

State of Colorado  
**Oil and Gas Conservation Commission**



1120 Lincoln Street, Suite 801, Denver, Colorado 80203 (303)894-2100 Fax:(303)894-2109

FOR OGCC USE ONLY	
OGCC Employee:	
Spill Inspection	Complaint NOAV
Tracking No:	

**SITE INVESTIGATION AND REMEDIATION WORKPLAN**

This form shall be submitted to the Director for approval prior to the initiation of site investigation and remediation activities. Form 27 is intended to be used whenever possible. Additional documentation will be required when large volumes of soil and groundwater have been impacted or involve large facilities with multiple source areas. See Rule 910. Attach as many pages as needed to fully describe the proposed work.

**CAUSE OF CONDITION BEING INVESTIGATED AND REMEDIATED**

Spill or Release    Plug & Abandon    Central Facility Closure    Site/Facility Closure    Other (describe): \_\_\_\_\_

OGCC Operator Number: _____	Contact Name and Telephone: _____
Name of Operator: _____	_____
Address: _____	No: _____
City: _____ State: _____ Zip: _____	Fax: _____

API Number: _____	County: _____
Facility Name: _____	Facility Number: _____
Well Name: _____	Well Number: _____
Location: (QtrQtr, Sec, Twp, Rng, Meridian): _____	Latitude: _____ Longitude: _____

**TECHNICAL CONDITIONS**

Type of Waste Causing Impact (crude oil, condensate, produced water, etc.): \_\_\_\_\_

**Site Conditions:** Is location within a sensitive area (according to Rule 901e)?    Y    N    If yes, attach evaluation.

Adjacent land use (cultivated, irrigated, dry land farming, industrial, residential, etc.): \_\_\_\_\_

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: \_\_\_\_\_

Potential receptors (water wells within 1/4 mi, surface waters, etc.): \_\_\_\_\_

\_\_\_\_\_

**Description of Impact** (if previously provided, refer to that form or document):

Impacted Media (check):	Extent of Impact:	How Determined:
Soils	_____	_____
Vegetation	_____	_____
Groundwater	_____	_____
Surface Water	_____	_____

**REMEDIALTION WORKPLAN**

**Describe initial action taken** (if previously provided, refer to that form or document):

\_\_\_\_\_

**Describe how source is to be removed:**

\_\_\_\_\_

**Describe how remediation of existing impacts is to be accomplished, including removal and disposal at an injection well or licensed facility, land treatment on site, removal of impacted groundwater, insitu bioremediation, burning of oily vegetation, etc.:**

\_\_\_\_\_

FORM  
27  
Rev 6/99

State of Colorado  
Oil and Gas Conservation Commission  
1120 Lincoln Street, Suite 801, Denver, Colorado 80203  
(303)894-2100 Fax:(303)894-2109



Tracking Number: \_\_\_\_\_  
Name of Operator: \_\_\_\_\_  
OGCC Operator No: \_\_\_\_\_  
Received Date: \_\_\_\_\_  
Well Name & No: \_\_\_\_\_  
Facility Name & No: \_\_\_\_\_

Page 2

**REMEDIATION WORKPLAN (Cont.)**

OGCC Employee: \_\_\_\_\_

**If groundwater has been impacted, describe proposed monitoring plan (# of wells or sample points, sampling schedule, analytical methods, etc.):**

Groundwater was not impacted.

**Describe reclamation plan.** Discuss existing and new grade recontouring; method and testing of compaction alleviation; and reseeding program, including location of new seed, seed mix and noxious weed prevention. Attach diagram or drawing. Use additional sheet for description if required.

See attached full Remediation Plan.

**Attach samples and analytical results taken to verify remediation of impacts. Show locations of samples on an onsite schematic or drawing.**

**Is further site investigation required?**  Y  N If yes, describe:

**Final disposition of E&P waste** (landtreated and disposed onsite, name of licensed disposal facility, recycling, reuse, etc.):

The impacted material that is removed during excavation activities will be stockpiled on site. The excavator will be used to mix and aerate the excavated material. Once the mixed soils have been well mixed and aerated, the natural attenuation process is expected to be completed one week after being exposed to the atmosphere. Subsequent to the attenuation period, post-treatment samples will be collected and analyzed to verify the soil mixing activities were successful in mitigating petroleum hydrocarbon impacts at the Site.

Please see full Remediation Plan for details.

**IMPLEMENTATION SCHEDULE**

Date Site Investigation Began: \_\_\_\_\_ Date Site Investigation Completed: \_\_\_\_\_ Date Remediation Plan Submitted: \_\_\_\_\_  
Remediation Start Date: \_\_\_\_\_ Anticipated Completion Date: \_\_\_\_\_ Actual Completion Date: \_\_\_\_\_

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct, and complete.

Print Name: Andrea Gross Signed: Andrea Gross  
Title: Permit Agent Date: 11/08/16

OGCC Approved: \_\_\_\_\_ Title: \_\_\_\_\_ Date: \_\_\_\_\_

**Remediation Work Plan  
Robidoux 13-7 Pit  
Moffat County, Colorado**

**Prepared For:**



Union Tower  
165 S. Union Blvd, Suite 366  
Lakewood, Colorado 80228

**Prepared By:**



3700 E. 41st Avenue  
Denver, CO 80216

**October 13, 2016**

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Figure 1 – Boring location Map

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### Attachments

Attachment A – Initial COGCC Form 27 Filed October 15, 2012

Attachment B – Revised COGCC Form 27 Filed May 12, 2014

Attachment C – COGCC Form 19

Attachment D – Soil Sample Photos

Attachment E – Laboratory Analytical Reports

Attachment F – Revised COGCC Form 27 Detailing Proposed Remediation Plan

## 1.0 Introduction

This work plan has been developed for implementation of remediation activities at the Robidoux 13-7 Pit (Site). Based on the evaluation of the current site conditions and initial sampling results, an optimal remedial strategy has been selected for this Site. Soil excavation and soil mixing was selected as the preferred remedial strategy. Soil mixing reuses the treated soil, so there is an up to 100% reduction in haul truck traffic to disposal facilities and borrows sites.

## 2.0 Project Background

Entek GRB LLC (Entek) took ownership of the Robidoux 13-7 well site (Site) in May 2010. The Site is located at the SWNE Section 13, Township 12 North, and Range 89 West in Moffat County, Colorado. The Site is on leased land owned by a private landowner. The former reserve pit at the Site was closed prior to Entek's ownership. Based on Google Earth images, the pit was closed sometime between July, 2006 and August, 2011. No pits have been used since Entek took ownership of the site. No pit was observed by Entek personnel during a September 13, 2012 inspection by the Colorado Oil and Gas Commission (COGCC). On October 15, 2012, Entek filed an initial COGCC Form 27 for the former pit at the Robidoux 13-7 well site (Attachment A).

On May 12, 2014, Entek filed a revised COGCC Form 27 that included a sampling work plan (Attachment B). The COGCC conditionally approved the work plan on May 16, 2014 under Remediation Tracking #8432. Prior to this work commencing and per the email attached, the plan was revised slightly based on locally available equipment at the time. Soil samples were collected from five soil borings on October 30, 2014. Sample results indicated that only one boring was impacted with total petroleum hydrocarbons (TPH or total volatile and extractable petroleum hydrocarbons) exceeding the COGCC's Table 910-1 limits. The soil boring location #3 (Lab Sample ID S1411001-010), collected from the center of the pit at the 3-6 foot depth interval, had an elevated TPH concentration of 890 mg/kg. The attached COGCC Form 19 was completed to document the impacted soil discovered during sampling (Attachment C). A complete summary of Site activities is provided below.

### 2.1 Initial Sampling Activities

On October 30, 2014, five soil borings (Borings #1 to #5) were advanced using a Giddings truck mounted rotary auger operated by BKS Environmental Associates, Inc. The samples were collected from beneath the pit and along the sidewalls to adequately characterize whether an impact has occurred. Figure 1 illustrates the general location of the former pit and boring locations. Sampling was conducted at three foot intervals to a depth of twelve feet below ground surface (bgs) using a solid stem auger to assess any subsurface impacts. Each boring was sampled from four sampling intervals (0-3 feet, 3-6 feet, 6-9 feet and 9-12 feet) and discrete samples were collected at the bottom of each interval and submitted for analysis. Continuous field screening of the cuttings based on visible and olfactory observations was conducted during the advancement of the solid stem fight auger. No visible indication of hydrocarbon contamination was reportedly observed by Entek personnel from the samples. Photos of the samples are provided in Attachment D. Groundwater was not encountered during the sampling activities.

Samples were submitted to Inter Mountain Labs (IML) and analyzed for the complete COGCC 910-1 table of constituents. Laboratory reports are included in Attachment E. Sample results indicated that

only one boring was impacted with total petroleum hydrocarbons exceeding the COGCC's Table 910-1 limits. Soil boring #3 (Sample S1411001-010), collected from the center of the pit at the 3-6 foot interval had an elevated TPH concentration of 890 Mg/Kg. Note that the TPH value was derived from the sum of the Gasoline Range Organics value (total volatile petroleum hydrocarbons – GRO compounds nC5-nC12) and Diesel Range Organics value (total extractable petroleum hydrocarbons - DRO compounds nC8-nC40). TPH constituent concentrations were below regulatory standards in the soil samples collected from the four other borings. A summary of the soil sampling results is provided in Table 1.

Note that total arsenic concentrations were also detected above the COGCC's Table 910-1 limits in several of the soil samples. However, the background levels in northwest Colorado are known to be high in arsenic. According to the Colorado Department of Public Health and Environment's (CDPHE's) *Arsenic Concentration in Soil, Risk Management Guidance for Evaluating document, dated July, 2014*, the Region 8 US EPA lists the average background soil arsenic concentrations of all land uses in Colorado at 11 mg/kg.

## 3.0 Remediation Plan

The site-specific remediation plan proposed for addressing the petroleum hydrocarbons impacted soil is outlined in the sections below. A revised COGCC Form 27 detailing the remediation work plan is included as Attachment F.

### 3.1 Excavation and Soil Mixing

Based on the analytical data collected during the initial soil sampling activities, soil impacts above regulatory standards remain between 3 and 6 feet bgs. The soil will be excavated in the area around Boring #3, which is located in the approximate center of the former pit. The extent of impacted soil to be excavated will be at a depth greater than 6 feet bgs until visibly clean soil is observed. The lateral and vertical extent of the excavation will be guided by field screening using visible and olfactory observations.

The following Remediation equipment will be used for the remediation project:

- An excavator for soil removal, overburden removal, stockpile management, soil mixing, sampling, and backfilling; and
- A Bulldozer and/or wheel loader for loading, grading and contouring.

The impacted material that is removed during excavation activities will be stockpiled on site. The excavator will be used to mix and aerate the excavated material. Once the mixed soils have been well mixed and aerated, the natural attenuation process is expected to be completed one week after being exposed to the atmosphere. Subsequent to the attenuation period, post-treatment samples will be collected and analyzed to verify the soil mixing activities were successful in mitigating petroleum hydrocarbon impacts at the Site.

### 3.2 Stormwater Control

Prior to commencement of remediation activities, best management practices (BMP's) will be implemented such as straw wattles and/or earthen berms around the work area to control stormwater runoff, minimizes erosion and prevent the potential migration of sediment. Field personnel will make

visual inspections of all erosion and sedimentation controls during the excavation activities and after precipitation events. Sediment controls in need of maintenance will be cleaned and/or repaired promptly.

### 3.3 Backfill and Reclamation

Once soil sample analytical results indicate that the extent of petroleum hydrocarbon impacts has been defined and the impacted soil treated, backfilling operations will commence. The pit materials that have been excavated and tested for complete remediation will be placed back in the pit. If required or deemed appropriate, additional native backfill consisting of locally imported material will be placed in the excavation. The backfill material will be compacted using the excavator or similar piece of equipment. The excavation will be completely backfilled to ground surface and re-contoured to match pre-existing surface conditions. The surface will be re-seeded using a local seed mix recommended/approved by the property owner.

## 4.0 Sampling and Analysis Plan

Soil sampling and analysis activities are being conducted in response to the impacted soil identified during the October 30, 2104 sampling event. The procedures detailed in this Sampling and Analysis Plan (SAP) are designed to comply with applicable COGCC regulations.

### 4.1 Confirmation Sampling

Once it's determined that the TPH-impacted material has been removed, discrete confirmation soil samples will be collected from the base and sidewalls of the excavation. Two representative post-treatment samples will be collected from the remediated material. The closure samples and post-treatment samples will be submitted to ACZ labs in Steamboat Springs, Colorado for TPH analysis (GRO and DRO) by US EPA Method 8015 Modified. The excavation will be expanded based on laboratory results to remove any remaining petroleum hydrocarbon impacts in soil above COGCC Table 910-1 soil standards, as necessary. Photographs will be taken of the sample locations prior to backfilling.

### 4.2 Soil Sample Handling and Custody Procedures

New sample containers supplied by the analytical laboratory will be used to contain soil samples for laboratory analyses. Soil jars will be completely filled to reduce headspace and provide sufficient soil volume for the laboratory analytical suite. Sample jars will be labeled as described below and subsequently placed in an ice-filled cooler and transported to the laboratory under strict Chain-of-Custody (COC) protocols.

Samples will be clearly marked at the time of sample collection with, at a minimum, the following information:

- Project name;
- Sample identification number;
- Sampling date and time;
- Analysis requested; and
- Initials of the sample collection personnel.

Sample labels will be completed using an indelible ink pen and securely affixed to each sample container. A unique sample identification number will be used to identify each sample. Excavation sidewall and base soil samples will be labeled using the designation SXX @ XX '.

The chain-of-custody record is used to document the transfer of samples from the sample collection personnel to the analytical laboratory. The original and at least one copy of the form are completed for each cooler transported to the laboratory. One copy will be retained for the project files, and the original will be placed in a plastic bag and enclosed in the sample cooler.

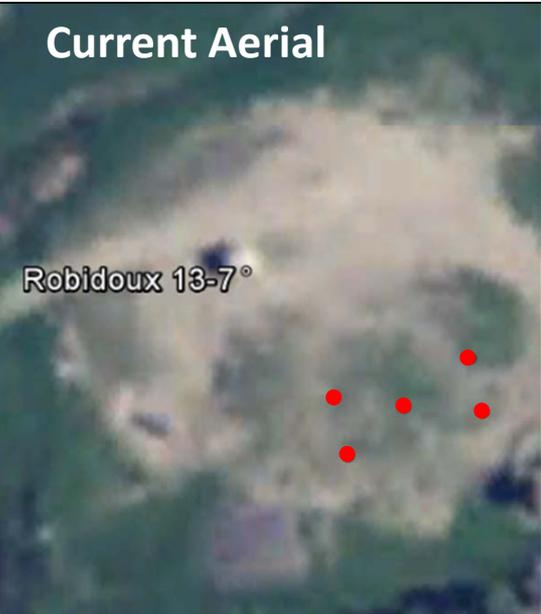
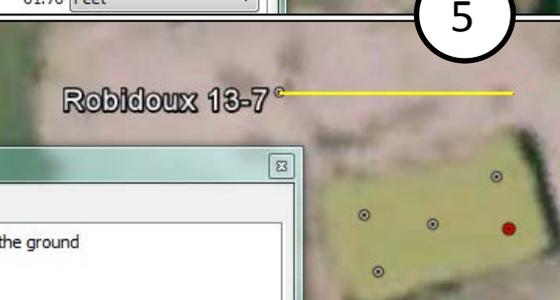
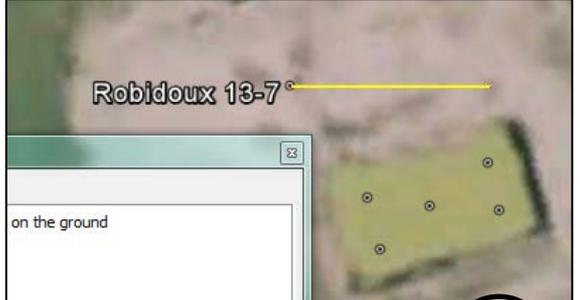
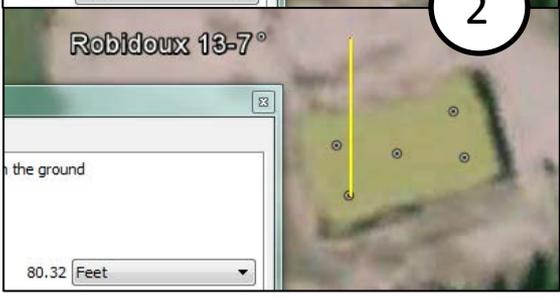
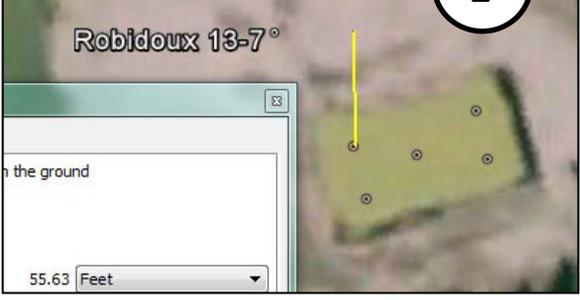
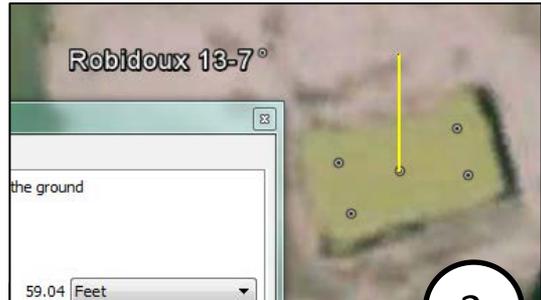
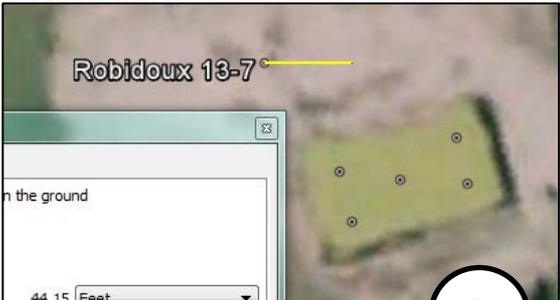
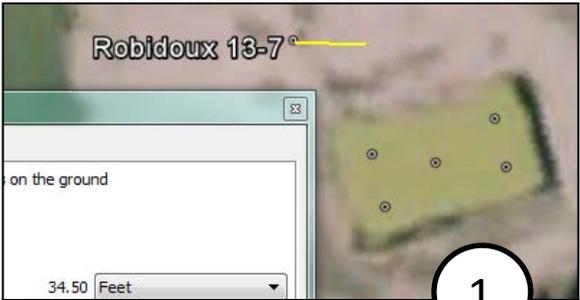
### 4.3 QA/QC Sample Procedures

The data will be reviewed for compliance with the analytical method and the associated quality assurance/quality control (QA/QC) procedures, including holding times, sample temperature, Chain-of-Custody procedures and internal lab QA/QC results as reported in the analytical report. Internal laboratory QA/QC samples, consisting of Method Blanks, Laboratory Control Samples, Surrogate Spikes, and Laboratory Matrix Spike/Matrix Spike Duplicate (MS/MSD) samples are utilized to verify the accuracy of laboratory analytical results, as applicable. These samples will be analyzed by the laboratory at the frequency specified by the applicable US EPA analytical method and/or laboratory certification requirement. Field and laboratory QA/QC data, including QA/QC sample results, analytical methods, and sample holding times, will be reviewed and analyzed for anomalies. Should this review indicate that QA/QC results are outside of the specified control limits, the subject samples will be re-analyzed, if possible. If re-analysis is not possible, the sample location area will be resampled and resubmitted for analysis.

## 5.0 Schedule

Entek can commence the project immediately upon approval depending on equipment availability. The project is estimated to take up to one month to complete including final backfill, compaction and regrading. Due to the upcoming Winter weather conditions, Entek is requesting the COGCC's authorization to start immediately upon their approval of the work plan.

