1/10/2018 4:19:47 PM	35910

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

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

Analytical Report

Lab Order: 1801310

Date Reported: 1/15/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Project: James Ranch

Lab Order: 1801310

Lab ID: 1801310-007

Collection Date: 1/5/2018 10:52:00 AM

Client Sample ID: S-11135250-11-010518-MG-HA-6-6"

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	30		mg/Kg	20	1/14/2018 11:45:49 PM	36012
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	1/10/2018 3:11:40 PM	35932
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	1/10/2018 3:11:40 PM	35932
Surr: DNOP	97.2	70-130		%Rec	1	1/10/2018 3:11:40 PM	35932
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	1/10/2018 4:43:30 PM	35910
Surr: BFB	89.8	15-316		%Rec	1	1/10/2018 4:43:30 PM	35910
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	1/10/2018 4:43:30 PM	35910
Toluene	ND	0.046		mg/Kg	1	1/10/2018 4:43:30 PM	35910
Ethylbenzene	ND	0.046		mg/Kg	1	1/10/2018 4:43:30 PM	35910
Xylenes, Total	ND	0.092		mg/Kg	1	1/10/2018 4:43:30 PM	35910
Surr: 4-Bromofluorobenzene	109	80-120		%Rec	1	1/10/2018 4:43:30 PM	35910

Lab ID: 1801310-008

Collection Date: 1/5/2018 10:55:00 AM

Client Sample ID: S-11135250-11-010518-MG-HA-7-6"

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	30		mg/Kg	20	1/14/2018 11:58:14 PM	36012
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	1/10/2018 3:35:50 PM	35932
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	1/10/2018 3:35:50 PM	35932
Surr: DNOP	98.3	70-130		%Rec	1	1/10/2018 3:35:50 PM	35932
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	1/10/2018 5:07:24 PM	35910
Surr: BFB	90.8	15-316		%Rec	1	1/10/2018 5:07:24 PM	35910
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	1/10/2018 5:07:24 PM	35910
Toluene	ND	0.047		mg/Kg	1	1/10/2018 5:07:24 PM	35910
Ethylbenzene	ND	0.047		mg/Kg	1	1/10/2018 5:07:24 PM	35910
Xylenes, Total	ND	0.094		mg/Kg	1	1/10/2018 5:07:24 PM	35910
Surr: 4-Bromofluorobenzene	110	80-120		%Rec	1	1/10/2018 5:07:24 PM	35910

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

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

Analytical Report

Lab Order: 1801310

Date Reported: 1/15/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Project: James Ranch

Lab Order: 1801310

Lab ID: 1801310-009

Collection Date: 1/5/2018 11:05:00 AM

Client Sample ID: S-11135250-11-010518-MG-HA-8-6"

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	30		mg/Kg	20	1/15/2018 12:10:38 AM	36012
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	1/10/2018 4:00:16 PM	35932
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	1/10/2018 4:00:16 PM	35932
Surr: DNOP	96.5	70-130		%Rec	1	1/10/2018 4:00:16 PM	35932
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/10/2018 7:53:48 PM	35910
Surr: BFB	90.4	15-316		%Rec	1	1/10/2018 7:53:48 PM	35910
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	1/10/2018 7:53:48 PM	35910
Toluene	ND	0.048		mg/Kg	1	1/10/2018 7:53:48 PM	35910
Ethylbenzene	ND	0.048		mg/Kg	1	1/10/2018 7:53:48 PM	35910
Xylenes, Total	ND	0.096		mg/Kg	1	1/10/2018 7:53:48 PM	35910
Surr: 4-Bromofluorobenzene	109	80-120		%Rec	1	1/10/2018 7:53:48 PM	35910

Lab ID: 1801310-010

Collection Date: 1/5/2018 11:10:00 AM

Client Sample ID: S-11135250-11-010518-MG-HA-9-6"

