



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 that reads "Christine Mathews". The signature is fluid and cursive, with the first name being more prominent.

Christine Mathews

Project Manager

CM/ji/1

Encl.

A handwritten signature in black ink that reads "Alan Brandon". The signature is cursive and somewhat stylized, with the first name being more prominent.

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	
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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 <b>not</b> 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	
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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: \_\_\_\_\_

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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
<b>Ranking Criteria Total Score</b>	<b>0*</b>
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 <sup>1</sup> .	
<sup>1</sup> 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](mailto:Bernard.Bockisch@ghd.com).

Sincerely,

GHD

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

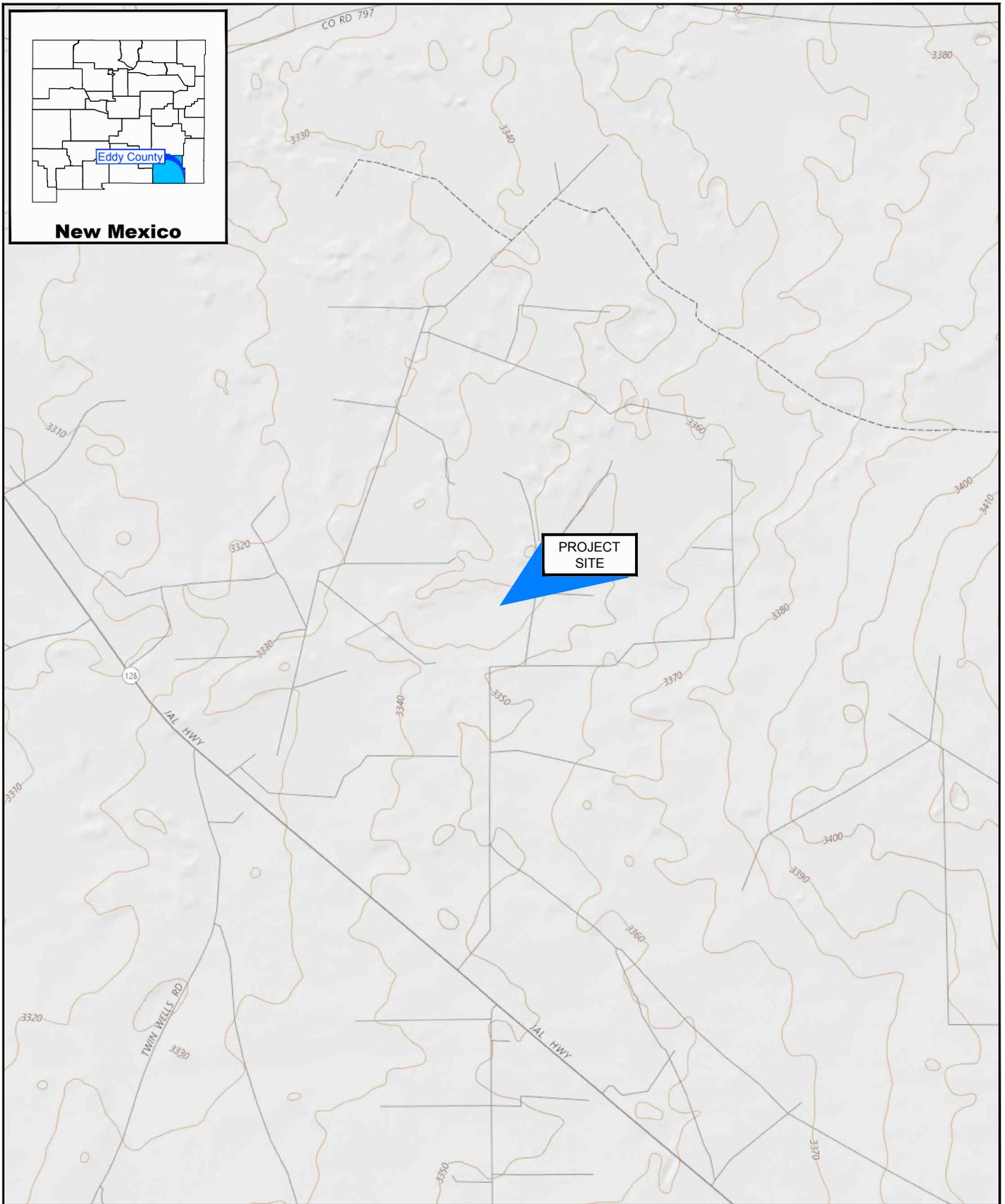
Alan Brandon  
Senior Project Manager

AB/md/1

Encl.