Figure 1



Search

ex: 37 25.818' N, 122 05.36' W

Get Directions History

Places

- Benson Montin Greer P&...
- Barns Easement End
- Case #3
- CO\_PLAT4GE-2011\_index.kml
  - Parcels\_PrivateOwners\_i...
  - ownr\_lat40-lon107.KML
  - Parcels\_PrivateOwners...
  - Parcels\_PrivateOwners...

Layers

Earth Gallery >>

- Primary Database
  - Borders and Labels
  - Places
  - Photos
  - Roads
  - 3D Buildings
  - Ocean
  - Weather
  - Gallery
  - Global Awareness
  - More



Tour Guide

Imagery Date: 7/10/2006 40°59'43.20" N 107°19'28.70" W elev 6589 ft eye alt 8104 ft

Search

ex: 37 25.818' N, 122 05.36' W

Get Directions History

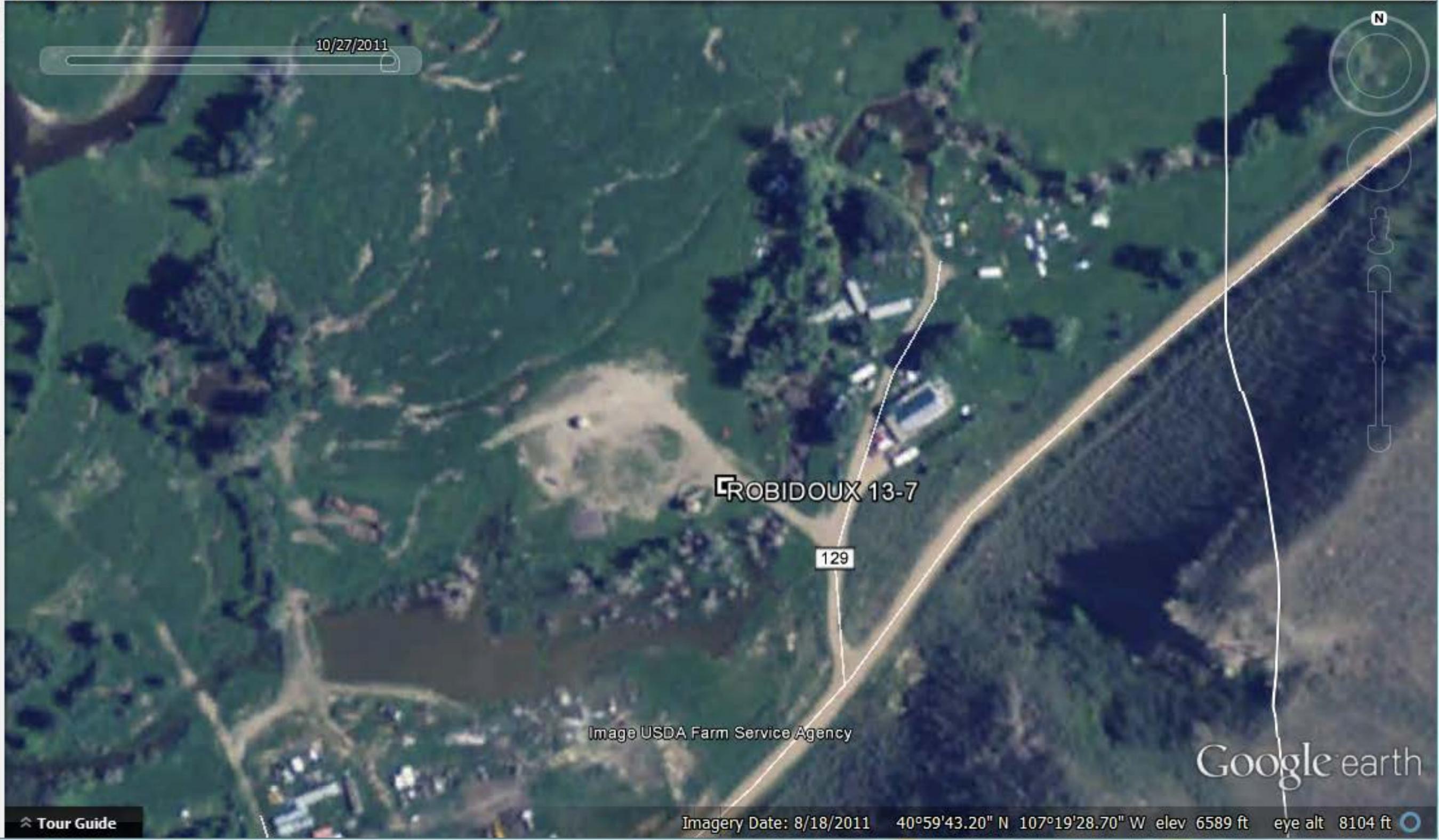
Places

- Benson Montin Greer P&...
- Barns Easement End
- Case #3
- CO\_PLAT4GE-2011\_index.kml
  - Parcels\_PrivateOwners\_i...
  - ownr\_lat40-Ion107.KML
  - Parcels\_PrivateOwners...
  - Parcels\_PrivateOwners...

Layers

Primary Database

- Borders and Labels
- Places
- Photos
- Roads
- 3D Buildings
- Ocean
- Weather
- Gallery
- Global Awareness
- More



Tour Guide

Imagery Date: 8/18/2011 40°59'43.20" N 107°19'28.70" W elev 6589 ft eye alt 8104 ft

- ▼ Niobrara Wells
  - SD FEDERAL 24-9 DL
  - BM FED 14-15
  - BM FED 14-10
  - C&C 18-8L
  - ROBIDOUX 13-15
  - Untitled Path
- Antler Energy
- GRMR
- Linn Wells
- Samson
- CO\_PLAT4GE-2011\_index.kml
- ownr\_lat40-lon107.KML
  - Area Features

- Primary Database
- Voyager
- Borders and Labels
- Places
- Photos
- Roads
- 3D Buildings
- Ocean
- Weather
- Gallery
- Global Awareness
- More



- ▼ Niobrara Wells
  - SD FEDERAL 24-9 DL
  - BM FED 14-15
  - BM FED 14-10
  - C&C 18-8L
  - ROBIDOUX 13-15
  - Untitled Path
- Antler Energy
- GRMR
- Linn Wells
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- CO\_PLAT4GE-2011\_index.kml
- ownr\_lat40-lon107.KML
- Area Features
  - Area Features

- Primary Database
- Voyager
- Borders and Labels
- Places
- Photos
- Roads
- 3D Buildings
- Ocean
- Weather
- Gallery
- Global Awareness
- More



**TABLE 1**  
**SOIL SAMPLE RESULTS SUMMARY - TOTAL PETROLEUM HYDROCARBONS**  
**Robidoux 13-7 Pit Closure**

Sample ID	Date Sampled	Soil Boring Location	Sample Depth (feet bgs)	Sample Results (mg/kg)			Method
				GRO (nC5-nC12)	DRO (nC8-nC40)	TPH	
S1411001-001	10/30/2014	#1	0-3	ND	30	30	8015C
S1411001-002	10/30/2014	#1	3-6	ND	230	230	8015C
S1411001-003	10/30/2014	#1	6-9	ND	96	96	8015C
S1411001-004	10/30/2014	#1	9-12	ND	ND	ND	8015C
S1411001-005	10/30/2014	#2	0-3	ND	ND	ND	8015C
S1411001-006	10/30/2014	#2	3-6	ND	ND	ND	8015C
S1411001-007	10/30/2014	#2	6-9	ND	35	35	8015C
S1411001-008	10/30/2014	#2	9-12	ND	ND	ND	8015C
S1411001-009	10/30/2014	#3	0-3	ND	100	100	8015C
S1411001-010	10/30/2014	#3	3-6	10	880	890	8015C
S1411001-011	10/30/2014	#3	6-9	10	330	340	8015C
S1411001-012	10/30/2014	#3	9-12	ND	310	310	8015C
S1411001-013	10/30/2014	#4	0-3	ND	ND	ND	8015C
S1411001-014	10/30/2014	#4	3-6	ND	220	220	8015C
S1411001-015	10/30/2014	#4	6-9	ND	240	240	8015C
S1411001-016	10/30/2014	#4	9-12	ND	160	160	8015C
S1411001-017	10/30/2014	#5	0-3	ND	ND	ND	8015C
S1411001-018	10/30/2014	#5	3-6	ND	180	180	8015C
S1411001-019	10/30/2014	#5	6-9	ND	180	180	8015C
S1411001-020	10/30/2014	#5	9-12	ND	230	230	8015C
<b>COGCC standards for soil (mg/kg)</b>						<b>500</b>	

Notes:

Samples analyzed by Inter Mountain Labs (IML) on 11/24/14.

Standards for soil are taken from 2 CCR 404-1, Table 910-1, effective February 1, 2014.

COGCC = Colorado Oil and Gas Conservation Commission

ND = Analytical result is less than the indicated laboratory reporting limit.

GRO = Total volatile petroleum hydrocarbons - gasoline range organics (nC5-nC12)

DRO = Total extractable petroleum hydrocarbons - diesel range organics (nC8-nC40)

TPH - Total volatile and extractable petroleum hydrocarbons. Value calculated by adding GRO (nC5-nC12) and DRO (nC8-nC40) concentrations.

bgs = Below ground surface

BOLD = Analytical result is in exceedance of COGCC soil standards.

Company Name: **Entek GRB LLC**

Facility Name: **Robidoux 13-7 Pit**

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**Attachment A**

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**Initial COGCC Form 27 Filed October 15, 2012**

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State of Colorado  
**Oil and Gas Conservation Commission**



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**SITE INVESTIGATION AND REMEDIATION WORKPLAN**

This form shall be submitted to the Director for approval prior to the initiation of site investigation and remediation activities. Form 27 is intended to be used whenever possible. Additional documentation will be required when large volumes of soil and groundwater have been impacted or involve large facilities with multiple source areas. See Rule 910. Attach as many pages as needed to fully describe the proposed work.

OGCC Employee:  
 Spill       Complaint  
 Inspection       NOAV  
 Tracking No:

**CAUSE OF CONDITION BEING INVESTIGATED AND REMEDIATED**

Spill or Release     Plug & Abandon     Central Facility Closure     Site/Facility Closure     Other (describe): \_\_\_\_\_

OGCC Operator Number: <u>10323</u>	Contact Name and Telephone: <u>Kristen Stocks</u>
Name of Operator: <u>Entek GRB LLC</u>	No: <u>307-200-1930</u>
Address: <u>535 16th St., Suite 620</u>	Fax: _____
City: <u>Denver</u> State: <u>CO</u> Zip: <u>80202</u>	
API Number: <u>05-081-07232</u>	County: <u>Moffat</u>
Facility Name: <u>Robidoux Pit</u>	Facility Number: <u>13-7</u>
Well Name: <u>Robidoux</u>	Well Number: <u>13-7</u>
Location: (QtrQtr, Sec, Twp, Rng, Meridian): <u>SWNE, 13, 12N, 89W, 6th</u> Latitude: <u>40.995334</u> Longitude: <u>-107.325237</u>	

**TECHNICAL CONDITIONS**

Type of Waste Causing Impact (crude oil, condensate, produced water, etc): \_\_\_\_\_

**Site Conditions:** Is location within a sensitive area (according to Rule 901e)?     Y     N    If yes, attach evaluation.

Adjacent land use (cultivated, irrigated, dry land farming, industrial, residential, etc.): \_\_\_\_\_

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: \_\_\_\_\_

Potential receptors (water wells within 1/4 mi, surface waters, etc.): \_\_\_\_\_

**Description of Impact** (if previously provided, refer to that form or document):

Impacted Media (check):	Extent of Impact:	How Determined:
<input type="checkbox"/> Soils	_____	_____
<input type="checkbox"/> Vegetation	_____	_____
<input type="checkbox"/> Groundwater	_____	_____
<input type="checkbox"/> Surface Water	_____	_____

**REMEDIALTION WORKPLAN**

**Describe initial action taken** (if previously provided, refer to that form or document):

Entek GRB LLC took ownership of the above reference well in May 2010. The pit on location was closed prior to Entek's ownership and there has not been a pit on location since. There was an onsite for the proposed Robidoux 13-7H on September 13, 2012 with Dave Kubezcko in attendance who can confirm that there is no pit on location.

**Describe how source is to be removed:**

\_\_\_\_\_

**Describe how remediation of existing impacts is to be accomplished, including removal and disposal at an injection well or licensed facility, land treatment on site, removal of impacted groundwater, insitu bioremediation, burning of oily vegetation, etc.:**

\_\_\_\_\_



Tracking Number: \_\_\_\_\_  
Name of Operator: \_\_\_\_\_  
OGCC Operator No: \_\_\_\_\_  
Received Date: \_\_\_\_\_  
Well Name & No: \_\_\_\_\_  
Facility Name & No: \_\_\_\_\_

REMEDIATION WORKPLAN (Cont.)

OGCC Employee: \_\_\_\_\_

If groundwater has been impacted, describe proposed monitoring plan (# of wells or sample points, sampling schedule, analytical methods, etc.):

No groundwater was impacted.

Describe reclamation plan. Discuss existing and new grade recontouring; method and testing of compaction alleviation; and reseeding program, including location of new seed, seed mix and noxious weed prevention. Attach diagram or drawing. Use additional sheet for description if required.

No reclamation is necessary.

Attach samples and analytical results taken to verify remediation of impacts. Show locations of samples on an onsite schematic or drawing.

Is further site investigation required?  Y  N If yes, describe:

Final disposition of E&P waste (landtreated and disposed onsite, name of licensed disposal facility, recycling, reuse, etc.):

N/A

IMPLEMENTATION SCHEDULE

Date Site Investigation Began: \_\_\_\_\_ Date Site Investigation Completed: \_\_\_\_\_ Date Remediation Plan Submitted: \_\_\_\_\_  
Remediation Start Date: \_\_\_\_\_ Anticipated Completion Date: \_\_\_\_\_ Actual Completion Date: \_\_\_\_\_

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct, and complete.

Print Name: Kimberly J. Rodell Signed: *Kimberly J. Rodell*  
Title: Permit Agent for Entek GRB LLC Date: 10/15/2012

OGCC Approved: \_\_\_\_\_ Title: \_\_\_\_\_ Date: \_\_\_\_\_

Company Name: **Entek GRB LLC**

Facility Name: **Robidoux 13-7 Pit**

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**Attachment B**

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**Revised COGCC Form 27 Filed May 12, 2014**

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State of Colorado  
**Oil and Gas Conservation Commission**



1120 Lincoln Street, Suite 801, Denver, Colorado 80203 (303)894-2100 Fax:(303)894-2109

FOR OGCC USE ONLY

**SITE INVESTIGATION AND REMEDIATION WORKPLAN**

This form shall be submitted to the Director for approval prior to the initiation of site investigation and remediation activities. Form 27 is intended to be used whenever possible. Additional documentation will be required when large volumes of soil and groundwater have been impacted or involve large facilities with multiple source areas. See Rule 910. Attach as many pages as needed to fully describe the proposed work.

OGCC Employee:  
 Spill       Complaint  
 Inspection       NOAV  
 Tracking No:

**CAUSE OF CONDITION BEING INVESTIGATED AND REMEDIATED**

Spill or Release     Plug & Abandon     Central Facility Closure     Site/Facility Closure     Other (describe): Pit Closure

OGCC Operator Number: <u>10323</u>	Contact Name and Telephone: <u>Kristen Stocks</u>
Name of Operator: <u>Entek GRB, LLC</u>	No: <u>(307) 200-1930</u>
Address: <u>535 16th Street, Suite 620</u>	Fax: <u>(866) 435-9424</u>
City: <u>Denver</u> State: <u>CO</u> Zip: <u>80202</u>	

API Number: <u>05-081-07232</u>	County: <u>Moffat</u>
Facility Name: <u>Robidoux Pit</u>	Facility Number: <u>13-7</u>
Well Name: <u>Robidoux</u>	Well Number: <u>Robidoux 13-7</u>
Location: (QtrQtr, Sec, Twp, Rng, Meridian): <u>SWNE 13, 21N, 89W, 6th</u>	Latitude: <u>40.995334</u> Longitude: <u>-107.325237</u>

**TECHNICAL CONDITIONS**

Type of Waste Causing Impact (crude oil, condensate, produced water, etc): Residual drilling materials

Site Conditions: Is location within a sensitive area (according to Rule 901e)?     Y     N    If yes, attach evaluation.

Adjacent land use (cultivated, irrigated, dry land farming, industrial, residential, etc.): rural residential

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: \_\_\_\_\_

Potential receptors (water wells within 1/4 mi, surface waters, etc.): none

Description of Impact (if previously provided, refer to that form or document):

Impacted Media (check):	Extent of Impact:	How Determined:
<input checked="" type="checkbox"/> Soils	<u>Residual drilling materials contained within lined pit</u>	<u>Reported by others</u>
<input type="checkbox"/> Vegetation	_____	_____
<input type="checkbox"/> Groundwater	_____	_____
<input type="checkbox"/> Surface Water	_____	_____

**REMEDIATION WORKPLAN**

**Describe initial action taken** (if previously provided, refer to that form or document):

The Robidoux 13-7 drilling pit was likely backfilled without an approved Closure Plan. Residual drilling materials may be present in the former pit and native soils beneath the bottom of the former pit may be impacted with petroleum product. To determine if petroleum impacted drilling materials or soils are present, the former pit location shall be identified (approximately 60' x 100') and five borings shall be advanced within the former pit footprint. Figure 1 illustrates the general location of the pit based on COGCC recorded lat/long of the wellhead and 5 proposed boring locations from historical Google Earth photos. The borings will be advanced using a Simco 2800 HSHST rig (4" solid stem auger) and split spoon samples will be collected at 1.5-2.0' intervals. The borings will be advanced from ground surface to a minimum of 2' below the bottom of the pit. The split spoon samples will be photographed and visually inspected for petroleum and/or petroleum staining. If petroleum and/or petroleum staining is observed, sample(s) will be collected and analyzed for total petroleum hydrocarbons (TPH). If sample analysis results indicate concentrations of greater than 500 mg/kg of TPH in the backfilled material, residual drilling material (if present) or native soils, a Closure Plan that may include pit excavation, material mixing and sampling of Table 910-1 parameters prior to backfilling.

**Describe how source is to be removed:**

**An additional approved plan will be needed from the State if TPH results are greater than 500 mg/kg.**

**Describe how remediation of existing impacts is to be accomplished, including removal and disposal at an injection well or licensed facility, land treatment on site, removal of impacted groundwater, insitu bioremediation, burning of oily vegetation, etc.:**

**If further remediation is necessary, it will be performed in accordance with an approved Closure Plan.**

FORM  
27  
Rev 6/99

State of Colorado  
Oil and Gas Conservation Commission  
1120 Lincoln Street, Suite 801, Denver, Colorado 80203  
(303)894-2100 Fax:(303)894-2109



Tracking Number: \_\_\_\_\_  
Name of Operator: \_\_\_\_\_  
OGCC Operator No: \_\_\_\_\_  
Received Date: \_\_\_\_\_  
Well Name & No: \_\_\_\_\_  
Facility Name & No: \_\_\_\_\_

Page 2

**REMEDIATION WORKPLAN (Cont.)**

OGCC Employee: \_\_\_\_\_

If groundwater has been impacted, describe proposed monitoring plan (# of wells or sample points, sampling schedule, analytical methods, etc.):

No groundwater impact anticipated.

**Describe reclamation plan.** Discuss existing and new grade recontouring; method and testing of compaction alleviation; and reseeding program, including location of new seed, seed mix and noxious weed prevention. Attach diagram or drawing. Use additional sheet for description if required.  
If the results of the sampling program indicate that no further action is required, additional reclamation may not be required. If the sampling program results require further action, a Closure Plan shall be prepared that includes provisions for reclamation the former pit location.

Attach samples and analytical results taken to verify remediation of impacts. Show locations of samples on an onsite schematic or drawing.