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	30		mg/Kg	20	1/15/2018 12:23:03 AM	36012
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	1/10/2018 4:24:37 PM	35932
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	1/10/2018 4:24:37 PM	35932
Surr: DNOP	94.8	70-130		%Rec	1	1/10/2018 4:24:37 PM	35932
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/10/2018 8:17:35 PM	35910
Surr: BFB	89.0	15-316		%Rec	1	1/10/2018 8:17:35 PM	35910
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	1/10/2018 8:17:35 PM	35910
Toluene	ND	0.049		mg/Kg	1	1/10/2018 8:17:35 PM	35910
Ethylbenzene	ND	0.049		mg/Kg	1	1/10/2018 8:17:35 PM	35910
Xylenes, Total	ND	0.097		mg/Kg	1	1/10/2018 8:17:35 PM	35910
Surr: 4-Bromofluorobenzene	107	80-120		%Rec	1	1/10/2018 8:17:35 PM	35910

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

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

Analytical ReportLab Order: **1801310**Date Reported: **1/15/2018****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** GHD
Project: James Ranch**Lab Order:** 1801310**Lab ID:** 1801310-011**Collection Date:** 1/5/2018 11:15:00 AM**Client Sample ID:** S-11135250-11-010518-MG-HA-10-6"**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	30		mg/Kg	20	1/15/2018 1:00:16 AM	36012
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	1/10/2018 4:48:56 PM	35932
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	1/10/2018 4:48:56 PM	35932
Surr: DNOP	97.3	70-130		%Rec	1	1/10/2018 4:48:56 PM	35932
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/10/2018 8:41:25 PM	35910
Surr: BFB	90.7	15-316		%Rec	1	1/10/2018 8:41:25 PM	35910
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	1/10/2018 8:41:25 PM	35910
Toluene	ND	0.048		mg/Kg	1	1/10/2018 8:41:25 PM	35910
Ethylbenzene	ND	0.048		mg/Kg	1	1/10/2018 8:41:25 PM	35910
Xylenes, Total	ND	0.095		mg/Kg	1	1/10/2018 8:41:25 PM	35910
Surr: 4-Bromofluorobenzene	110	80-120		%Rec	1	1/10/2018 8:41:25 PM	35910

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1801310

15-Jan-18

Client: GHD
Project: James Ranch

Sample ID	MB-36012	SampType:	mblk	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	36012	RunNo:	48434					
Prep Date:	1/14/2018	Analysis Date:	1/14/2018	SeqNo:	1556984	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-36012	SampType:	lcs	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	36012	RunNo:	48434					
Prep Date:	1/14/2018	Analysis Date:	1/14/2018	SeqNo:	1556985	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	98.1	90	110			

Qualifiers:

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1801310

15-Jan-18

Client: GHD
Project: James Ranch

Sample ID	LCS-35932		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 35932		RunNo: 48338					
Prep Date:	1/9/2018		Analysis Date: 1/10/2018		SeqNo: 1552552		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	10	50.00	0	96.2	70	130			
Surr: DNOP	4.5		5.000		89.7	70	130			

Sample ID	MB-35932		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 35932		RunNo: 48338					
Prep Date:	1/9/2018		Analysis Date: 1/10/2018		SeqNo: 1552553		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.5		10.00		94.8	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1801310

15-Jan-18

Client: GHD
Project: James Ranch

Sample ID	MB-35910		SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	PBS		Batch ID: 35910		RunNo: 48355					
Prep Date:	1/8/2018		Analysis Date: 1/10/2018		SeqNo: 1553192		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	890		1000		89.4	15	316			

Sample ID	LCS-35910		SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	LCSS		Batch ID: 35910		RunNo: 48355					
Prep Date:	1/8/2018		Analysis Date: 1/10/2018		SeqNo: 1553221		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	99.1	75.9	131			
Surr: BFB	980		1000		97.7	15	316			

Sample ID	1801310-002AMS		SampType: MS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	S-11135250-11-0105		Batch ID: 35910		RunNo: 48355					
Prep Date:	1/8/2018		Analysis Date: 1/10/2018		SeqNo: 1553224		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	4.7	23.54	0	102	77.8	128			
Surr: BFB	930		941.6		99.0	15	316			