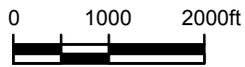
A handwritten signature in blue ink that reads "Jeffrey Walker". The signature is written in a cursive, slightly slanted style.

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



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



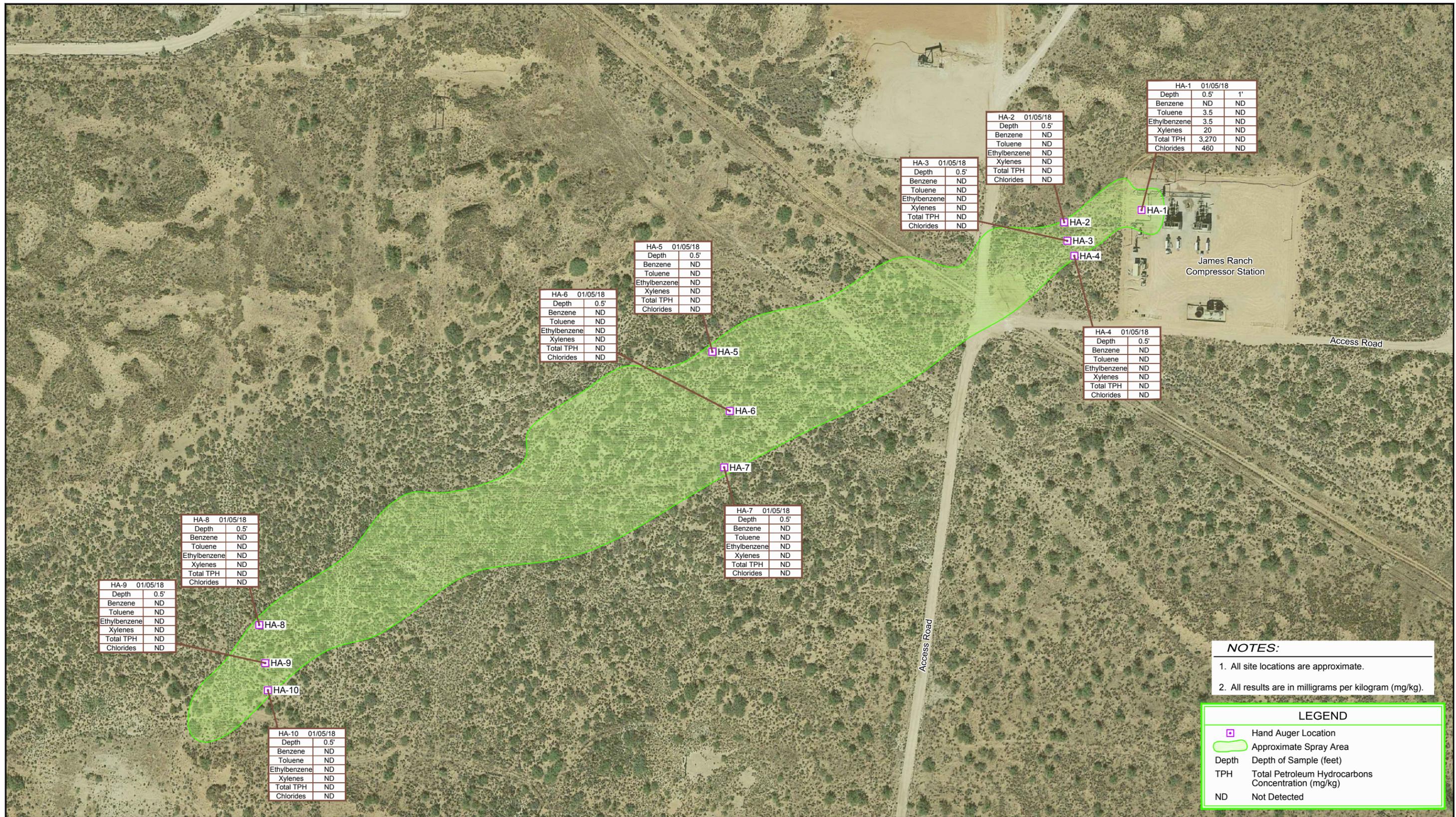
ETC FIELD SERVICES, LLC  
EDDY COUNTY, NEW MEXICO  
JAMES RANCH COMPRESSOR STATION