Is further site investigation required?  Y  N If yes, describe:

TBD

Final disposition of E&P waste (landtreated and disposed onsite, name of licensed disposal facility, recycling, reuse, etc.):

TBD

**IMPLEMENTATION SCHEDULE**

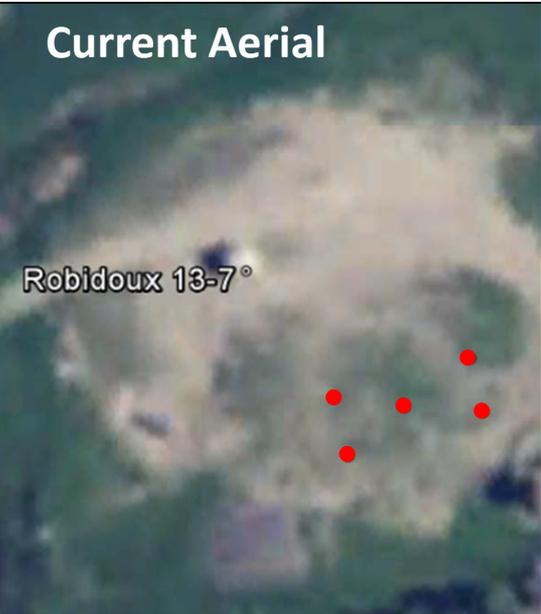
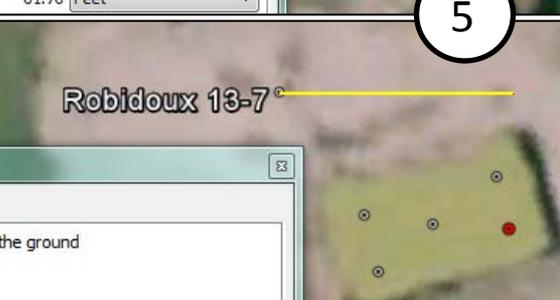
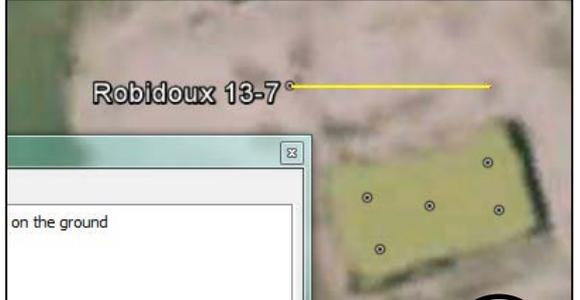
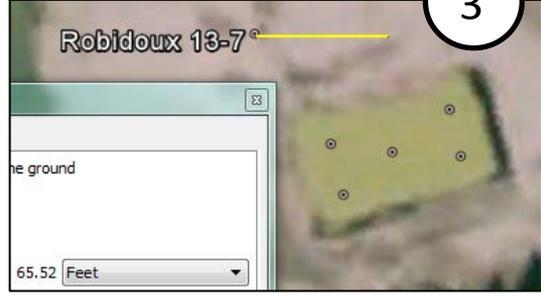
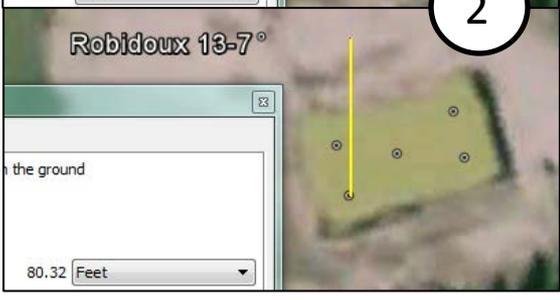
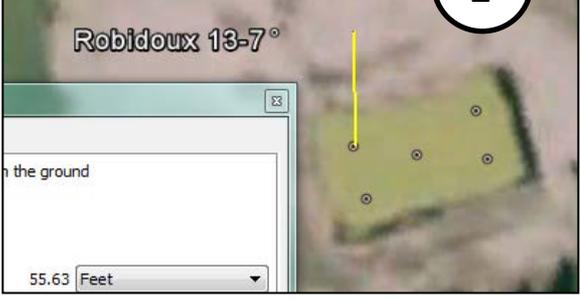
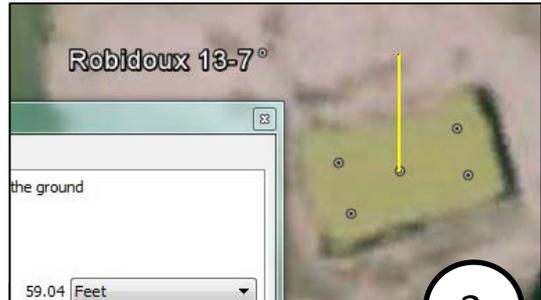
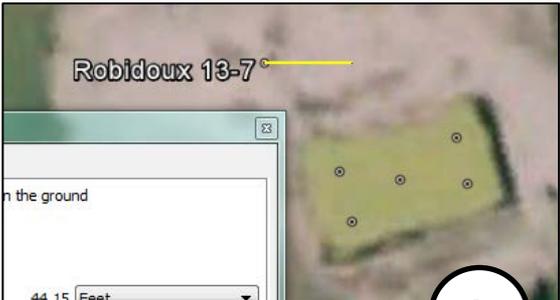
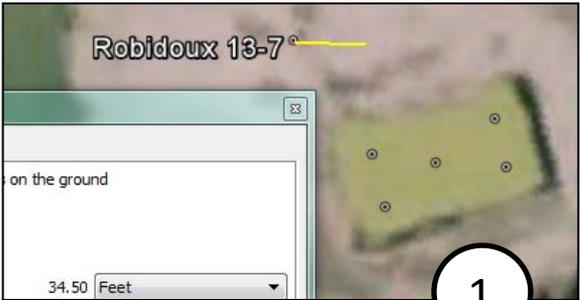
Date Site Investigation Began: 5/1/14 Date Site Investigation Completed: 5/12/14 Date Remediation Plan Submitted: TBD  
Remediation Start Date: TBD Anticipated Completion Date: TBD Actual Completion Date: \_\_\_\_\_

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct, and complete.

Print Name: Kristen Stocks Signed: [Signature]  
Title: Sr. Engineer Date: 5/12/14

OGCC Approved: \_\_\_\_\_ Title: \_\_\_\_\_ Date: \_\_\_\_\_

Figure 1





Tracking Number: \_\_\_\_\_  
 Name of Operator: \_\_\_\_\_  
 OGCC Operator No.: \_\_\_\_\_  
 Received Date: \_\_\_\_\_  
 Well Name & No.: \_\_\_\_\_  
 Facility Name & No.: \_\_\_\_\_

OGCC Employee: \_\_\_\_\_

If groundwater has been impacted, describe proposed monitoring plan (# of wells or sample points, sampling schedule, analytical methods, etc.):

No groundwater impact anticipated.

**Describe reclamation plan.** Discuss existing and new grade recontouring; method and testing of compaction alleviation; and reseeding program, including location of new seed, seed mix and noxious weed prevention. Attach diagram or drawing. Use additional sheet for description if required.  
 If the results of the sampling program indicate that no further action is required, additional reclamation may not be required. If the sampling program results require further action, a Closure Plan shall be prepared that includes provisions for reclamation the former pit location.

Attach samples and analytical results taken to verify remediation of impacts. Show locations of samples on an onsite schematic or drawing.

Is further site investigation required?  Y  N If yes, describe:

TBD

Final disposition of E&P waste (landtreated and disposed onsite, name of licensed disposal facility, recycling, reuse, etc.):

TBD

**IMPLEMENTATION SCHEDULE**

Date Site Investigation Began: 5/1/14 Date Site Investigation Completed: 5/12/14 Date Remediation Plan Submitted: TBD  
 Remediation Start Date: TBD Anticipated Completion Date: TBD Actual Completion Date: \_\_\_\_\_

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct, and complete.

Print Name: Kristen Stocks

Signed:

Date: 5/12/14

OGCC Approved: Kris Nield (Kris Nield) Title: Environmental Protection Specialist Date: 5/16/2014

See DATA Entered Form 27 for COA's

Company Name: **Entek GRB LLC**

Facility Name: **Robidoux 13-7 Pit**

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**Attachment C**

**COGCC Form 19**

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State of Colorado  
**Oil and Gas Conservation Commission**

1120 Lincoln Street, Suite 801, Denver, Colorado 80203 (303)894-2100 Fax:(303)894-2109



FOR OGCC USE ONLY

Spill report taken by:

FACILITY ID:

**SPILL/RELEASE REPORT**

This form is to be submitted by the party responsible for the oil and gas spill or release. Any spill or release which may impact waters of the State must be reported as soon as practicable; any spill over 20 bbls must be reported within 24 hours and all spills over five bbls must be reported within ten days. Submit a Site Investigation and Remediation Workplan (Form 27) when requested by the Director.

**OPERATOR INFORMATION**

Name of Operator: <u>Entek GRB LLC</u> OGCC Operator No: <u>10323</u>	Phone Numbers
Address: <u>535 16th St., Suite 620</u>	No: <u>307-200-1930</u>
City: <u>Denver</u> State: <u>CO</u> Zip: <u>80202</u>	Fax: <u>866-435-9424</u>
Contact Person: <u>Kristen Stocks</u>	E-Mail: <u>kstocks@entekenergy.com</u>

**DESCRIPTION OF SPILL OR RELEASE**

Date of Incident: <u>10/30/2014</u> Facility Name & No.: <u>Robidoux 13-7 Pit</u>	County: <u>Moffat</u>
Type of Facility (well, tank battery, flow line, pit): <u>Former pit</u>	QtrQtr: <u>SWNE</u> Section: <u>13</u>
Well Name and Number: <u>Robidoux 13-7</u>	Township: <u>12N</u> Range: <u>89W</u>
API Number: <u>05-081-07232</u>	Meridian: <u>6th</u>
Specify volume spilled and recovered (in bbls) for the following materials:	
Oil spilled: <u>NA</u> Oil recov'd: <u>NA</u> Water spilled: <u>NA</u> Water recov'd: <u>NA</u> Other spilled: <u>NA</u> Other recov'd: _____	
Ground Water impacted? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Surface Water impacted? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Contained within berm? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Area and vertical extent of spill: _____ x <u>6-9 foot depth</u>
Current land use: <u>Oil &amp; gas and rural residential</u>	Weather conditions: _____
Soil/geology description: <u>Silt &amp; gravel</u>	
IF LESS THAN A MILE, report distance IN FEET to nearest.... Surface water: <u>250 ft.</u> wetlands: <u>250 ft</u> buildings: <u>730 ft</u>	
Livestock: _____ water wells: _____ Depth to shallowest ground water: <u>unknown</u>	
Cause of spill (e.g., equipment failure, human error, etc.): <u>historical drilling reserve pit</u> Detailed description of the spill/release incident:	
<u>Entek GRB LLC took ownership of the above reference well in May 2010. The pit on location was closed prior to Entek's ownership and there has not been a pit on location since. No pit was observed during an on-site inspection with the COGCC on 9/13/2012.</u>	

**CORRECTIVE ACTION**

Describe immediate response (how stopped, contained and recovered):  
The former drilling reserve pit was previously backfilled by the former operator prior to Entek's ownership. No drilling materials have been disposed of in pit since Entek acquired the site in May 2010.

Describe any emergency pits constructed:

How was the extent of contamination determined:  
Soil samples were collected from 5 soil borings on 10/30/2014. Discrete soil samples were collected from 4 sampling intervals (0-3', 3-6', 6-9' & 9-12') from each boring. Sample results indicated that only one boring was impacted with contaminants exceeding the COGCC's Table 910-1 limits. Soil boring Sample #3 (Sample S1411001-01), collected from the center of the pit at the 3-6' interval, had elevated TPH levels detected at 890 mg/kg.

Further remediation activities proposed (attach separate sheet if needed):  
The soil will be excavated in the area around boring #3, which is located in the approximate center of the former pit. The soil will be excavated to a depth of > 6 feet bgs until visibly clean soil is observed. More details are provided in the attached Remediation Work Plan.

Describe measures taken to prevent problem from reoccurring:  
**No pits will be used for disposal on site.**

**OTHER NOTIFICATIONS**

List the parties and agencies notified (County, BLM, EPA, DOT, Local Emergency Planning Coordinator or other).

Date	Agency	Contact	Phone	Response
10/20/2016	COGCC	Kris Neidel	970-871-1963	Notified via emailed with analytical results of the soil sampling

Spill/Release Tracking No: \_\_\_\_\_

Company Name: **Entek GRB LLC**

Facility Name: **Robidoux 13-7 Pit**

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**Attachment D**

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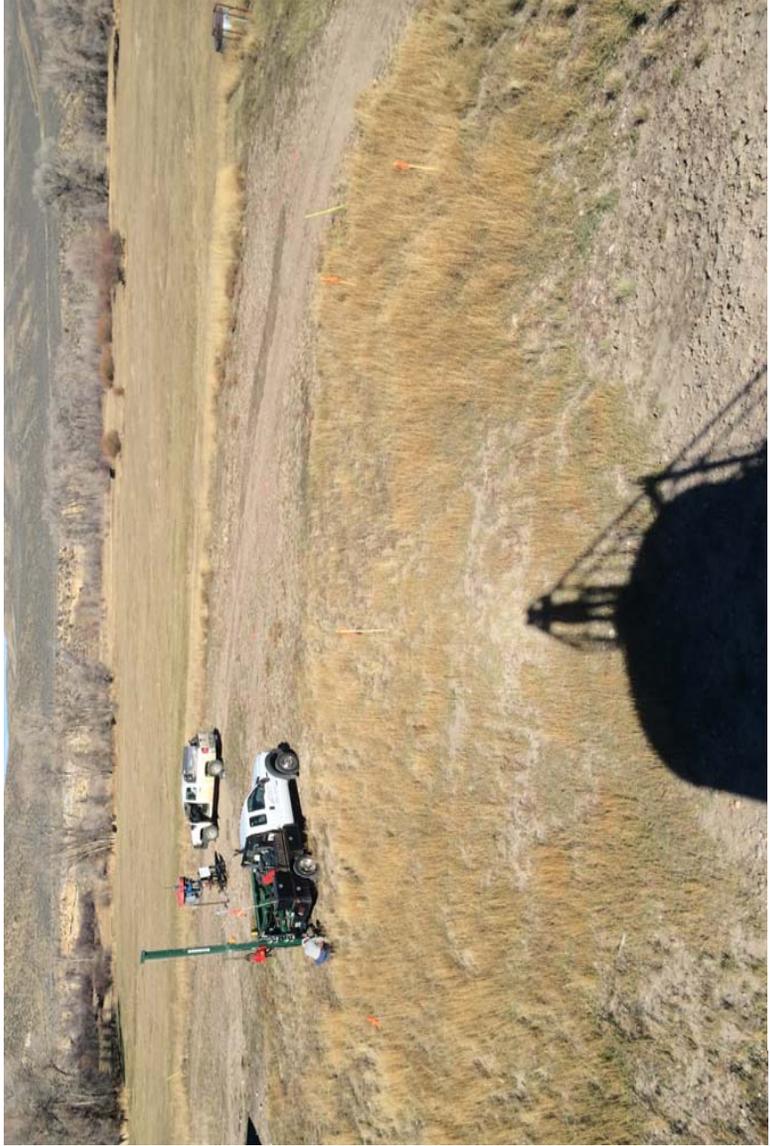
**Soil Sample Photos**

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Soil Sample Photographs



























ENTEK ENERGY

KRISTEN STOCKS

- SAMPLE LOCATION
- \*ALL SAMPLES COLLECTED FROM BOTTOM OF AUGER STEM @ END OF SAMPLE (DISCRETE - VISUAL METHOD USED TO DETERMIN STAINING)
- ① 0-3 DRY DK DIRT - NO SM  
3-6 <sup>ROCKY</sup> DK DIRT - NO SM  
6-9 DAMP DK GREY DIRT - NO SM  
9-12 DAMP DK GREY DIRT - NO SM
- ② 0-3 DRY DK DIRT - NO SM  
3-6 DRY DK DIRT - NO SM  
6-9 DAMP DK GREY DIRT - NO SM  
9-12 DAMP DK GRAY - NO SM
- ③ 0-3 DRY DK DIRT - NO SM  
3-6 DRY DIRT DK LT DIRT  
6-9 MULTI COLORED DIRT  
9-12 DK GREY DIRT - NO SM
- ④ 0-3 DRY DIRT  
3-6 DK LT DIRT NO SM  
6-9 TANN BLK DIRT  
9-12 DK GREY DIRT
- ⑤ 0-3 DK DIRT - NO SM  
3-6 BROWN DIRT - DRY NO SM  
6-9 DK BROWN DIRT - NO SM  
9-12 DAMP BROWN DIRT - NO SM
- ALL MEASUREMENTS FOR SAMPLE LOCATION WERE DONE BASED ON NORTH SOUTH DISTANCE FROM WELL HEAD USING A GPS, STRING LINE AND A TAPE MEAS WITH ORANGE PAINT MARKINGS
- ALL SAMPLES, EQUIP MARKING METHODS & PHOTO DOCUMENTED

\* SAMPLES APPEAR CLEAN - SENT TO LAB FOR TESTING



Company Name: **Entek GRB LLC**

Facility Name: **Robidoux 13-7 Pit**

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## **Attachment E**

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### **Laboratory Analytical Reports**

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Date: 10/10/2016

**CLIENT:** ENTEK GRB LLC  
**Project:** Robidoux 13-7 Pit Closure  
**Lab Order:** S1411001

**CASE NARRATIVE**  
**Report ID:** S1411001002  
(Replaces S1411001001)

Samples #1, #2, #3, #4, and #5 were received on October 31, 2014.

Samples were analyzed using the methods outlined in the following references:

- U.S.E.P.A. 600/2-78-054 "Field and Laboratory Methods Applicable to Overburden and Mining Soils", 1978
- American Society of Agronomy, Number 9, Part 2, 1982
- USDA Handbook 60 "Diagnosis and Improvement of Saline and Alkali Soils", 1969
- Wyoming Department of Environmental Quality, Land Quality Division, Guideline No. 1, 1984
- New Mexico Overburden and Soils Inventory and Handling Guideline, March 1987
- State of Utah, Division of Oil, Gas, and Mining: Guidelines for Management of Topsoil and Overburden for Underground and Surface Coal Mining, April 1988
- Montana Department of State Lands, Reclamation Division: Soil, Overburden, and Regraded Spoil Guidelines, December 1994
- State of Nevada Modified Sobek Procedure
- Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition

All Quality Control parameters met the acceptance criteria defined by EPA and Inter-Mountain Laboratories except as indicated in this case narrative.

Qualifiers by sample

S1411001-010 - 8015C Diesel Range Organics-Soil (Absaraka Lab)/o-Terphenyl - Outside the Range of Dilutions

This report S1411001002 replaces report S1411001001 for the following reasons:

The original report listed the sample depths in "inches" incorrectly. This revised report lists the sample depths with the proper units of "feet".

The parameter of TPH (Total Petroleum Hydrocarbons) was added to the revised report. TPH is the calculation of Total Volatile Hydrocarbons plus Total Extractible Hydrocarbons.