Sample ID	1801310-002AMSD		SampType:	MSD		TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	S-11135250-11-0105		Batch ID:	35910		RunNo:	48355				
Prep Date:	1/8/2018		Analysis Date:	1/10/2018		SeqNo:	1553225		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	24	4.9	24.63	0	97.9	77.8	128	0.0920	20		
Surr: BFB	990		985.2		100	15	316	0	0		

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1801310

15-Jan-18

Client: GHD
Project: James Ranch

Sample ID	MB-35910		SampType: MBLK		TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBS		Batch ID: 35910		RunNo: 48355					
Prep Date:	1/8/2018		Analysis Date: 1/10/2018		SeqNo: 1553249		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		109	80	120			

Sample ID	LCS-35910		SampType: LCS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	LCSS		Batch ID: 35910		RunNo: 48355					
Prep Date:	1/8/2018		Analysis Date: 1/10/2018		SeqNo: 1553250		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.025	1.000	0	96.9	77.3	128			
Toluene	0.97	0.050	1.000	0	97.4	79.2	125			
Ethylbenzene	0.96	0.050	1.000	0	95.7	80.7	127			
Xylenes, Total	2.8	0.10	3.000	0	94.7	81.6	129			
Surr: 4-Bromofluorobenzene	1.1		1.000		112	80	120			

Qualifiers:

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



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

Sample Log-In Check List

Client Name: GHD

Work Order Number: 1801310

RcptNo: 1

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

Completed By: Sophia Campuzano 1/8/2018 9:22:05 AM

Reviewed By: JMO 1/8/18

Anne Thorne

Sophia Campuzano

Chain of Custody

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

Log In

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

of preserved
bottles checked
for pH: _____
(<2 or >12 unless noted)
Adjusted? _____
Checked by: _____

Special Handling (if applicable)

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

Person Notified:	_____	Date:	_____
By Whom:	_____	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	_____		
Client Instructions:	_____		

16. Additional remarks:

17. Cooler Information

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

Chain-of-Custody Record

Client: GHD

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

Phone #: 505 884 0672

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

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

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☒ Standard ☐ Rush

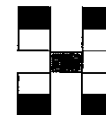
Project Name: James Ranch

Project #: 11135250-11

Project Manager: Bernard Bockisch

Sampler:
 On Ice: ☒ Yes ☐ No

Sample Temperature: 1.8



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No	BTEX (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Chloride 300	Air Bubbles (Y or N)
01/05/18																			
	1020	S	S-11135250-11-010518-MG-HA-1-6"	4.2 GL 55	ICE	-001	X		X									X	
	1022		S-11135250-11-010518-MG-HA-1-12"			-002	X		X									X	
	1030		S-11135250-11-010518-MG-HA-2-6"			-003	X		X									X	
	1032		S-11135250-11-010518-MG-HA-3-6"			-004	X		X									X	
	1035		S-11135250-11-010518-MG-HA-4-6"			-005	X		X									X	
	1050		S-11135250-11-010518-MG-HA-5-6"			-006	X		X									X	
	1052		S-11135250-11-010518-MG-HA-6-6"			-007	X		X									X	
	1055		S-11135250-11-010518-MG-HA-7-6"			-008	X		X									X	
	1105		S-11135250-11-010518-MG-HA-8-6"			-009	X		X									X	
	1110		S-11135250-11-010518-MG-HA-9-6"			-010	X		X									X	
	1115		S-11135250-11-010518-MG-HA-10-6"			-011	X		X									X	

Date: 1/5/18 Time: 1330 Relinquished by: [Signature]

Date: 1/5/18 Time: 1900 Relinquished by: [Signature]

Received by: [Signature] Date: 1/5/18 Time: 1330

Received by: [Signature] Date: 01/06/18 Time: 1030

Remarks:

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

www.ghd.com