11135250-11

Feb 1, 2018

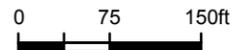
SITE LOCATION MAP

FIGURE 1



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

Lat/Long: 32.304726° North, 103.790291° West



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)
<b>NMOCD Remediation Action Levels</b>			<b>600</b>	<b>10</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>50</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>5,000</b>
<b>ASSESSMENT SOIL SAMPLES</b>												
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 hide News 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**

<a href="#">Table of data</a>
<a href="#">Tab-separated data</a>
<a href="#">Graph of data</a>
<a href="#">Reselect period</a>

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 measurement
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](http://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](http://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 in a cursive style.

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

Table with columns: Analyses, Result, PQL, Qual, Units, DF, Date Analyzed, Batch ID. Includes EPA METHOD 300.0: ANIONS, EPA METHOD 8015M/D: DIESEL RANGE ORGANICS, EPA METHOD 8015D: GASOLINE RANGE, and EPA METHOD 8021B: VOLATILES.

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

Table with columns: Analyses, Result, PQL, Qual, Units, DF, Date Analyzed, Batch ID. Includes EPA METHOD 300.0: ANIONS, EPA METHOD 8015M/D: DIESEL RANGE ORGANICS, EPA METHOD 8015D: GASOLINE RANGE, and EPA METHOD 8021B: VOLATILES.

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

Table with columns: 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. Page 1 of 10

**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:** 1801310-003

**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
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	30		mg/Kg	20	1/14/2018 10:31:21 PM	36012
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
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
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
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
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
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
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	30		mg/Kg	20	1/14/2018 11:08:35 PM	36012
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
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
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
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
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
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.

<b>Qualifiers:</b>	* 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	Page 2 of 10
	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

Table with columns: Analyses, Result, PQL, Qual, Units, DF, Date Analyzed, Batch ID. Includes EPA METHOD 300.0: ANIONS, EPA METHOD 8015M/D: DIESEL RANGE ORGANICS, EPA METHOD 8015D: GASOLINE RANGE, and EPA METHOD 8021B: VOLATILES.

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

Table with columns: Analyses, Result, PQL, Qual, Units, DF, Date Analyzed, Batch ID. Includes EPA METHOD 300.0: ANIONS, EPA METHOD 8015M/D: DIESEL RANGE ORGANICS, EPA METHOD 8015D: GASOLINE RANGE, and EPA METHOD 8021B: VOLATILES.

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

Table with columns: 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

Table with columns: Analyses, Result, PQL, Qual, Units, DF, Date Analyzed, Batch ID. Includes EPA METHOD 300.0: ANIONS, EPA METHOD 8015M/D: DIESEL RANGE ORGANICS, EPA METHOD 8015D: GASOLINE RANGE, and EPA METHOD 8021B: VOLATILES.

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

Table with columns: Analyses, Result, PQL, Qual, Units, DF, Date Analyzed, Batch ID. Includes EPA METHOD 300.0: ANIONS, EPA METHOD 8015M/D: DIESEL RANGE ORGANICS, EPA METHOD 8015D: GASOLINE RANGE, and EPA METHOD 8021B: VOLATILES.

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

Table with columns: 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.

**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
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	30		mg/Kg	20	1/15/2018 12:10:38 AM	36012
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
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
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
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
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
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
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	30		mg/Kg	20	1/15/2018 12:23:03 AM	36012
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
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
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
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
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
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.