Reviewed by:

Steve Kasa, Organics Lab Supervisor



### Sample Analysis Report

**CLIENT:** ENTEK GRB LLC  
535 16 Street, Suite 620  
Denver, CO 80202

**Date Reported:** 10/10/2016  
**Report ID:** S1411001002  
(Replaces S1411001001)

**Project:** Robidoux 13-7 Pit Closure  
**Lab ID:** S1411001-001  
**Client Sample ID:** #1  
**Depths:** 0 - 3 Feet

**Work Order:** S1411001  
**Collection Date:** 10/30/2014  
**Date Received:** 10/31/2014  
**Sampler:** MK  
**Matrix:** Soil  
**COC:** 155924/925/926

Analyses	Result	RL	Qual	Units	Date Analyzed/Init	Method
<b>General Parameters-Soil</b>						
pH	6.8	0.1		s.u.	11/19/2014 1100 FA	USDA 60-21a
Electrical Conductivity	0.97	0.01		dS/m	11/19/2014 1100 FA	ASA9 10-3.3
Hexavalent Chromium	ND	2		ppm	11/21/2014 0000 KS	3060A/7196A
Trivalent Chromium	61	2		ppm	11/21/2014 0000 KS	3060A/7196A
<b>Saturated Paste Cations</b>						
Calcium	5.37	0.01		meq/L	11/19/2014 1711 BJ	EPA 200.7
Magnesium	3.72	0.01		meq/L	11/19/2014 1711 BJ	EPA 200.7
Sodium	1.22	0.01		meq/L	11/19/2014 1711 BJ	EPA 200.7
Sodium Adsorption Ratio	0.57	0.01			11/21/2014 0943 KS	Calculation
<b>Saturated Paste Metals</b>						
Nickel	ND	0.05		ppm	11/19/2014 0000 BJ	EPA 200.7
<b>Hot Water Soluble Metals</b>						
Boron	0.70	0.05		ppm	11/17/2014 1601 BJ	ASA9 25-9
<b>Total Metals-3050/6010</b>						
Arsenic	1.5	0.9		mg/Kg	11/20/2014 1727 DG	6010C
Barium	284	0.2		mg/Kg	11/20/2014 1727 DG	6010C
Cadmium	2.57	0.05		mg/Kg	11/20/2014 1727 DG	6010C
Chromium	60.9	0.1		mg/Kg	11/20/2014 1727 DG	6010C
Copper	19.8	0.2		mg/Kg	11/20/2014 1727 DG	6010C
Lead	8.1	1.5		mg/Kg	11/20/2014 1727 DG	6010C
Selenium	ND	2.2		mg/Kg	11/20/2014 1727 DG	6010C
Silver	5.6	0.5		mg/Kg	11/20/2014 1727 DG	6010C
Zinc	57.1	1.3		mg/Kg	11/20/2014 1727 DG	6010C
<b>Mercury</b>						
Mercury	ND	0.2		mg/Kg	11/21/2014 0000 AW	7471B
<b>8021B MBTEXN-Soil (Absaraka Lab)</b>						
Benzene	ND	0.5		mg/Kg	11/05/2014 1406 MAB	8021B
Toluene	ND	0.5		mg/Kg	11/05/2014 1406 MAB	8021B
Ethylbenzene	ND	0.5		mg/Kg	11/05/2014 1406 MAB	8021B
m,p-Xylenes	ND	1		mg/Kg	11/05/2014 1406 MAB	8021B
o-Xylene	ND	0.5		mg/Kg	11/05/2014 1406 MAB	8021B
Xylenes, Total	ND	1.5		mg/Kg	11/05/2014 1406 MAB	8021B
Surr: 4-Bromofluorobenzene	115	53-150		%REC	11/05/2014 1406 MAB	8021B

**These results apply only to the samples tested.**

**RL - Reporting Limit**

- Qualifiers:**
- B Analyte detected in the associated Method Blank
  - E Value above quantitation range
  - J Analyte detected below quantitation limits
  - M Value exceeds Monthly Ave or MCL or is less than LCL
  - O Outside the Range of Dilutions
  - X Matrix Effect

- C Calculated Value
- H Holding times for preparation or analysis exceeded
- L Analyzed by another laboratory
- ND Not Detected at the Reporting Limit
- S Spike Recovery outside accepted recovery limits

Reviewed by: Steve Kasa  
Steve Kasa, Organics Lab Supervisor



Sample Analysis Report

CLIENT: ENTEK GRB LLC
535 16 Street, Suite 620
Denver, CO 80202

Date Reported: 10/10/2016
Report ID: S1411001002
(Replaces S1411001001)
Work Order: S1411001
Collection Date: 10/30/2014
Date Received: 10/31/2014
Sampler: MK
Matrix: Soil
COC: 155924/925/926

Project: Robidoux 13-7 Pit Closure
Lab ID: S1411001-001
Client Sample ID: #1
Depths: 0 - 3 Feet

Table with 7 columns: Analyses, Result, RL, Qual, Units, Date Analyzed/Init, Method. Rows include 8015C Gasoline Range Organics-Soil, 8015C Diesel Range Organics-Soil, and TPH (Total Petroleum Hydrocarbons) Soil.

These results apply only to the samples tested.

RL - Reporting Limit

- Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
X Matrix Effect

- C Calculated Value
H Holding times for preparation or analysis exceeded
L Analyzed by another laboratory
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits

Reviewed by: [Signature]
Steve Kasa, Organics Lab Supervisor



Sample Analysis Report

CLIENT: ENTEK GRB LLC
535 16 Street, Suite 620
Denver, CO 80202

Date Reported: 10/10/2016
Report ID: S1411001002
(Replaces S1411001001)

Project: Robidoux 13-7 Pit Closure
Lab ID: S1411001-002
Client Sample ID: #1
Depths: 3 - 6 Feet

Work Order: S1411001
Collection Date: 10/30/2014
Date Received: 10/31/2014
Sampler: MK
Matrix: Soil
COC: 155924/925/926

Table with columns: Analyses, Result, RL, Qual, Units, Date Analyzed/Init, Method. Rows include General Parameters-Soil, Saturated Paste Cations, Saturated Paste Metals, Hot Water Soluble Metals, Total Metals-3050/6010, Mercury, and 8021B MBTEXN-Soil (Absaraka Lab).

These results apply only to the samples tested.

RL - Reporting Limit

- Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
X Matrix Effect

- C Calculated Value
H Holding times for preparation or analysis exceeded
L Analyzed by another laboratory
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits

Reviewed by: [Signature]
Steve Kasa, Organics Lab Supervisor



### Sample Analysis Report

**CLIENT:** ENTEK GRB LLC  
535 16 Street, Suite 620  
Denver, CO 80202

**Date Reported:** 10/10/2016  
**Report ID:** S1411001002  
(Replaces S1411001001)

**Project:** Robidoux 13-7 Pit Closure  
**Lab ID:** S1411001-002  
**Client Sample ID:** #1  
**Depths:** 3 - 6 Feet

**Work Order:** S1411001  
**Collection Date:** 10/30/2014  
**Date Received:** 10/31/2014  
**Sampler:** MK  
**Matrix:** Soil  
**COC:** 155924/925/926

Analyses	Result	RL	Qual	Units	Date Analyzed/Init	Method
<b>8015C Gasoline Range Organics-Soil (Absaraka Lab)</b>						
Unadjusted TVPH (nC5-nC12)	ND	10		mg/Kg	11/05/2014 1648 MAB	8015C
Surr: 4-Bromofluorobenzene	112	38-139		%REC	11/05/2014 1648 MAB	8015C
<b>8015C Diesel Range Organics-Soil (Absaraka Lab)</b>						
Total Extractable Hydrocarbons (nC8-nC40)	230	25		mg/Kg	11/11/2014 1412 MAB	8015C
Surr: o-Terphenyl	74	11-116		%REC	11/11/2014 1412 MAB	8015C
<b>TPH (Total Petroleum Hydrocarbons) Soil (Absaraka Lab)</b>						
TPH (Calculated)	230	25		mg/Kg	10/07/2016 0000 SFK	Calculation

**These results apply only to the samples tested.**

**RL - Reporting Limit**

- Qualifiers:**
- B Analyte detected in the associated Method Blank
  - E Value above quantitation range
  - J Analyte detected below quantitation limits
  - M Value exceeds Monthly Ave or MCL or is less than LCL
  - O Outside the Range of Dilutions
  - X Matrix Effect

- C Calculated Value
- H Holding times for preparation or analysis exceeded
- L Analyzed by another laboratory
- ND Not Detected at the Reporting Limit
- S Spike Recovery outside accepted recovery limits

Reviewed by:   
Steve Kasa, Organics Lab Supervisor



### Sample Analysis Report

**CLIENT:** ENTEK GRB LLC  
535 16 Street, Suite 620  
Denver, CO 80202

**Date Reported:** 10/10/2016  
**Report ID:** S1411001002  
(Replaces S1411001001)

**Project:** Robidoux 13-7 Pit Closure  
**Lab ID:** S1411001-003  
**Client Sample ID:** #1  
**Depths:** 6 - 9 Feet

**Work Order:** S1411001  
**Collection Date:** 10/30/2014  
**Date Received:** 10/31/2014  
**Sampler:** MK  
**Matrix:** Soil  
**COC:** 155924/925/926

Analyses	Result	RL	Qual	Units	Date Analyzed/Init	Method
<b>General Parameters-Soil</b>						
pH	7.8	0.1		s.u.	11/19/2014 1102 FA	USDA 60-21a
Electrical Conductivity	1.62	0.01		dS/m	11/19/2014 1102 FA	ASA9 10-3.3
Hexavalent Chromium	ND	2		ppm	11/21/2014 0000 KS	3060A/7196A
Trivalent Chromium	29	2		ppm	11/21/2014 0000 KS	3060A/7196A
<b>Saturated Paste Cations</b>						
Calcium	4.29	0.01		meq/L	11/19/2014 1716 BJ	EPA 200.7
Magnesium	4.02	0.01		meq/L	11/19/2014 1716 BJ	EPA 200.7
Sodium	7.84	0.01		meq/L	11/19/2014 1716 BJ	EPA 200.7
Sodium Adsorption Ratio	3.85	0.01			11/21/2014 0943 KS	Calculation
<b>Saturated Paste Metals</b>						
Nickel	ND	0.05		ppm	11/19/2014 0000 BJ	EPA 200.7
<b>Hot Water Soluble Metals</b>						
Boron	0.60	0.05		ppm	11/17/2014 1613 BJ	ASA9 25-9
<b>Total Metals-3050/6010</b>						
Arsenic	3.0	0.9		mg/Kg	11/20/2014 1745 DG	6010C
Barium	934	0.2		mg/Kg	11/20/2014 1745 DG	6010C
Cadmium	1.87	0.05		mg/Kg	11/20/2014 1745 DG	6010C
Chromium	28.5	0.1		mg/Kg	11/20/2014 1745 DG	6010C
Copper	22.2	0.2		mg/Kg	11/20/2014 1745 DG	6010C
Lead	7.6	1.5		mg/Kg	11/20/2014 1745 DG	6010C
Selenium	2.7	2.2		mg/Kg	11/20/2014 1745 DG	6010C
Silver	1.8	0.5		mg/Kg	11/20/2014 1745 DG	6010C
Zinc	48.2	1.3		mg/Kg	11/20/2014 1745 DG	6010C
<b>Mercury</b>						
Mercury	ND	0.2		mg/Kg	11/21/2014 0000 AW	7471B
<b>8021B MBTEXN-Soil (Absaraka Lab)</b>						
Benzene	ND	0.5		mg/Kg	11/05/2014 1718 MAB	8021B
Toluene	ND	0.5		mg/Kg	11/05/2014 1718 MAB	8021B
Ethylbenzene	ND	0.5		mg/Kg	11/05/2014 1718 MAB	8021B
m,p-Xylenes	ND	1		mg/Kg	11/05/2014 1718 MAB	8021B
o-Xylene	ND	0.5		mg/Kg	11/05/2014 1718 MAB	8021B
Xylenes, Total	ND	1.5		mg/Kg	11/05/2014 1718 MAB	8021B
Surr: 4-Bromofluorobenzene	132	53-150		%REC	11/05/2014 1718 MAB	8021B

**These results apply only to the samples tested.**

**RL - Reporting Limit**

- Qualifiers:**
- B Analyte detected in the associated Method Blank
  - E Value above quantitation range
  - J Analyte detected below quantitation limits
  - M Value exceeds Monthly Ave or MCL or is less than LCL
  - O Outside the Range of Dilutions
  - X Matrix Effect

- C Calculated Value
- H Holding times for preparation or analysis exceeded
- L Analyzed by another laboratory
- ND Not Detected at the Reporting Limit
- S Spike Recovery outside accepted recovery limits

Reviewed by: Steve Kasa  
Steve Kasa, Organics Lab Supervisor



### Sample Analysis Report

**CLIENT:** ENTEK GRB LLC  
535 16 Street, Suite 620  
Denver, CO 80202

**Date Reported:** 10/10/2016  
**Report ID:** S1411001002  
(Replaces S1411001001)

**Project:** Robidoux 13-7 Pit Closure  
**Lab ID:** S1411001-003  
**Client Sample ID:** #1  
**Depths:** 6 - 9 Feet

**Work Order:** S1411001  
**Collection Date:** 10/30/2014  
**Date Received:** 10/31/2014  
**Sampler:** MK  
**Matrix:** Soil  
**COC:** 155924/925/926

Analyses	Result	RL	Qual	Units	Date Analyzed/Init	Method
<b>8015C Gasoline Range Organics-Soil (Absaraka Lab)</b>						
Unadjusted TVPH (nC5-nC12)	ND	10		mg/Kg	11/05/2014 1718 MAB	8015C
Surr: 4-Bromofluorobenzene	105	38-139		%REC	11/05/2014 1718 MAB	8015C
<b>8015C Diesel Range Organics-Soil (Absaraka Lab)</b>						
Total Extractable Hydrocarbons (nC8-nC40)	96	25		mg/Kg	11/11/2014 1522 MAB	8015C
Surr: o-Terphenyl	75	11-116		%REC	11/11/2014 1522 MAB	8015C
<b>TPH (Total Petroleum Hydrocarbons) Soil (Absaraka Lab)</b>						
TPH (Calculated)	96	25		mg/Kg	10/07/2016 0000 SFK	Calculation

**These results apply only to the samples tested.**

**RL - Reporting Limit**

- Qualifiers:**
- B Analyte detected in the associated Method Blank
  - E Value above quantitation range
  - J Analyte detected below quantitation limits
  - M Value exceeds Monthly Ave or MCL or is less than LCL
  - O Outside the Range of Dilutions
  - X Matrix Effect

- C Calculated Value
- H Holding times for preparation or analysis exceeded
- L Analyzed by another laboratory
- ND Not Detected at the Reporting Limit
- S Spike Recovery outside accepted recovery limits

Reviewed by: Steve Kasa  
Steve Kasa, Organics Lab Supervisor



Sample Analysis Report

CLIENT: ENTEK GRB LLC
535 16 Street, Suite 620
Denver, CO 80202

Date Reported: 10/10/2016
Report ID: S1411001002
(Replaces S1411001001)

Project: Robidoux 13-7 Pit Closure
Lab ID: S1411001-004
Client Sample ID: #1
Depths: 9 - 12 Feet

Work Order: S1411001
Collection Date: 10/30/2014
Date Received: 10/31/2014
Sampler: MK
Matrix: Soil
COC: 155924/925/926

Table with columns: Analyses, Result, RL, Qual, Units, Date Analyzed/Init, Method. Rows include General Parameters-Soil, Saturated Paste Cations, Saturated Paste Metals, Hot Water Soluble Metals, Total Metals-3050/6010, Mercury, and 8021B MBTEXN-Soil (Absaraka Lab).

These results apply only to the samples tested.

RL - Reporting Limit

- Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
X Matrix Effect

- C Calculated Value
H Holding times for preparation or analysis exceeded
L Analyzed by another laboratory
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits

Reviewed by: [Signature]
Steve Kasa, Organics Lab Supervisor



Sample Analysis Report

CLIENT: ENTEK GRB LLC
535 16 Street, Suite 620
Denver, CO 80202

Date Reported: 10/10/2016
Report ID: S1411001002
(Replaces S1411001001)
Work Order: S1411001
Collection Date: 10/30/2014
Date Received: 10/31/2014
Sampler: MK
Matrix: Soil
COC: 155924/925/926

Project: Robidoux 13-7 Pit Closure
Lab ID: S1411001-004
Client Sample ID: #1
Depths: 9 - 12 Feet

Table with 7 columns: Analyses, Result, RL, Qual, Units, Date Analyzed/Init, Method. Rows include 8015C Gasoline Range Organics-Soil, 8015C Diesel Range Organics-Soil, and TPH (Total Petroleum Hydrocarbons) Soil.

These results apply only to the samples tested.

RL - Reporting Limit

- Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
X Matrix Effect

- C Calculated Value
H Holding times for preparation or analysis exceeded
L Analyzed by another laboratory
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits

Reviewed by: [Signature]
Steve Kasa, Organics Lab Supervisor



Sample Analysis Report

CLIENT: ENTEK GRB LLC
535 16 Street, Suite 620
Denver, CO 80202

Date Reported: 10/10/2016
Report ID: S1411001002
(Replaces S1411001001)

Project: Robidoux 13-7 Pit Closure
Lab ID: S1411001-005
Client Sample ID: #2
Depths: 0 - 3 Feet

Work Order: S1411001
Collection Date: 10/30/2014
Date Received: 10/31/2014
Sampler: MK
Matrix: Soil
COC: 155924/925/926

Table with columns: Analyses, Result, RL, Qual, Units, Date Analyzed/Init, Method. Rows include General Parameters-Soil, Saturated Paste Cations, Saturated Paste Metals, Hot Water Soluble Metals, Total Metals-3050/6010, Mercury, and 8021B MBTEXN-Soil (Absaraka Lab).

These results apply only to the samples tested.

RL - Reporting Limit

- Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
X Matrix Effect

- C Calculated Value
H Holding times for preparation or analysis exceeded
L Analyzed by another laboratory
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits

Reviewed by: [Signature]
Steve Kasa, Organics Lab Supervisor



Sample Analysis Report

CLIENT: ENTEK GRB LLC
535 16 Street, Suite 620
Denver, CO 80202

Date Reported: 10/10/2016
Report ID: S1411001002
(Replaces S1411001001)

Project: Robidoux 13-7 Pit Closure
Lab ID: S1411001-005
Client Sample ID: #2
Depths: 0 - 3 Feet

Work Order: S1411001
Collection Date: 10/30/2014
Date Received: 10/31/2014
Sampler: MK
Matrix: Soil
COC: 155924/925/926

Table with 7 columns: Analyses, Result, RL, Qual, Units, Date Analyzed/Init, Method. Rows include 8015C Gasoline Range Organics-Soil, 8015C Diesel Range Organics-Soil, and TPH (Total Petroleum Hydrocarbons) Soil.

These results apply only to the samples tested.

RL - Reporting Limit

- Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
X Matrix Effect

- C Calculated Value
H Holding times for preparation or analysis exceeded
L Analyzed by another laboratory
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits

Reviewed by: [Signature]
Steve Kasa, Organics Lab Supervisor



Sample Analysis Report

CLIENT: ENTEK GRB LLC
535 16 Street, Suite 620
Denver, CO 80202

Date Reported: 10/10/2016
Report ID: S1411001002
(Replaces S1411001001)

Project: Robidoux 13-7 Pit Closure
Lab ID: S1411001-006
Client Sample ID: #2
Depths: 3 - 6 Feet

Work Order: S1411001
Collection Date: 10/30/2014
Date Received: 10/31/2014
Sampler: MK
Matrix: Soil
COC: 155924/925/926

Table with columns: Analyses, Result, RL, Qual, Units, Date Analyzed/Init, Method. Rows include General Parameters-Soil, Saturated Paste Cations, Saturated Paste Metals, Hot Water Soluble Metals, Total Metals-3050/6010, Mercury, and 8021B MBTEXN-Soil (Absaraka Lab).

These results apply only to the samples tested.

RL - Reporting Limit

- Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
X Matrix Effect

- C Calculated Value
H Holding times for preparation or analysis exceeded
L Analyzed by another laboratory
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits

Reviewed by: [Signature]
Steve Kasa, Organics Lab Supervisor



Sample Analysis Report

CLIENT: ENTEK GRB LLC
535 16 Street, Suite 620
Denver, CO 80202

Date Reported: 10/10/2016
Report ID: S1411001002
(Replaces S1411001001)
Work Order: S1411001
Collection Date: 10/30/2014
Date Received: 10/31/2014
Sampler: MK
Matrix: Soil
COC: 155924/925/926

Project: Robidoux 13-7 Pit Closure
Lab ID: S1411001-006
Client Sample ID: #2
Depths: 3 - 6 Feet

Table with 7 columns: Analyses, Result, RL, Qual, Units, Date Analyzed/Init, Method. Rows include 8015C Gasoline Range Organics-Soil, 8015C Diesel Range Organics-Soil, and TPH (Total Petroleum Hydrocarbons) Soil.

These results apply only to the samples tested.

RL - Reporting Limit

- Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
X Matrix Effect

- C Calculated Value
H Holding times for preparation or analysis exceeded
L Analyzed by another laboratory
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits

Reviewed by: [Signature]
Steve Kasa, Organics Lab Supervisor



Sample Analysis Report

CLIENT: ENTEK GRB LLC
535 16 Street, Suite 620
Denver, CO 80202

Date Reported: 10/10/2016
Report ID: S1411001002
(Replaces S1411001001)

Project: Robidoux 13-7 Pit Closure
Lab ID: S1411001-007
Client Sample ID: #2
Depths: 6 - 9 Feet

Work Order: S1411001
Collection Date: 10/30/2014
Date Received: 10/31/2014
Sampler: MK
Matrix: Soil
COC: 155924/925/926

Table with columns: Analyses, Result, RL, Qual, Units, Date Analyzed/Init, Method. Rows include General Parameters-Soil, Saturated Paste Cations, Saturated Paste Metals, Hot Water Soluble Metals, Total Metals-3050/6010, Mercury, and 8021B MBTEXN-Soil (Absaraka Lab).

These results apply only to the samples tested.

RL - Reporting Limit

- Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
X Matrix Effect

- C Calculated Value
H Holding times for preparation or analysis exceeded
L Analyzed by another laboratory
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits

Reviewed by: [Signature]
Steve Kasa, Organics Lab Supervisor



### Sample Analysis Report

**CLIENT:** ENTEK GRB LLC  
535 16 Street, Suite 620  
Denver, CO 80202

**Date Reported:** 10/10/2016  
**Report ID:** S1411001002  
(Replaces S1411001001)

**Project:** Robidoux 13-7 Pit Closure  
**Lab ID:** S1411001-007  
**Client Sample ID:** #2  
**Depths:** 6 - 9 Feet

**Work Order:** S1411001  
**Collection Date:** 10/30/2014  
**Date Received:** 10/31/2014  
**Sampler:** MK  
**Matrix:** Soil  
**COC:** 155924/925/926

Analyses	Result	RL	Qual	Units	Date Analyzed/Init	Method
<b>8015C Gasoline Range Organics-Soil (Absaraka Lab)</b>						
Unadjusted TVPH (nC5-nC12)	ND	10		mg/Kg	11/05/2014 1915 MAB	8015C
Surr: 4-Bromofluorobenzene	108	38-139		%REC	11/05/2014 1915 MAB	8015C
<b>8015C Diesel Range Organics-Soil (Absaraka Lab)</b>						
Total Extractable Hydrocarbons (nC8-nC40)	35	25		mg/Kg	11/11/2014 1740 MAB	8015C
Surr: o-Terphenyl	70	11-116		%REC	11/11/2014 1740 MAB	8015C
<b>TPH (Total Petroleum Hydrocarbons) Soil (Absaraka Lab)</b>						
TPH (Calculated)	35	25		mg/Kg	10/07/2016 0000 SFK	Calculation

**These results apply only to the samples tested.**

**RL - Reporting Limit**

- Qualifiers:**
- B Analyte detected in the associated Method Blank
  - E Value above quantitation range
  - J Analyte detected below quantitation limits
  - M Value exceeds Monthly Ave or MCL or is less than LCL
  - O Outside the Range of Dilutions
  - X Matrix Effect

- C Calculated Value
- H Holding times for preparation or analysis exceeded
- L Analyzed by another laboratory
- ND Not Detected at the Reporting Limit
- S Spike Recovery outside accepted recovery limits

Reviewed by:   
Steve Kasa, Organics Lab Supervisor



### Sample Analysis Report

**CLIENT:** ENTEK GRB LLC  
535 16 Street, Suite 620  
Denver, CO 80202

**Date Reported:** 10/10/2016  
**Report ID:** S1411001002  
(Replaces S1411001001)

**Project:** Robidoux 13-7 Pit Closure  
**Lab ID:** S1411001-008  
**Client Sample ID:** #2  
**Depths:** 9 - 12 Feet

**Work Order:** S1411001  
**Collection Date:** 10/30/2014  
**Date Received:** 10/31/2014  
**Sampler:** MK  
**Matrix:** Soil  
**COC:** 155924/925/926

Analyses	Result	RL	Qual	Units	Date Analyzed/Init	Method
<b>General Parameters-Soil</b>						
pH	7.6	0.1		s.u.	11/19/2014 1108 FA	USDA 60-21a
Electrical Conductivity	1.96	0.01		dS/m	11/19/2014 1108 FA	ASA9 10-3.3
Hexavalent Chromium	ND	2		ppm	11/21/2014 0000 KS	3060A/7196A
Trivalent Chromium	27	2		ppm	11/21/2014 0000 KS	3060A/7196A
<b>Saturated Paste Cations</b>						
Calcium	5.37	0.01		meq/L	11/19/2014 1737 BJ	EPA 200.7
Magnesium	8.66	0.01		meq/L	11/19/2014 1737 BJ	EPA 200.7
Sodium	7.15	0.01		meq/L	11/19/2014 1737 BJ	EPA 200.7
Sodium Adsorption Ratio	2.70	0.01			11/21/2014 0943 KS	Calculation
<b>Saturated Paste Metals</b>						
Nickel	ND	0.05		ppm	11/19/2014 0000 BJ	EPA 200.7
<b>Hot Water Soluble Metals</b>						
Boron	0.43	0.05		ppm	11/17/2014 1627 BJ	ASA9 25-9
<b>Total Metals-3050/6010</b>						
Arsenic	10.4	0.9		mg/Kg	11/20/2014 1756 DG	6010C
Barium	409	0.2		mg/Kg	11/20/2014 1756 DG	6010C
Cadmium	1.78	0.05		mg/Kg	11/20/2014 1756 DG	6010C
Chromium	27.4	0.1		mg/Kg	11/20/2014 1756 DG	6010C
Copper	16.8	0.2		mg/Kg	11/20/2014 1756 DG	6010C
Lead	7.7	1.5		mg/Kg	11/20/2014 1756 DG	6010C
Selenium	ND	2.2		mg/Kg	11/20/2014 1756 DG	6010C
Silver	0.6	0.5		mg/Kg	11/20/2014 1756 DG	6010C
Zinc	52.2	1.3		mg/Kg	11/20/2014 1756 DG	6010C
<b>Mercury</b>						
Mercury	ND	0.2		mg/Kg	11/21/2014 0000 AW	7471B
<b>8021B MBTEXN-Soil (Absaraka Lab)</b>						
Benzene	ND	0.5		mg/Kg	11/05/2014 1945 MAB	8021B
Toluene	ND	0.5		mg/Kg	11/05/2014 1945 MAB	8021B
Ethylbenzene	ND	0.5		mg/Kg	11/05/2014 1945 MAB	8021B
m,p-Xylenes	ND	1		mg/Kg	11/05/2014 1945 MAB	8021B
o-Xylene	ND	0.5		mg/Kg	11/05/2014 1945 MAB	8021B
Xylenes, Total	ND	1.5		mg/Kg	11/05/2014 1945 MAB	8021B
Surr: 4-Bromofluorobenzene	130	53-150		%REC	11/05/2014 1945 MAB	8021B

**These results apply only to the samples tested.**

**RL - Reporting Limit**

- Qualifiers:**
- B Analyte detected in the associated Method Blank
  - E Value above quantitation range
  - J Analyte detected below quantitation limits
  - M Value exceeds Monthly Ave or MCL or is less than LCL
  - O Outside the Range of Dilutions
  - X Matrix Effect

- C Calculated Value
- H Holding times for preparation or analysis exceeded
- L Analyzed by another laboratory
- ND Not Detected at the Reporting Limit
- S Spike Recovery outside accepted recovery limits

Reviewed by: Steve Kasa  
Steve Kasa, Organics Lab Supervisor



### Sample Analysis Report

**CLIENT:** ENTEK GRB LLC  
535 16 Street, Suite 620  
Denver, CO 80202

**Date Reported:** 10/10/2016  
**Report ID:** S1411001002  
(Replaces S1411001001)

**Project:** Robidoux 13-7 Pit Closure  
**Lab ID:** S1411001-008  
**Client Sample ID:** #2  
**Depths:** 9 - 12 Feet

**Work Order:** S1411001  
**Collection Date:** 10/30/2014  
**Date Received:** 10/31/2014  
**Sampler:** MK  
**Matrix:** Soil  
**COC:** 155924/925/926

Analyses	Result	RL	Qual	Units	Date Analyzed/Init	Method
<b>8015C Gasoline Range Organics-Soil (Absaraka Lab)</b>						
Unadjusted TVPH (nC5-nC12)	ND	10		mg/Kg	11/05/2014 1945 MAB	8015C
Surr: 4-Bromofluorobenzene	103	38-139		%REC	11/05/2014 1945 MAB	8015C
<b>8015C Diesel Range Organics-Soil (Absaraka Lab)</b>						
Total Extractable Hydrocarbons (nC8-nC40)	ND	25		mg/Kg	11/11/2014 1815 MAB	8015C
Surr: o-Terphenyl	65	11-116		%REC	11/11/2014 1815 MAB	8015C
<b>TPH (Total Petroleum Hydrocarbons) Soil (Absaraka Lab)</b>						
TPH (Calculated)	ND	25		mg/Kg	10/07/2016 0000 SFK	Calculation

**These results apply only to the samples tested.**

**RL - Reporting Limit**

- Qualifiers:**
- B Analyte detected in the associated Method Blank
  - E Value above quantitation range
  - J Analyte detected below quantitation limits
  - M Value exceeds Monthly Ave or MCL or is less than LCL
  - O Outside the Range of Dilutions
  - X Matrix Effect

- C Calculated Value
- H Holding times for preparation or analysis exceeded
- L Analyzed by another laboratory
- ND Not Detected at the Reporting Limit
- S Spike Recovery outside accepted recovery limits

Reviewed by: Steve Kasa  
Steve Kasa, Organics Lab Supervisor



Sample Analysis Report

CLIENT: ENTEK GRB LLC
535 16 Street, Suite 620
Denver, CO 80202

Date Reported: 10/10/2016
Report ID: S1411001002
(Replaces S1411001001)

Project: Robidoux 13-7 Pit Closure
Lab ID: S1411001-009
Client Sample ID: #3
Depths: 0 - 3 Feet

Work Order: S1411001
Collection Date: 10/30/2014
Date Received: 10/31/2014
Sampler: MK
Matrix: Soil
COC: 155924/925/926

Table with columns: Analyses, Result, RL, Qual, Units, Date Analyzed/Init, Method. Rows include General Parameters-Soil, Saturated Paste Cations, Saturated Paste Metals, Hot Water Soluble Metals, Total Metals-3050/6010, Mercury, and 8021B MBTEXN-Soil (Absaraka Lab).

These results apply only to the samples tested.

RL - Reporting Limit

- Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
X Matrix Effect

- C Calculated Value
H Holding times for preparation or analysis exceeded
L Analyzed by another laboratory
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits

Reviewed by: [Signature]
Steve Kasa, Organics Lab Supervisor



### Sample Analysis Report

**CLIENT:** ENTEK GRB LLC  
535 16 Street, Suite 620  
Denver, CO 80202

**Date Reported:** 10/10/2016  
**Report ID:** S1411001002  
(Replaces S1411001001)

**Project:** Robidoux 13-7 Pit Closure  
**Lab ID:** S1411001-009  
**Client Sample ID:** #3  
**Depths:** 0 - 3 Feet

**Work Order:** S1411001  
**Collection Date:** 10/30/2014  
**Date Received:** 10/31/2014  
**Sampler:** MK  
**Matrix:** Soil  
**COC:** 155924/925/926

Analyses	Result	RL	Qual	Units	Date Analyzed/Init	Method
<b>8015C Gasoline Range Organics-Soil (Absaraka Lab)</b>						
Unadjusted TVPH (nC5-nC12)	ND	10		mg/Kg	11/05/2014 2015 MAB	8015C
Surr: 4-Bromofluorobenzene	122	38-139		%REC	11/05/2014 2015 MAB	8015C
<b>8015C Diesel Range Organics-Soil (Absaraka Lab)</b>						
Total Extractable Hydrocarbons (nC8-nC40)	100	25		mg/Kg	11/11/2014 1849 MAB	8015C
Surr: o-Terphenyl	76	11-116		%REC	11/11/2014 1849 MAB	8015C
<b>TPH (Total Petroleum Hydrocarbons) Soil (Absaraka Lab)</b>						
TPH (Calculated)	100	25		mg/Kg	10/07/2016 0000 SFK	Calculation

**These results apply only to the samples tested.**

**RL - Reporting Limit**

- Qualifiers:**
- B Analyte detected in the associated Method Blank
  - E Value above quantitation range
  - J Analyte detected below quantitation limits
  - M Value exceeds Monthly Ave or MCL or is less than LCL
  - O Outside the Range of Dilutions
  - X Matrix Effect

- C Calculated Value
- H Holding times for preparation or analysis exceeded
- L Analyzed by another laboratory
- ND Not Detected at the Reporting Limit
- S Spike Recovery outside accepted recovery limits

Reviewed by:   
Steve Kasa, Organics Lab Supervisor



### Sample Analysis Report

**CLIENT:** ENTEK GRB LLC  
535 16 Street, Suite 620  
Denver, CO 80202

**Date Reported:** 10/10/2016  
**Report ID:** S1411001002  
(Replaces S1411001001)

**Project:** Robidoux 13-7 Pit Closure  
**Lab ID:** S1411001-010  
**Client Sample ID:** #3  
**Depths:** 3 - 6 Feet

**Work Order:** S1411001  
**Collection Date:** 10/30/2014  
**Date Received:** 10/31/2014  
**Sampler:** MK  
**Matrix:** Soil  
**COC:** 155924/925/926

Analyses	Result	RL	Qual	Units	Date Analyzed/Init	Method
<b>General Parameters-Soil</b>						
pH	7.7	0.1		s.u.	11/19/2014 1110 FA	USDA 60-21a
Electrical Conductivity	1.45	0.01		dS/m	11/19/2014 1110 FA	ASA9 10-3.3
Hexavalent Chromium	ND	2		ppm	11/21/2014 0000 KS	3060A/7196A
Trivalent Chromium	22	2		ppm	11/21/2014 0000 KS	3060A/7196A
<b>Saturated Paste Cations</b>						
Calcium	2.79	0.01		meq/L	11/19/2014 1742 BJ	EPA 200.7
Magnesium	3.46	0.01		meq/L	11/19/2014 1742 BJ	EPA 200.7
Sodium	8.25	0.01		meq/L	11/19/2014 1742 BJ	EPA 200.7
Sodium Adsorption Ratio	4.67	0.01			11/21/2014 0943 KS	Calculation
<b>Saturated Paste Metals</b>						
Nickel	ND	0.05		ppm	11/19/2014 0000 BJ	EPA 200.7
<b>Hot Water Soluble Metals</b>						
Boron	0.64	0.05		ppm	11/17/2014 1632 BJ	ASA9 25-9
<b>Total Metals-3050/6010</b>						
Arsenic	2.5	0.9		mg/Kg	11/20/2014 1807 DG	6010C
Barium	3170	0.2		mg/Kg	11/20/2014 1807 DG	6010C
Cadmium	1.47	0.05		mg/Kg	11/20/2014 1807 DG	6010C
Chromium	21.6	0.1		mg/Kg	11/20/2014 1807 DG	6010C
Copper	13.0	0.2		mg/Kg	11/20/2014 1807 DG	6010C
Lead	14.4	1.5		mg/Kg	11/20/2014 1807 DG	6010C
Selenium	ND	2.2		mg/Kg	11/20/2014 1807 DG	6010C
Silver	1.1	0.5		mg/Kg	11/20/2014 1807 DG	6010C
Zinc	59.4	1.3		mg/Kg	11/20/2014 1807 DG	6010C
<b>Mercury</b>						
Mercury	ND	0.2		mg/Kg	11/21/2014 0000 AW	7471B
<b>8021B MBTEXN-Soil (Absaraka Lab)</b>						
Benzene	ND	0.5		mg/Kg	11/05/2014 2045 MAB	8021B
Toluene	0.8	0.5		mg/Kg	11/05/2014 2045 MAB	8021B
Ethylbenzene	ND	0.5		mg/Kg	11/05/2014 2045 MAB	8021B
m,p-Xylenes	ND	1		mg/Kg	11/05/2014 2045 MAB	8021B
o-Xylene	ND	0.5		mg/Kg	11/05/2014 2045 MAB	8021B
Xylenes, Total	ND	1.5		mg/Kg	11/05/2014 2045 MAB	8021B
Surr: 4-Bromofluorobenzene	104	53-150		%REC	11/05/2014 2045 MAB	8021B

**These results apply only to the samples tested.**

**RL - Reporting Limit**

- Qualifiers:**
- B Analyte detected in the associated Method Blank
  - E Value above quantitation range
  - J Analyte detected below quantitation limits
  - M Value exceeds Monthly Ave or MCL or is less than LCL
  - O Outside the Range of Dilutions
  - X Matrix Effect

- C Calculated Value
- H Holding times for preparation or analysis exceeded
- L Analyzed by another laboratory
- ND Not Detected at the Reporting Limit
- S Spike Recovery outside accepted recovery limits

Reviewed by: Steve Kasa  
Steve Kasa, Organics Lab Supervisor



Sample Analysis Report

CLIENT: ENTEK GRB LLC
535 16 Street, Suite 620
Denver, CO 80202

Date Reported: 10/10/2016
Report ID: S1411001002
(Replaces S1411001001)
Work Order: S1411001
Collection Date: 10/30/2014
Date Received: 10/31/2014
Sampler: MK
Matrix: Soil
COC: 155924/925/926

Project: Robidoux 13-7 Pit Closure
Lab ID: S1411001-010
Client Sample ID: #3
Depths: 3 - 6 Feet

Table with 7 columns: Analyses, Result, RL, Qual, Units, Date Analyzed/Init, Method. Rows include 8015C Gasoline Range Organics-Soil, 8015C Diesel Range Organics-Soil, and TPH (Total Petroleum Hydrocarbons) Soil.

These results apply only to the samples tested.