<b>Qualifiers:</b>	* 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	Page 5 of 10
	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: 1801310-011 Collection Date: 1/5/2018 11:15:00 AM

Client Sample ID: S-11135250-11-010518-MG-HA-10-6" Matrix: SOIL

Table with columns: Analyses, Result, PQL, Qual, Units, DF, Date Analyzed, Batch ID. Rows include EPA METHOD 300.0: ANIONS, EPA METHOD 8015M/D: DIESEL RANGE ORGANICS, EPA METHOD 8015D: GASOLINE RANGE, and EPA METHOD 8021B: VOLATILES.

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

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

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

**Qualifiers:**

- |   |   |
|---|---|
| * Value exceeds Maximum Contaminant Level.              | B Analyte detected in the associated Method Blank           |
| D Sample Diluted Due to Matrix                          | E Value above quantitation range                            |
| H Holding times for preparation or analysis exceeded    | J Analyte detected below quantitation limits                |
| ND Not Detected at the Reporting Limit                  | P Sample pH Not In Range                                    |
| PQL Practical 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 <b>LCS-35932</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>35932</b>		RunNo: <b>48338</b>							
Prep Date: <b>1/9/2018</b>	Analysis Date: <b>1/10/2018</b>		SeqNo: <b>1552552</b>		Units: <b>mg/Kg</b>					
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 <b>MB-35932</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>							
Client ID: <b>PBS</b>	Batch ID: <b>35932</b>		RunNo: <b>48338</b>							
Prep Date: <b>1/9/2018</b>	Analysis Date: <b>1/10/2018</b>		SeqNo: <b>1552553</b>		Units: <b>mg/Kg</b>					
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.
- 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 <b>MB-35910</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>35910</b>		RunNo: <b>48355</b>							
Prep Date: <b>1/8/2018</b>	Analysis Date: <b>1/10/2018</b>		SeqNo: <b>1553192</b>		Units: <b>mg/Kg</b>					
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 <b>LCS-35910</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>35910</b>		RunNo: <b>48355</b>							
Prep Date: <b>1/8/2018</b>	Analysis Date: <b>1/10/2018</b>		SeqNo: <b>1553221</b>		Units: <b>mg/Kg</b>					
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 <b>1801310-002AMS</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>S-11135250-11-0105</b>	Batch ID: <b>35910</b>		RunNo: <b>48355</b>							
Prep Date: <b>1/8/2018</b>	Analysis Date: <b>1/10/2018</b>		SeqNo: <b>1553224</b>		Units: <b>mg/Kg</b>					
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 <b>1801310-002AMSD</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>S-11135250-11-0105</b>	Batch ID: <b>35910</b>		RunNo: <b>48355</b>							
Prep Date: <b>1/8/2018</b>	Analysis Date: <b>1/10/2018</b>		SeqNo: <b>1553225</b>		Units: <b>mg/Kg</b>					
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	<b>MB-35910</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>35910</b>	RunNo:	<b>48355</b>					
Prep Date:	<b>1/8/2018</b>	Analysis Date:	<b>1/10/2018</b>	SeqNo:	<b>1553249</b>	Units:	<b>mg/Kg</b>			
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	<b>LCS-35910</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>35910</b>	RunNo:	<b>48355</b>					
Prep Date:	<b>1/8/2018</b>	Analysis Date:	<b>1/10/2018</b>	SeqNo:	<b>1553250</b>	Units:	<b>mg/Kg</b>			
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.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

**Sample Log-In Check List**

Client Name: GHD

Work Order Number: 1801310

RcptNo: 1

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

*Anne Thorne*

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

*Sophia Campuzano*

Reviewed By: JMO 1/8/18

**Chain of Custody**

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

**Log In**

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

# 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**

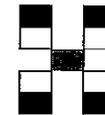
Project Manager:

**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 <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Chloride 300	Air Bubbles (Y or N)	
01/05/18						1801310														
	1020	S	S-11135250-11-010518-MG-HA-1-6"	4.2 Glass Jar	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]*

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

Remarks:

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

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

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](http://www.ghd.com)