RL - Reporting Limit

- Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
X Matrix Effect

- C Calculated Value
H Holding times for preparation or analysis exceeded
L Analyzed by another laboratory
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits

Reviewed by: [Signature]
Steve Kasa, Organics Lab Supervisor



### Sample Analysis Report

**CLIENT:** ENTEK GRB LLC  
535 16 Street, Suite 620  
Denver, CO 80202

**Date Reported:** 10/10/2016  
**Report ID:** S1411001002  
(Replaces S1411001001)

**Project:** Robidoux 13-7 Pit Closure  
**Lab ID:** S1411001-011  
**Client Sample ID:** #3  
**Depths:** 6 - 9 Feet

**Work Order:** S1411001  
**Collection Date:** 10/30/2014  
**Date Received:** 10/31/2014  
**Sampler:** MK  
**Matrix:** Soil  
**COC:** 155924/925/926

Analyses	Result	RL	Qual	Units	Date Analyzed/Init	Method
<b>General Parameters-Soil</b>						
pH	7.7	0.1		s.u.	11/19/2014 1111 FA	USDA 60-21a
Electrical Conductivity	1.37	0.01		dS/m	11/19/2014 1111 FA	ASA9 10-3.3
Hexavalent Chromium	ND	2		ppm	11/21/2014 0000 KS	3060A/7196A
Trivalent Chromium	16	2		ppm	11/21/2014 0000 KS	3060A/7196A
<b>Saturated Paste Cations</b>						
Calcium	2.44	0.01		meq/L	11/19/2014 1745 BJ	EPA 200.7
Magnesium	3.03	0.01		meq/L	11/19/2014 1745 BJ	EPA 200.7
Sodium	7.13	0.01		meq/L	11/19/2014 1745 BJ	EPA 200.7
Sodium Adsorption Ratio	4.31	0.01			11/21/2014 0943 KS	Calculation
<b>Saturated Paste Metals</b>						
Nickel	ND	0.05		ppm	11/19/2014 0000 BJ	EPA 200.7
<b>Hot Water Soluble Metals</b>						
Boron	0.67	0.05		ppm	11/17/2014 1642 BJ	ASA9 25-9
<b>Total Metals-3050/6010</b>						
Arsenic	ND	0.9		mg/Kg	11/20/2014 1809 DG	6010C
Barium	2330	0.2		mg/Kg	11/20/2014 1809 DG	6010C
Cadmium	0.98	0.05		mg/Kg	11/20/2014 1809 DG	6010C
Chromium	16.4	0.1		mg/Kg	11/20/2014 1809 DG	6010C
Copper	12.4	0.2		mg/Kg	11/20/2014 1809 DG	6010C
Lead	10.5	1.5		mg/Kg	11/20/2014 1809 DG	6010C
Selenium	ND	2.2		mg/Kg	11/20/2014 1809 DG	6010C
Silver	0.8	0.5		mg/Kg	11/20/2014 1809 DG	6010C
Zinc	45.2	1.3		mg/Kg	11/20/2014 1809 DG	6010C
<b>Mercury</b>						
Mercury	ND	0.2		mg/Kg	11/21/2014 0000 AW	7471B
<b>8021B MBTEXN-Soil (Absaraka Lab)</b>						
Benzene	ND	0.5		mg/Kg	11/05/2014 2115 MAB	8021B
Toluene	ND	0.5		mg/Kg	11/05/2014 2115 MAB	8021B
Ethylbenzene	ND	0.5		mg/Kg	11/05/2014 2115 MAB	8021B
m,p-Xylenes	ND	1		mg/Kg	11/05/2014 2115 MAB	8021B
o-Xylene	ND	0.5		mg/Kg	11/05/2014 2115 MAB	8021B
Xylenes, Total	ND	1.5		mg/Kg	11/05/2014 2115 MAB	8021B
Surr: 4-Bromofluorobenzene	108	53-150		%REC	11/05/2014 2115 MAB	8021B

**These results apply only to the samples tested.**

**RL - Reporting Limit**

- Qualifiers:**
- B Analyte detected in the associated Method Blank
  - E Value above quantitation range
  - J Analyte detected below quantitation limits
  - M Value exceeds Monthly Ave or MCL or is less than LCL
  - O Outside the Range of Dilutions
  - X Matrix Effect

- C Calculated Value
- H Holding times for preparation or analysis exceeded
- L Analyzed by another laboratory
- ND Not Detected at the Reporting Limit
- S Spike Recovery outside accepted recovery limits

Reviewed by: Steve Kasa  
Steve Kasa, Organics Lab Supervisor



Sample Analysis Report

CLIENT: ENTEK GRB LLC
535 16 Street, Suite 620
Denver, CO 80202

Date Reported: 10/10/2016
Report ID: S1411001002
(Replaces S1411001001)
Work Order: S1411001
Collection Date: 10/30/2014
Date Received: 10/31/2014
Sampler: MK
Matrix: Soil
COC: 155924/925/926

Project: Robidoux 13-7 Pit Closure
Lab ID: S1411001-011
Client Sample ID: #3
Depths: 6 - 9 Feet

Table with 7 columns: Analyses, Result, RL, Qual, Units, Date Analyzed/Init, Method. Rows include 8015C Gasoline Range Organics-Soil, 8015C Diesel Range Organics-Soil, and TPH (Total Petroleum Hydrocarbons) Soil.

These results apply only to the samples tested.

RL - Reporting Limit

- Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
X Matrix Effect

- C Calculated Value
H Holding times for preparation or analysis exceeded
L Analyzed by another laboratory
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits

Reviewed by: [Signature]
Steve Kasa, Organics Lab Supervisor



Sample Analysis Report

CLIENT: ENTEK GRB LLC
535 16 Street, Suite 620
Denver, CO 80202

Date Reported: 10/10/2016
Report ID: S1411001002
(Replaces S1411001001)

Project: Robidoux 13-7 Pit Closure
Lab ID: S1411001-012
Client Sample ID: #3
Depths: 9 - 12 Feet

Work Order: S1411001
Collection Date: 10/30/2014
Date Received: 10/31/2014
Sampler: MK
Matrix: Soil
COC: 155924/925/926

Table with columns: Analyses, Result, RL, Qual, Units, Date Analyzed/Init, Method. Rows include General Parameters-Soil, Saturated Paste Cations, Saturated Paste Metals, Hot Water Soluble Metals, Total Metals-3050/6010, Mercury, and 8021B MBTEXN-Soil (Absaraka Lab).

These results apply only to the samples tested.

RL - Reporting Limit

- Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
X Matrix Effect

- C Calculated Value
H Holding times for preparation or analysis exceeded
L Analyzed by another laboratory
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits

Reviewed by: [Signature]
Steve Kasa, Organics Lab Supervisor



### Sample Analysis Report

**CLIENT:** ENTEK GRB LLC  
535 16 Street, Suite 620  
Denver, CO 80202

**Date Reported:** 10/10/2016  
**Report ID:** S1411001002  
(Replaces S1411001001)

**Project:** Robidoux 13-7 Pit Closure  
**Lab ID:** S1411001-012  
**Client Sample ID:** #3  
**Depths:** 9 - 12 Feet

**Work Order:** S1411001  
**Collection Date:** 10/30/2014  
**Date Received:** 10/31/2014  
**Sampler:** MK  
**Matrix:** Soil  
**COC:** 155924/925/926

Analyses	Result	RL	Qual	Units	Date Analyzed/Init	Method
<b>8015C Gasoline Range Organics-Soil (Absaraka Lab)</b>						
Unadjusted TVPH (nC5-nC12)	ND	10		mg/Kg	11/05/2014 2145 MAB	8015C
Surr: 4-Bromofluorobenzene	111	38-139		%REC	11/05/2014 2145 MAB	8015C
<b>8015C Diesel Range Organics-Soil (Absaraka Lab)</b>						
Total Extractable Hydrocarbons (nC8-nC40)	310	25		mg/Kg	11/11/2014 2033 MAB	8015C
Surr: o-Terphenyl	80	11-116		%REC	11/11/2014 2033 MAB	8015C
<b>TPH (Total Petroleum Hydrocarbons) Soil (Absaraka Lab)</b>						
TPH (Calculated)	310	25		mg/Kg	10/07/2016 0000 SFK	Calculation

**These results apply only to the samples tested.**

**RL - Reporting Limit**

- Qualifiers:**
- B Analyte detected in the associated Method Blank
  - E Value above quantitation range
  - J Analyte detected below quantitation limits
  - M Value exceeds Monthly Ave or MCL or is less than LCL
  - O Outside the Range of Dilutions
  - X Matrix Effect

- C Calculated Value
- H Holding times for preparation or analysis exceeded
- L Analyzed by another laboratory
- ND Not Detected at the Reporting Limit
- S Spike Recovery outside accepted recovery limits

Reviewed by:   
Steve Kasa, Organics Lab Supervisor



### Sample Analysis Report

**CLIENT:** ENTEK GRB LLC  
535 16 Street, Suite 620  
Denver, CO 80202

**Date Reported:** 10/10/2016  
**Report ID:** S1411001002  
(Replaces S1411001001)

**Project:** Robidoux 13-7 Pit Closure  
**Lab ID:** S1411001-013  
**Client Sample ID:** #4  
**Depths:** 0 - 3 Feet

**Work Order:** S1411001  
**Collection Date:** 10/30/2014  
**Date Received:** 10/31/2014  
**Sampler:** MK  
**Matrix:** Soil  
**COC:** 155924/925/926

Analyses	Result	RL	Qual	Units	Date Analyzed/Init	Method
<b>General Parameters-Soil</b>						
pH	7.9	0.1		s.u.	11/19/2014 1113 FA	USDA 60-21a
Electrical Conductivity	0.76	0.01		dS/m	11/19/2014 1113 FA	ASA9 10-3.3
Hexavalent Chromium	ND	2		ppm	11/21/2014 0000 KS	3060A/7196A
Trivalent Chromium	26	2		ppm	11/21/2014 0000 KS	3060A/7196A
<b>Saturated Paste Cations</b>						
Calcium	2.28	0.01		meq/L	11/19/2014 1749 BJ	EPA 200.7
Magnesium	4.00	0.01		meq/L	11/19/2014 1749 BJ	EPA 200.7
Sodium	2.02	0.01		meq/L	11/19/2014 1749 BJ	EPA 200.7
Sodium Adsorption Ratio	1.14	0.01			11/21/2014 0943 KS	Calculation
<b>Saturated Paste Metals</b>						
Nickel	ND	0.05		ppm	11/19/2014 0000 BJ	EPA 200.7
<b>Hot Water Soluble Metals</b>						
Boron	0.74	0.05		ppm	11/17/2014 1647 BJ	ASA9 25-9
<b>Total Metals-3050/6010</b>						
Arsenic	ND	0.9		mg/Kg	11/20/2014 1821 DG	6010C
Barium	1060	0.2		mg/Kg	11/20/2014 1821 DG	6010C
Cadmium	1.06	0.05		mg/Kg	11/20/2014 1821 DG	6010C
Chromium	25.9	0.1		mg/Kg	11/20/2014 1821 DG	6010C
Copper	12.8	0.2		mg/Kg	11/20/2014 1821 DG	6010C
Lead	7.9	1.5		mg/Kg	11/20/2014 1821 DG	6010C
Selenium	ND	2.2		mg/Kg	11/20/2014 1821 DG	6010C
Silver	1.5	0.5		mg/Kg	11/20/2014 1821 DG	6010C
Zinc	45.6	1.3		mg/Kg	11/20/2014 1821 DG	6010C
<b>Mercury</b>						
Mercury	ND	0.2		mg/Kg	11/21/2014 0000 AW	7471B
<b>8021B MBTEXN-Soil (Absaraka Lab)</b>						
Benzene	ND	0.5		mg/Kg	11/06/2014 1440 MAB	8021B
Toluene	ND	0.5		mg/Kg	11/06/2014 1440 MAB	8021B
Ethylbenzene	ND	0.5		mg/Kg	11/06/2014 1440 MAB	8021B
m,p-Xylenes	ND	1		mg/Kg	11/06/2014 1440 MAB	8021B
o-Xylene	ND	0.5		mg/Kg	11/06/2014 1440 MAB	8021B
Xylenes, Total	ND	1.5		mg/Kg	11/06/2014 1440 MAB	8021B
Surr: 4-Bromofluorobenzene	139	53-150		%REC	11/06/2014 1440 MAB	8021B

**These results apply only to the samples tested.**

**RL - Reporting Limit**

- Qualifiers:**
- B Analyte detected in the associated Method Blank
  - E Value above quantitation range
  - J Analyte detected below quantitation limits
  - M Value exceeds Monthly Ave or MCL or is less than LCL
  - O Outside the Range of Dilutions
  - X Matrix Effect

- C Calculated Value
- H Holding times for preparation or analysis exceeded
- L Analyzed by another laboratory
- ND Not Detected at the Reporting Limit
- S Spike Recovery outside accepted recovery limits

Reviewed by: Steve Kasa  
Steve Kasa, Organics Lab Supervisor



Sample Analysis Report

CLIENT: ENTEK GRB LLC
535 16 Street, Suite 620
Denver, CO 80202

Date Reported: 10/10/2016
Report ID: S1411001002
(Replaces S1411001001)
Work Order: S1411001
Collection Date: 10/30/2014
Date Received: 10/31/2014
Sampler: MK
Matrix: Soil
COC: 155924/925/926

Project: Robidoux 13-7 Pit Closure
Lab ID: S1411001-013
Client Sample ID: #4
Depths: 0 - 3 Feet

Table with 7 columns: Analyses, Result, RL, Qual, Units, Date Analyzed/Init, Method. Rows include 8015C Gasoline Range Organics-Soil, 8015C Diesel Range Organics-Soil, and TPH (Total Petroleum Hydrocarbons) Soil.

These results apply only to the samples tested.

RL - Reporting Limit

- Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
X Matrix Effect

- C Calculated Value
H Holding times for preparation or analysis exceeded
L Analyzed by another laboratory
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits

Reviewed by: [Signature]
Steve Kasa, Organics Lab Supervisor



Sample Analysis Report

CLIENT: ENTEK GRB LLC
535 16 Street, Suite 620
Denver, CO 80202

Date Reported: 10/10/2016
Report ID: S1411001002
(Replaces S1411001001)

Project: Robidoux 13-7 Pit Closure
Lab ID: S1411001-014
Client Sample ID: #4
Depths: 3 - 6 Feet

Work Order: S1411001
Collection Date: 10/30/2014
Date Received: 10/31/2014
Sampler: MK
Matrix: Soil
COC: 155924/925/926

Table with columns: Analyses, Result, RL, Qual, Units, Date Analyzed/Init, Method. Rows include General Parameters-Soil, Saturated Paste Cations, Saturated Paste Metals, Hot Water Soluble Metals, Total Metals-3050/6010, Mercury, and 8021B MBTEXN-Soil (Absaraka Lab).

These results apply only to the samples tested.

RL - Reporting Limit

- Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
X Matrix Effect

- C Calculated Value
H Holding times for preparation or analysis exceeded
L Analyzed by another laboratory
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits

Reviewed by: [Signature]
Steve Kasa, Organics Lab Supervisor



### Sample Analysis Report

**CLIENT:** ENTEK GRB LLC  
535 16 Street, Suite 620  
Denver, CO 80202

**Date Reported:** 10/10/2016  
**Report ID:** S1411001002  
(Replaces S1411001001)

**Project:** Robidoux 13-7 Pit Closure  
**Lab ID:** S1411001-014  
**Client Sample ID:** #4  
**Depths:** 3 - 6 Feet

**Work Order:** S1411001  
**Collection Date:** 10/30/2014  
**Date Received:** 10/31/2014  
**Sampler:** MK  
**Matrix:** Soil  
**COC:** 155924/925/926

Analyses	Result	RL	Qual	Units	Date Analyzed/Init	Method
<b>8015C Gasoline Range Organics-Soil (Absaraka Lab)</b>						
Unadjusted TVPH (nC5-nC12)	ND	10		mg/Kg	11/06/2014 1509 MAB	8015C
Surr: 4-Bromofluorobenzene	108	38-139		%REC	11/06/2014 1509 MAB	8015C
<b>8015C Diesel Range Organics-Soil (Absaraka Lab)</b>						
Total Extractable Hydrocarbons (nC8-nC40)	220	25		mg/Kg	11/11/2014 2142 MAB	8015C
Surr: o-Terphenyl	82	11-116		%REC	11/11/2014 2142 MAB	8015C
<b>TPH (Total Petroleum Hydrocarbons) Soil (Absaraka Lab)</b>						
TPH (Calculated)	220	25		mg/Kg	10/07/2016 0000 SFK	Calculation

**These results apply only to the samples tested.**

**RL - Reporting Limit**

- Qualifiers:**
- B Analyte detected in the associated Method Blank
  - E Value above quantitation range
  - J Analyte detected below quantitation limits
  - M Value exceeds Monthly Ave or MCL or is less than LCL
  - O Outside the Range of Dilutions
  - X Matrix Effect

- C Calculated Value
- H Holding times for preparation or analysis exceeded
- L Analyzed by another laboratory
- ND Not Detected at the Reporting Limit
- S Spike Recovery outside accepted recovery limits

Reviewed by:   
Steve Kasa, Organics Lab Supervisor



Sample Analysis Report

CLIENT: ENTEK GRB LLC
535 16 Street, Suite 620
Denver, CO 80202

Date Reported: 10/10/2016
Report ID: S1411001002
(Replaces S1411001001)

Project: Robidoux 13-7 Pit Closure
Lab ID: S1411001-015
Client Sample ID: #4
Depths: 6 - 9 Feet

Work Order: S1411001
Collection Date: 10/30/2014
Date Received: 10/31/2014
Sampler: MK
Matrix: Soil
COC: 155924/925/926

Table with columns: Analyses, Result, RL, Qual, Units, Date Analyzed/Init, Method. Rows include General Parameters-Soil, Saturated Paste Cations, Saturated Paste Metals, Hot Water Soluble Metals, Total Metals-3050/6010, Mercury, and 8021B MBTEXN-Soil (Absaraka Lab).

These results apply only to the samples tested.

RL - Reporting Limit

- Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
X Matrix Effect

- C Calculated Value
H Holding times for preparation or analysis exceeded
L Analyzed by another laboratory
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits

Reviewed by: [Signature]
Steve Kasa, Organics Lab Supervisor



### Sample Analysis Report

**CLIENT:** ENTEK GRB LLC  
535 16 Street, Suite 620  
Denver, CO 80202

**Date Reported:** 10/10/2016  
**Report ID:** S1411001002  
(Replaces S1411001001)

**Project:** Robidoux 13-7 Pit Closure  
**Lab ID:** S1411001-015  
**Client Sample ID:** #4  
**Depths:** 6 - 9 Feet

**Work Order:** S1411001  
**Collection Date:** 10/30/2014  
**Date Received:** 10/31/2014  
**Sampler:** MK  
**Matrix:** Soil  
**COC:** 155924/925/926

Analyses	Result	RL	Qual	Units	Date Analyzed/Init	Method
<b>8015C Gasoline Range Organics-Soil (Absaraka Lab)</b>						
Unadjusted TVPH (nC5-nC12)	ND	10		mg/Kg	11/06/2014 1538 MAB	8015C
Surr: 4-Bromofluorobenzene	103	38-139		%REC	11/06/2014 1538 MAB	8015C
<b>8015C Diesel Range Organics-Soil (Absaraka Lab)</b>						
Total Extractable Hydrocarbons (nC8-nC40)	240	25		mg/Kg	11/11/2014 2216 MAB	8015C
Surr: o-Terphenyl	82	11-116		%REC	11/11/2014 2216 MAB	8015C
<b>TPH (Total Petroleum Hydrocarbons) Soil (Absaraka Lab)</b>						
TPH (Calculated)	240	25		mg/Kg	10/07/2016 0000 SFK	Calculation

**These results apply only to the samples tested.**

**RL - Reporting Limit**

- Qualifiers:**
- B Analyte detected in the associated Method Blank
  - E Value above quantitation range
  - J Analyte detected below quantitation limits
  - M Value exceeds Monthly Ave or MCL or is less than LCL
  - O Outside the Range of Dilutions
  - X Matrix Effect

- C Calculated Value
- H Holding times for preparation or analysis exceeded
- L Analyzed by another laboratory
- ND Not Detected at the Reporting Limit
- S Spike Recovery outside accepted recovery limits

Reviewed by: Steve Kasa  
Steve Kasa, Organics Lab Supervisor



### Sample Analysis Report

**CLIENT:** ENTEK GRB LLC  
535 16 Street, Suite 620  
Denver, CO 80202

**Date Reported:** 10/10/2016  
**Report ID:** S1411001002  
(Replaces S1411001001)

**Project:** Robidoux 13-7 Pit Closure  
**Lab ID:** S1411001-016  
**Client Sample ID:** #4  
**Depths:** 9 - 12 Feet

**Work Order:** S1411001  
**Collection Date:** 10/30/2014  
**Date Received:** 10/31/2014  
**Sampler:** MK  
**Matrix:** Soil  
**COC:** 155924/925/926

Analyses	Result	RL	Qual	Units	Date Analyzed/Init	Method
<b>General Parameters-Soil</b>						
pH	8.2	0.1		s.u.	11/19/2014 1117 FA	USDA 60-21a
Electrical Conductivity	1.23	0.01		dS/m	11/19/2014 1117 FA	ASA9 10-3.3
Hexavalent Chromium	ND	2		ppm	11/21/2014 0000 KS	3060A/7196A
Trivalent Chromium	26	2		ppm	11/21/2014 0000 KS	3060A/7196A
<b>Saturated Paste Cations</b>						
Calcium	1.89	0.01		meq/L	11/19/2014 1806 BJ	EPA 200.7
Magnesium	4.56	0.01		meq/L	11/19/2014 1806 BJ	EPA 200.7
Sodium	6.76	0.01		meq/L	11/19/2014 1806 BJ	EPA 200.7
Sodium Adsorption Ratio	3.76	0.01			11/21/2014 0943 KS	Calculation
<b>Saturated Paste Metals</b>						
Nickel	ND	0.05		ppm	11/19/2014 0000 BJ	EPA 200.7
<b>Hot Water Soluble Metals</b>						
Boron	0.64	0.05		ppm	11/17/2014 1656 BJ	ASA9 25-9
<b>Total Metals-3050/6010</b>						
Arsenic	2.7	0.9		mg/Kg	11/20/2014 1827 DG	6010C
Barium	1080	0.2		mg/Kg	11/20/2014 1827 DG	6010C
Cadmium	1.31	0.05		mg/Kg	11/20/2014 1827 DG	6010C
Chromium	25.6	0.1		mg/Kg	11/20/2014 1827 DG	6010C
Copper	15.1	0.2		mg/Kg	11/20/2014 1827 DG	6010C
Lead	7.4	1.5		mg/Kg	11/20/2014 1827 DG	6010C
Selenium	ND	2.2		mg/Kg	11/20/2014 1827 DG	6010C
Silver	ND	0.5		mg/Kg	11/20/2014 1827 DG	6010C
Zinc	50.5	1.3		mg/Kg	11/20/2014 1827 DG	6010C
<b>Mercury</b>						
Mercury	ND	0.2		mg/Kg	11/21/2014 0000 AW	7471B
<b>8021B MBTEXN-Soil (Absaraka Lab)</b>						
Benzene	ND	0.5		mg/Kg	11/06/2014 1608 MAB	8021B
Toluene	ND	0.5		mg/Kg	11/06/2014 1608 MAB	8021B
Ethylbenzene	ND	0.5		mg/Kg	11/06/2014 1608 MAB	8021B
m,p-Xylenes	ND	1		mg/Kg	11/06/2014 1608 MAB	8021B
o-Xylene	ND	0.5		mg/Kg	11/06/2014 1608 MAB	8021B
Xylenes, Total	ND	1.5		mg/Kg	11/06/2014 1608 MAB	8021B
Surr: 4-Bromofluorobenzene	110	53-150		%REC	11/06/2014 1608 MAB	8021B

**These results apply only to the samples tested.**

**RL - Reporting Limit**

- Qualifiers:**
- B Analyte detected in the associated Method Blank
  - E Value above quantitation range
  - J Analyte detected below quantitation limits
  - M Value exceeds Monthly Ave or MCL or is less than LCL
  - O Outside the Range of Dilutions
  - X Matrix Effect

- C Calculated Value
- H Holding times for preparation or analysis exceeded
- L Analyzed by another laboratory
- ND Not Detected at the Reporting Limit
- S Spike Recovery outside accepted recovery limits

Reviewed by: Steve Kasa  
Steve Kasa, Organics Lab Supervisor



### Sample Analysis Report

**CLIENT:** ENTEK GRB LLC  
535 16 Street, Suite 620  
Denver, CO 80202

**Date Reported:** 10/10/2016  
**Report ID:** S1411001002  
(Replaces S1411001001)

**Project:** Robidoux 13-7 Pit Closure  
**Lab ID:** S1411001-016  
**Client Sample ID:** #4  
**Depths:** 9 - 12 Feet

**Work Order:** S1411001  
**Collection Date:** 10/30/2014  
**Date Received:** 10/31/2014  
**Sampler:** MK  
**Matrix:** Soil  
**COC:** 155924/925/926

Analyses	Result	RL	Qual	Units	Date Analyzed/Init	Method
<b>8015C Gasoline Range Organics-Soil (Absaraka Lab)</b>						
Unadjusted TVPH (nC5-nC12)	ND	10		mg/Kg	11/06/2014 1608 MAB	8015C
Surr: 4-Bromofluorobenzene	104	38-139		%REC	11/06/2014 1608 MAB	8015C
<b>8015C Diesel Range Organics-Soil (Absaraka Lab)</b>						
Total Extractable Hydrocarbons (nC8-nC40)	160	25		mg/Kg	11/11/2014 2251 MAB	8015C
Surr: o-Terphenyl	62	11-116		%REC	11/11/2014 2251 MAB	8015C
<b>TPH (Total Petroleum Hydrocarbons) Soil (Absaraka Lab)</b>						
TPH (Calculated)	160	25		mg/Kg	10/07/2016 0000 SFK	Calculation

**These results apply only to the samples tested.**

**RL - Reporting Limit**

- Qualifiers:**
- B Analyte detected in the associated Method Blank
  - E Value above quantitation range
  - J Analyte detected below quantitation limits
  - M Value exceeds Monthly Ave or MCL or is less than LCL
  - O Outside the Range of Dilutions
  - X Matrix Effect

- C Calculated Value
- H Holding times for preparation or analysis exceeded
- L Analyzed by another laboratory
- ND Not Detected at the Reporting Limit
- S Spike Recovery outside accepted recovery limits

Reviewed by: Steve Kasa  
Steve Kasa, Organics Lab Supervisor



Sample Analysis Report

CLIENT: ENTEK GRB LLC
535 16 Street, Suite 620
Denver, CO 80202

Date Reported: 10/10/2016
Report ID: S1411001002
(Replaces S1411001001)

Project: Robidoux 13-7 Pit Closure
Lab ID: S1411001-017
Client Sample ID: #5
Depths: 0 - 3 Feet

Work Order: S1411001
Collection Date: 10/30/2014
Date Received: 10/31/2014
Sampler: MK
Matrix: Soil
COC: 155924/925/926

Table with columns: Analyses, Result, RL, Qual, Units, Date Analyzed/Init, Method. Rows include General Parameters-Soil, Saturated Paste Cations, Saturated Paste Metals, Hot Water Soluble Metals, Total Metals-3050/6010, Mercury, and 8021B MBTEXN-Soil (Absaraka Lab).

These results apply only to the samples tested.

RL - Reporting Limit

- Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
X Matrix Effect

- C Calculated Value
H Holding times for preparation or analysis exceeded
L Analyzed by another laboratory
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits

Reviewed by: [Signature]
Steve Kasa, Organics Lab Supervisor



Sample Analysis Report

CLIENT: ENTEK GRB LLC
535 16 Street, Suite 620
Denver, CO 80202

Date Reported: 10/10/2016
Report ID: S1411001002
(Replaces S1411001001)
Work Order: S1411001
Collection Date: 10/30/2014
Date Received: 10/31/2014
Sampler: MK
Matrix: Soil
COC: 155924/925/926

Project: Robidoux 13-7 Pit Closure
Lab ID: S1411001-017
Client Sample ID: #5
Depths: 0 - 3 Feet

Table with 7 columns: Analyses, Result, RL, Qual, Units, Date Analyzed/Init, Method. Rows include 8015C Gasoline Range Organics-Soil, 8015C Diesel Range Organics-Soil, and TPH (Total Petroleum Hydrocarbons) Soil.

These results apply only to the samples tested.

RL - Reporting Limit

- Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
X Matrix Effect

- C Calculated Value
H Holding times for preparation or analysis exceeded
L Analyzed by another laboratory
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits

Reviewed by: [Signature]
Steve Kasa, Organics Lab Supervisor



### Sample Analysis Report

**CLIENT:** ENTEK GRB LLC  
535 16 Street, Suite 620  
Denver, CO 80202

**Date Reported:** 10/10/2016  
**Report ID:** S1411001002  
(Replaces S1411001001)

**Project:** Robidoux 13-7 Pit Closure  
**Lab ID:** S1411001-018  
**Client Sample ID:** #5  
**Depths:** 3 - 6 Feet

**Work Order:** S1411001  
**Collection Date:** 10/30/2014  
**Date Received:** 10/31/2014  
**Sampler:** MK  
**Matrix:** Soil  
**COC:** 155924/925/926

Analyses	Result	RL	Qual	Units	Date Analyzed/Init	Method
<b>General Parameters-Soil</b>						
pH	8.3	0.1		s.u.	11/19/2014 1119 FA	USDA 60-21a
Electrical Conductivity	1.23	0.01		dS/m	11/19/2014 1119 FA	ASA9 10-3.3
Hexavalent Chromium	ND	2		ppm	11/21/2014 0000 KS	3060A/7196A
Trivalent Chromium	28	2		ppm	11/21/2014 0000 KS	3060A/7196A
<b>Saturated Paste Cations</b>						
Calcium	1.27	0.01		meq/L	11/19/2014 1811 BJ	EPA 200.7
Magnesium	3.22	0.01		meq/L	11/19/2014 1811 BJ	EPA 200.7
Sodium	8.05	0.01		meq/L	11/19/2014 1811 BJ	EPA 200.7
Sodium Adsorption Ratio	5.38	0.01			11/21/2014 0943 KS	Calculation
<b>Saturated Paste Metals</b>						
Nickel	ND	0.05		ppm	11/19/2014 0000 BJ	EPA 200.7
<b>Hot Water Soluble Metals</b>						
Boron	0.68	0.05		ppm	11/17/2014 1701 BJ	ASA9 25-9
<b>Total Metals-3050/6010</b>						
Arsenic	4.6	0.9		mg/Kg	11/20/2014 1839 DG	6010C
Barium	897	0.2		mg/Kg	11/20/2014 1839 DG	6010C
Cadmium	1.25	0.05		mg/Kg	11/20/2014 1839 DG	6010C
Chromium	28.2	0.1		mg/Kg	11/20/2014 1839 DG	6010C
Copper	16.3	0.2		mg/Kg	11/20/2014 1839 DG	6010C
Lead	7.7	1.5		mg/Kg	11/20/2014 1839 DG	6010C
Selenium	ND	2.2		mg/Kg	11/20/2014 1839 DG	6010C
Silver	ND	0.5		mg/Kg	11/20/2014 1839 DG	6010C
Zinc	56.8	1.3		mg/Kg	11/20/2014 1839 DG	6010C
<b>Mercury</b>						
Mercury	ND	0.2		mg/Kg	11/21/2014 0000 AW	7471B
<b>8021B MBTEXN-Soil (Absaraka Lab)</b>						
Benzene	ND	0.5		mg/Kg	11/06/2014 1706 MAB	8021B
Toluene	ND	0.5		mg/Kg	11/06/2014 1706 MAB	8021B
Ethylbenzene	ND	0.5		mg/Kg	11/06/2014 1706 MAB	8021B
m,p-Xylenes	ND	1		mg/Kg	11/06/2014 1706 MAB	8021B
o-Xylene	ND	0.5		mg/Kg	11/06/2014 1706 MAB	8021B
Xylenes, Total	ND	1.5		mg/Kg	11/06/2014 1706 MAB	8021B
Surr: 4-Bromofluorobenzene	106	53-150		%REC	11/06/2014 1706 MAB	8021B

**These results apply only to the samples tested.**

**RL - Reporting Limit**

- Qualifiers:**
- B Analyte detected in the associated Method Blank
  - E Value above quantitation range
  - J Analyte detected below quantitation limits
  - M Value exceeds Monthly Ave or MCL or is less than LCL
  - O Outside the Range of Dilutions
  - X Matrix Effect

- C Calculated Value
- H Holding times for preparation or analysis exceeded
- L Analyzed by another laboratory
- ND Not Detected at the Reporting Limit
- S Spike Recovery outside accepted recovery limits

Reviewed by: Steve Kasa  
Steve Kasa, Organics Lab Supervisor



Sample Analysis Report

CLIENT: ENTEK GRB LLC
535 16 Street, Suite 620
Denver, CO 80202

Date Reported: 10/10/2016
Report ID: S1411001002
(Replaces S1411001001)
Work Order: S1411001
Collection Date: 10/30/2014
Date Received: 10/31/2014
Sampler: MK
Matrix: Soil
COC: 155924/925/926

Project: Robidoux 13-7 Pit Closure
Lab ID: S1411001-018
Client Sample ID: #5
Depths: 3 - 6 Feet

Table with 7 columns: Analyses, Result, RL, Qual, Units, Date Analyzed/Init, Method. Rows include 8015C Gasoline Range Organics-Soil, 8015C Diesel Range Organics-Soil, and TPH (Total Petroleum Hydrocarbons) Soil.

These results apply only to the samples tested.

RL - Reporting Limit

- Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
X Matrix Effect

- C Calculated Value
H Holding times for preparation or analysis exceeded
L Analyzed by another laboratory
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits

Reviewed by: [Signature]
Steve Kasa, Organics Lab Supervisor



Sample Analysis Report

CLIENT: ENTEK GRB LLC
535 16 Street, Suite 620
Denver, CO 80202

Date Reported: 10/10/2016
Report ID: S1411001002
(Replaces S1411001001)

Project: Robidoux 13-7 Pit Closure
Lab ID: S1411001-019
Client Sample ID: #5
Depths: 6 - 9 Feet

Work Order: S1411001
Collection Date: 10/30/2014
Date Received: 10/31/2014
Sampler: MK
Matrix: Soil
COC: 155924/925/926

Table with columns: Analyses, Result, RL, Qual, Units, Date Analyzed/Init, Method. Rows include General Parameters-Soil, Saturated Paste Cations, Saturated Paste Metals, Hot Water Soluble Metals, Total Metals-3050/6010, Mercury, and 8021B MBTEXN-Soil (Absaraka Lab).

These results apply only to the samples tested.

RL - Reporting Limit

- Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
X Matrix Effect

- C Calculated Value
H Holding times for preparation or analysis exceeded
L Analyzed by another laboratory
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits

Reviewed by: [Signature]
Steve Kasa, Organics Lab Supervisor



Sample Analysis Report

CLIENT: ENTEK GRB LLC
535 16 Street, Suite 620
Denver, CO 80202

Date Reported: 10/10/2016
Report ID: S1411001002
(Replaces S1411001001)
Work Order: S1411001
Collection Date: 10/30/2014
Date Received: 10/31/2014
Sampler: MK
Matrix: Soil
COC: 155924/925/926

Project: Robidoux 13-7 Pit Closure
Lab ID: S1411001-019
Client Sample ID: #5
Depths: 6 - 9 Feet

Table with 7 columns: Analyses, Result, RL, Qual, Units, Date Analyzed/Init, Method. Rows include 8015C Gasoline Range Organics-Soil, 8015C Diesel Range Organics-Soil, and TPH (Total Petroleum Hydrocarbons) Soil.

These results apply only to the samples tested.

RL - Reporting Limit

- Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
X Matrix Effect

- C Calculated Value
H Holding times for preparation or analysis exceeded
L Analyzed by another laboratory
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits

Reviewed by: [Signature]
Steve Kasa, Organics Lab Supervisor



Sample Analysis Report

CLIENT: ENTEK GRB LLC
535 16 Street, Suite 620
Denver, CO 80202

Date Reported: 10/10/2016
Report ID: S1411001002
(Replaces S1411001001)

Project: Robidoux 13-7 Pit Closure
Lab ID: S1411001-020
Client Sample ID: #5
Depths: 9 - 12 Feet

Work Order: S1411001
Collection Date: 10/30/2014
Date Received: 10/31/2014
Sampler: MK
Matrix: Soil
COC: 155924/925/926

Table with columns: Analyses, Result, RL, Qual, Units, Date Analyzed/Init, Method. Rows include General Parameters-Soil, Saturated Paste Cations, Saturated Paste Metals, Hot Water Soluble Metals, Total Metals-3050/6010, Mercury, and 8021B MBTEXN-Soil (Absaraka Lab).

These results apply only to the samples tested.

RL - Reporting Limit

- Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
X Matrix Effect

- C Calculated Value
H Holding times for preparation or analysis exceeded
L Analyzed by another laboratory
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits

Reviewed by: [Signature]
Steve Kasa, Organics Lab Supervisor



Sample Analysis Report

CLIENT: ENTEK GRB LLC
535 16 Street, Suite 620
Denver, CO 80202

Date Reported: 10/10/2016
Report ID: S1411001002
(Replaces S1411001001)
Work Order: S1411001
Collection Date: 10/30/2014
Date Received: 10/31/2014
Sampler: MK
Matrix: Soil
COC: 155924/925/926

Project: Robidoux 13-7 Pit Closure
Lab ID: S1411001-020
Client Sample ID: #5
Depths: 9 - 12 Feet

Table with 7 columns: Analyses, Result, RL, Qual, Units, Date Analyzed/Init, Method. Rows include 8015C Gasoline Range Organics-Soil, 8015C Diesel Range Organics-Soil, and TPH (Total Petroleum Hydrocarbons) Soil.

These results apply only to the samples tested.

RL - Reporting Limit

- Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
X Matrix Effect

- C Calculated Value
H Holding times for preparation or analysis exceeded
L Analyzed by another laboratory
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits

Reviewed by: [Signature]
Steve Kasa, Organics Lab Supervisor



### ANALYTICAL QC SUMMARY REPORT

**CLIENT:** ENTEK GRB LLC  
**Work Order:** S1411001  
**Project:** Robidoux 13-7 Pit Closure

**Date:** 10/10/2016  
**Report ID:** S1411001002  
(Replaces S1411001001)

**8015C Diesel Range Organics-Soil**

Sample Type **MBLK**

Units: mg/Kg

MB-9171 (11/11/14 10:45)	RunNo: 114856	PrepDate: 11/10/14 0:00	BatchID 9171				Qual
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	
Total Extractable Hydrocarbons (nC8-nC40)	ND	25					
Surr: o-Terphenyl	3.3	0.02	5		65.7	47 - 121	

**8015C Diesel Range Organics-Soil**

Sample Type **LCS**

Units: mg/Kg

LCS-9171 (11/11/14 11:20)	RunNo: 114856	PrepDate: 11/10/14 0:00	BatchID 9171				Qual
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	
Total Extractable Hydrocarbons (nC8-nC40)	90	25	200		45.0	26 - 100	
Surr: o-Terphenyl	3.2	0.02	5		63.3	47 - 121	

**8015C Diesel Range Organics-Soil**

Sample Type **MS**

Units: mg/Kg

S1411001-002AMS (11/11/14 14:47)	RunNo: 114856	PrepDate: 11/10/14 0:00	BatchID 9171				Qual
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	
Total Extractable Hydrocarbons (nC8-nC40)	420	25	200	230	95.4	16 - 98	
Surr: o-Terphenyl	3.9	0.02	5	ND	77.0	11 - 116	

**8015C Diesel Range Organics-Soil**

Sample Type **DUP**

Units: mg/Kg

S1411001-001ADUP (11/11/14 13:37)	RunNo: 114856	PrepDate: 11/10/14 0:00	BatchID 9171				Qual
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	
Total Extractable Hydrocarbons (nC8-nC40)	ND	25	30			20	
Surr: o-Terphenyl	3.8	0.02	3.8	0		20	

<b>Qualifiers:</b>	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	L Analyzed by another laboratory	ND Not Detected at the Reporting Limit
	O Outside the Range of Dilutions	R RPD outside accepted recovery limits
	S Spike Recovery outside accepted recovery limits	X Matrix Effect



### ANALYTICAL QC SUMMARY REPORT

**CLIENT:** ENTEK GRB LLC  
**Work Order:** S1411001  
**Project:** Robidoux 13-7 Pit Closure

**Date:** 10/10/2016  
**Report ID:** S1411001002  
(Replaces S1411001001)

**8015C Gasoline Range Organics-Soil**

Sample Type **MBLK**

Units: mg/Kg

MB-9148 (11/05/14 12:08)	RunNo: 114686	PrepDate: 11/04/14 0:00	BatchID 9148				
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Unadjusted TVPH (nC5-nC12)	ND	10					
Surr: 4-Bromofluorobenzene	23	1	20		117	65 - 138	

**8015C Gasoline Range Organics-Soil**

Sample Type **LCS**

Units: mg/Kg

LCS-9148 (11/05/14 15:15)	RunNo: 114686	PrepDate: 11/04/14 0:00	BatchID 9148				
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Unadjusted TVPH (nC5-nC12)	120	10	90		132	84 - 133	
Surr: 4-Bromofluorobenzene	20	1	20		99.4	65 - 138	

**8015C Gasoline Range Organics-Soil**

Sample Type **MS**

Units: mg/Kg

S1411001-001AMS (11/05/14 15:51)	RunNo: 114686	PrepDate: 11/04/14 0:00	BatchID 9148				
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Unadjusted TVPH (nC5-nC12)	130	10	130	ND	103	75 - 130	
Surr: 4-Bromofluorobenzene	22	1	20	ND	112	38 - 139	

**8015C Gasoline Range Organics-Soil**

Sample Type **MSD**

Units: mg/Kg

S1411001-001AMSD (11/05/14 16:19)	RunNo: 114686	PrepDate: 11/04/14 0:00	BatchID 9148				
Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual
Unadjusted TVPH (nC5-nC12)	150	10	130	8.81	112	20	
Surr: 4-Bromofluorobenzene	23	1	22	0	116	20	

- Qualifiers:**
- B Analyte detected in the associated Method Blank
  - H Holding times for preparation or analysis exceeded
  - L Analyzed by another laboratory
  - O Outside the Range of Dilutions
  - S Spike Recovery outside accepted recovery limits
  - E Value above quantitation range
  - J Analyte detected below quantitation limits
  - ND Not Detected at the Reporting Limit
  - R RPD outside accepted recovery limits
  - X Matrix Effect

**ANALYTICAL QC SUMMARY REPORT**

**CLIENT:** ENTEK GRB LLC  
**Work Order:** S1411001  
**Project:** Robidoux 13-7 Pit Closure

**Date:** 10/10/2016  
**Report ID:** S1411001002  
 (Replaces S1411001001)

**8021B MBTEXN-Soil**Sample Type **MBLK**

Units: mg/Kg

MB-9148 (11/05/14 12:08)	RunNo: 114683	PrepDate: 11/04/14 0:00	BatchID 9148				Qual
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	
Benzene	ND	0.5					
Ethylbenzene	ND	0.5					
m,p-Xylenes	ND	1					
o-Xylene	ND	0.5					
Toluene	ND	0.5					
Xylenes, Total	ND	1.5					
Surr: 4-Bromofluorobenzene	31	0.5	20		154	53 - 150	

**8021B MBTEXN-Soil**Sample Type **LCS**

Units: mg/Kg

LCS-9148 (11/05/14 15:15)	RunNo: 114683	PrepDate: 11/04/14 0:00	BatchID 9148				Qual
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	
Benzene	9.5	0.5	10		95.2	66 - 126	
Ethylbenzene	11	0.5	10		108	71 - 136	
m,p-Xylenes	22	1	20		109	65 - 142	
o-Xylene	11	0.5	10		110	70 - 138	
Toluene	10	0.5	10		102	66 - 134	
Xylenes, Total	33	1.5					
Surr: 4-Bromofluorobenzene	20	0.5	20		101	53 - 150	

**8021B MBTEXN-Soil**Sample Type **MS**

Units: mg/Kg

S1411001-001AMS (11/05/14 15:51)	RunNo: 114683	PrepDate: 11/04/14 0:00	BatchID 9148				Qual
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	
Benzene	8.6	0.5	10	ND	86.3	60 - 116	
Ethylbenzene	12	0.5	10	ND	119	78 - 121	
m,p-Xylenes	24	1	20	ND	122	75 - 127	
o-Xylene	11	0.5	10	ND	114	60 - 141	
Toluene	9.1	0.5	10	ND	91.1	63 - 126	
Surr: 4-Bromofluorobenzene	21	0.5	20	ND	103	53 - 150	

**8021B MBTEXN-Soil**Sample Type **MSD**

Units: mg/Kg

S1411001-001AMSD (11/05/14 16:19)	RunNo: 114683	PrepDate: 11/04/14 0:00	BatchID 9148				Qual
Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	
Benzene	9.5	0.5	8.6	9.97	94.9	20	
Ethylbenzene	13	0.5	12	7.17	128	20	SX
m,p-Xylenes	26	1	24	6.85	130	20	SX
o-Xylene	12	0.5	11	7.29	122	20	
Toluene	10	0.5	9.1	9.33	99.6	20	
Xylenes, Total	38	1.5	36	0		0	
Surr: 4-Bromofluorobenzene	21	0.5	21	0	104	20	

<b>Qualifiers:</b>	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	L Analyzed by another laboratory	ND Not Detected at the Reporting Limit
	O Outside the Range of Dilutions	R RPD outside accepted recovery limits
	S Spike Recovery outside accepted recovery limits	X Matrix Effect



### ANALYTICAL QC SUMMARY REPORT

**CLIENT:** ENTEK GRB LLC  
**Work Order:** S1411001  
**Project:** Robidoux 13-7 Pit Closure

**Date:** 10/10/2016  
**Report ID:** S1411001002  
(Replaces S1411001001)

**Calcium Chloride Boron/Selenium**

Sample Type **MBLK**

Units: ppm

CACL BLK (11/17/14 17:18)	RunNo: 115012							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Boron	ND	0.05						

**Calcium Chloride Boron/Selenium**

Sample Type **LCS**

Units: ppm

CACL QC (11/17/14 17:16)	RunNo: 115012							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Boron	0.49	0.05	0.63		78.1	37.1 - 162.9		

**Calcium Chloride Boron/Selenium**

Sample Type **DUP**

Units: ppm

S1411001-003AD (11/17/14 16:15)	RunNo: 115012							
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual	
Boron	0.49	0.05	0.60	18.5		62.9		

S1411001-014AD (11/17/14 16:51)	RunNo: 115012							
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual	
Boron	0.99	0.05	0.90	9.20		62.9		

**Hexavalent Chromium**

Sample Type **MBLK**

Units: ppm

MB-R115228 (11/21/14 00:00)	RunNo: 115228							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Hexavalent Chromium	ND	1						

**Hexavalent Chromium**

Sample Type **LCS**

Units: ppm

LCS-R115228 (11/21/14 00:00)	RunNo: 115228							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Hexavalent Chromium	0.6	0.1	0.67		86.2	80 - 120		

**Hexavalent Chromium**

Sample Type **DUP**

Units: ppm

S1411001-003A (11/21/14 00:00)	RunNo: 115228							
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual	
Hexavalent Chromium	ND	2	ND			0		

S1411001-014A (11/21/14 00:00)	RunNo: 115228							
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual	
Hexavalent Chromium	ND	2	ND			0		

- Qualifiers:**
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  - E Value above quantitation range
  - J Analyte detected below quantitation limits
  - ND Not Detected at the Reporting Limit
  - R RPD outside accepted recovery limits
  - X Matrix Effect



### ANALYTICAL QC SUMMARY REPORT

**CLIENT:** ENTEK GRB LLC  
**Work Order:** S1411001  
**Project:** Robidoux 13-7 Pit Closure

**Date:** 10/10/2016  
**Report ID:** S1411001002  
(Replaces S1411001001)

**Electrical Conductivity - Soil**

Sample Type **LCS**

Units: dS/m

CONTROL (11/19/14 11:22)	RunNo: 115110							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Electrical Conductivity	4.18	0.01	3.53		118	80 - 120		

**Electrical Conductivity - Soil**

Sample Type **DUP**

Units: dS/m

S1411001-003A (11/19/14 11:03)	RunNo: 115110							
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual	
Electrical Conductivity	1.52	0.01	1.62	6.37		20		

S1411001-014A (11/19/14 11:15)	RunNo: 115110							
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual	
Electrical Conductivity	1.08	0.01	1.06	1.87		20		

**Total Mercury in Soils**

Sample Type **MBLK**

Units: mg/Kg

MB-R115193 (11/21/14 00:00)	RunNo: 115193							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Mercury	ND	0.2						

**Total Mercury in Soils**

Sample Type **LCS**

Units: mg/Kg

LCS-R115193 (11/21/14 00:00)	RunNo: 115193							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Mercury	2.0	0.2	2		99.3	90 - 110		

**Total Mercury in Soils**

Sample Type **DUP**

Units: mg/Kg

S1410388-001BDUP (11/21/14 00:00)	RunNo: 115193							
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual	
Mercury	9.2	0.2	8.6	6.66		20	H	

S1411001-001ADUP (11/21/14 00:00)	RunNo: 115193							
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual	
Mercury	ND	0.2	ND			20		

S1411001-011ADUP (11/21/14 00:00)	RunNo: 115193							
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual	
Mercury	ND	0.2	ND			20		

S1411112-001ADUP (11/21/14 00:00)	RunNo: 115193							
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual	
Mercury	ND	0.2	ND			20		

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  - E Value above quantitation range
  - J Analyte detected below quantitation limits
  - ND Not Detected at the Reporting Limit
  - R RPD outside accepted recovery limits
  - X Matrix Effect



### ANALYTICAL QC SUMMARY REPORT

**CLIENT:** ENTEK GRB LLC  
**Work Order:** S1411001  
**Project:** Robidoux 13-7 Pit Closure

**Date:** 10/10/2016  
**Report ID:** S1411001002  
(Replaces S1411001001)

**pH-Soil** Sample Type **LCS** Units: s.u.

CONTROL (11/19/14 11:22)	RunNo: 115110							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
pH	6.9	0.1	6.9		99.3	96 - 104		

**pH-Soil** Sample Type **DUP** Units: s.u.

S1411001-003A (11/19/14 11:03)	RunNo: 115110							
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual	
pH	7.7	0.1	7.8	1.17		20		

S1411001-014A (11/19/14 11:15)	RunNo: 115110							
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual	
pH	8.3	0.1	8.1	1.95		20		

**Saturated Paste Cations by EPA 200.7** Sample Type **MBLK** Units: meq/L

SAR BLK (11/19/14 19:16)	RunNo: 115126							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Calcium	ND	0.01						
Magnesium	ND	0.01						
Sodium	ND	0.01						

**Saturated Paste Cations by EPA 200.7** Sample Type **LCS** Units: meq/L

SAR QC (11/19/14 19:14)	RunNo: 115126							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Calcium	20.7	0.01	22.2		93.3	80 - 120		
Magnesium	11.8	0.01	12		98.0	80 - 120		
Sodium	19.0	0.01	19.2		98.8	80 - 120		

**Saturated Paste Cations by EPA 200.7** Sample Type **DUP** Units: meq/L

S1411001-003AD (11/19/14 17:18)	RunNo: 115126							
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual	
Calcium	3.82	0.01	4.29	11.1		20		
Magnesium	3.62	0.01	4.02	10.2		20		
Sodium	7.28	0.01	7.84	7.15		20		

S1411001-014AD (11/19/14 18:01)	RunNo: 115126							
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual	
Calcium	1.50	0.01	1.33	13.2		20		
Magnesium	3.44	0.01	3.09	11.4		20		
Sodium	7.00	0.01	6.60	6.03		20		

S1410443-009AD (11/19/14 18:47)	RunNo: 115126							
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual	
Calcium	211	0.01	191	10.5		20		
Magnesium	35.3	0.01	31.2	13.1		20		

- Qualifiers:**
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  - S Spike Recovery outside accepted recovery limits
  - E Value above quantitation range
  - J Analyte detected below quantitation limits
  - ND Not Detected at the Reporting Limit
  - R RPD outside accepted recovery limits
  - X Matrix Effect



### ANALYTICAL QC SUMMARY REPORT

**CLIENT:** ENTEK GRB LLC  
**Work Order:** S1411001  
**Project:** Robidoux 13-7 Pit Closure

**Date:** 10/10/2016  
**Report ID:** S1411001002  
(Replaces S1411001001)

**Saturated Paste Cations by EPA 200.7**

Sample Type **DUP**

Units: meq/L

S1411027-005AD (11/19/14 19:11)		RunNo: 115126					
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual
Calcium	3.27	0.01	2.92	11.9		20	
Magnesium	1.52	0.01	1.36	11.5		20	
Sodium	1.69	0.01	1.83	7.49		20	

**Total (3050) Metals by ICP - 6010C**

Sample Type **MBLK**

Units: mg/Kg

MB-9235 (11/20/14 17:20)		RunNo: 115184	PrepDate: 11/20/14 6:57	BatchID 9235			
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Arsenic	ND	0.9					
Barium	ND	0.2					
Cadmium	ND	0.05					
Chromium	ND	0.1					
Copper	ND	0.2					
Lead	ND	1.5					
Selenium	ND	2.2					
Silver	ND	0.5					
Zinc	ND	1.3					

**Total (3050) Metals by ICP - 6010C**

Sample Type **LCS**

Units: mg/Kg

LCS-9235 (11/20/14 17:22)		RunNo: 115184	PrepDate: 11/20/14 6:57	BatchID 9235			
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Arsenic	48.7	0.9	50		97.4	80 - 120	
Barium	47.2	0.2	50		94.4	80 - 120	
Cadmium	43.3	0.05	50		86.7	80 - 120	
Chromium	50.3	0.1	50		101	80 - 120	
Copper	46.9	0.2	50		93.7	80 - 120	
Lead	51.2	1.5	50		102	80 - 120	
Selenium	82.4	2.2	100		82.4	80 - 120	
Silver	26.3	0.5	25		105	80 - 120	
Zinc	49.6	1.3	50		99.1	80 - 120	

**Total (3050) Metals by ICP - 6010C**

Sample Type **MS**

Units: mg/Kg

S1411001-002AS (11/20/14 17:40)		RunNo: 115184	PrepDate: 11/19/14 6:45	BatchID 9235			
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Arsenic	51.3	0.9	50	3.4	95.8	75 - 125	
Barium	1190	0.2	50	1250	-114	75 - 125	S
Cadmium	46.3	0.05	50	2.11	88.4	75 - 125	
Chromium	68.9	0.1	50	20.7	96.4	75 - 125	
Copper	54.5	0.2	50	11.6	85.7	75 - 125	
Lead	53.8	1.5	50	6.5	94.6	75 - 125	
Selenium	86.9	2.2	100	3.7	83.2	75 - 125	
Silver	22.8	0.5	25	3.3	77.9	75 - 125	
Zinc	79.5	1.3	50	37.0	85.0	75 - 125	

- Qualifiers:**
- B Analyte detected in the associated Method Blank
  - H Holding times for preparation or analysis exceeded
  - L Analyzed by another laboratory
  - O Outside the Range of Dilutions
  - S Spike Recovery outside accepted recovery limits

- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- X Matrix Effect



### ANALYTICAL QC SUMMARY REPORT

**CLIENT:** ENTEK GRB LLC  
**Work Order:** S1411001  
**Project:** Robidoux 13-7 Pit Closure

**Date:** 10/10/2016  
**Report ID:** S1411001002  
(Replaces S1411001001)

**Total (3050) Metals by ICP - 6010C**

Sample Type **MS**

Units: mg/Kg

S1411001-012AS (11/20/14 18:16)		RunNo: 115184	PrepDate: 11/19/14 6:45	BatchID 9235			
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Arsenic	46.1	0.9	50	1.3	89.7	75 - 125	
Barium	1930	0.2	50	2030	-211	75 - 125	S
Cadmium	47.6	0.05	50	1.33	92.6	75 - 125	
Chromium	69.3	0.1	50	29.4	79.8	75 - 125	
Copper	59.6	0.2	50	17.1	85.1	75 - 125	
Lead	55.3	1.5	50	7.0	96.6	75 - 125	
Selenium	86.5	2.2	100	ND	86.5	75 - 125	
Silver	22.8	0.5	25	0.8	87.7	75 - 125	
Zinc	89.7	1.3	50	54.6	70.0	75 - 125	S

**Total (3050) Metals by ICP - 6010C**

Sample Type **MSD**

Units: mg/Kg

S1411001-002AMSD (11/20/14 17:42)		RunNo: 115184	PrepDate: 11/19/14 6:45	BatchID 9235			
Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual
Arsenic	52.1	0.9	51.3	1.50	97.3	20	
Barium	1410	0.2	1190	16.4	312	20	S
Cadmium	51.0	0.05	46.3	9.66	97.8	20	
Chromium	80.3	0.1	68.9	15.3	119	20	
Copper	62.8	0.2	54.5	14.2	102	20	
Lead	61.5	1.5	53.8	13.5	110	20	
Selenium	97.4	2.2	86.9	11.4	93.7	20	
Silver	26.2	0.5	22.8	14.1	91.7	20	
Zinc	89.4	1.3	79.5	11.7	105	20	

S1411001-012AMSD (11/20/14 18:18)		RunNo: 115184	PrepDate: 11/19/14 6:45	BatchID 9235			
Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual
Arsenic	47.6	0.9	46.1	3.19	92.7	20	
Barium	1690	0.2	1930	13.2	-687	20	S
Cadmium	46.2	0.05	47.6	2.98	89.8	20	
Chromium	64.9	0.1	69.3	6.48	71.1	20	S
Copper	60.2	0.2	59.6	0.939	86.2	20	
Lead	53.3	1.5	55.3	3.68	92.6	20	
Selenium	89.2	2.2	86.5	3.11	89.2	20	
Silver	22.6	0.5	22.8	0.643	87.1	20	
Zinc	85.2	1.3	89.7	5.10	61.1	20	S

**Total (3050) Metals by ICP - 6010C**

Sample Type **DUP**

Units: mg/Kg

S1411001-001AD (11/20/14 17:29)		RunNo: 115184	PrepDate: 11/19/14 6:45	BatchID 9235			
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual
Arsenic	ND	0.9	1.5			20	
Barium	297	0.2	284	4.24		20	
Cadmium	2.29	0.05	2.57	11.4		20	
Chromium	39.4	0.1	60.9	42.7		20	R
Copper	16.7	0.2	19.8	17.0		20	

- Qualifiers:**
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  - E Value above quantitation range
  - J Analyte detected below quantitation limits
  - ND Not Detected at the Reporting Limit
  - R RPD outside accepted recovery limits
  - X Matrix Effect



### ANALYTICAL QC SUMMARY REPORT

**CLIENT:** ENTEK GRB LLC  
**Work Order:** S1411001  
**Project:** Robidoux 13-7 Pit Closure

**Date:** 10/10/2016  
**Report ID:** S1411001002  
(Replaces S1411001001)

**Total (3050) Metals by ICP - 6010C**

Sample Type **DUP**

Units: mg/Kg

S1411001-001AD (11/20/14 17:29)	RunNo: 115184	PrepDate: 11/19/14 6:45	BatchID 9235
Analyte	Result	RL	Ref Samp %RPD %REC % RPD Limits Qual

Lead	10.7	1.5	8.1	28.2	20	R
Selenium	ND	2.2	ND		20	
Silver	3.9	0.5	5.6	35.4	20	R
Zinc	58.0	1.3	57.1	1.55	20	

S1411001-011AD (11/20/14 18:12)	RunNo: 115184	PrepDate: 11/19/14 6:45	BatchID 9235
Analyte	Result	RL	Ref Samp %RPD %REC % RPD Limits Qual

Arsenic	4.2	0.9	ND		20	R
Barium	2370	0.2	2330	1.86	20	
Cadmium	1.12	0.05	0.98	13.1	20	
Chromium	17.0	0.1	16.4	3.71	20	
Copper	12.0	0.2	12.4	3.28	20	
Lead	8.2	1.5	10.5	24.7	20	R
Selenium	ND	2.2	ND		20	
Silver	1.0	0.5	0.8	24.9	20	R
Zinc	44.6	1.3	45.2	1.53	20	

- Qualifiers:**
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  - E Value above quantitation range
  - J Analyte detected below quantitation limits
  - ND Not Detected at the Reporting Limit
  - R RPD outside accepted recovery limits
  - X Matrix Effect



Summit Environmental Technologies, Inc.  
3310 Win St.  
Cuyahoga Falls, Ohio 44223  
TEL: (330) 253-8211 FAX: (330) 253-4489  
Website: <http://www.settek.com>

November 12, 2014

Steve Kasa  
Inter-Mountain Laboratories, Inc.  
555 Absaraka  
Sheridan, WY 82801  
TEL: (307) 674-7506  
FAX: (307) 672-9845

RE: S1411001

Order No.: 14110305

Dear Steve Kasa:

Summit Environmental Technologies, Inc. received 2 sample(s) on 11/5/2014 for the analyses presented in the following report.

There were no problems with the analytical events associated with this report unless noted in the Case Narrative.

Quality control data is within laboratory defined or method specified acceptance limits except where noted.

If you have any questions regarding these tests results, please feel free to call the laboratory.

Sincerely,

A handwritten signature in black ink, appearing to read "Mo Osman".

Dr. Mo Osman

Project Manager

3310 Win St.  
Cuyahoga Falls, Ohio 44223

A2LA 0724.01, Alabama 41600, Arizona AZ0788, Arkansas 88-0735, California 07256CA, Colorado, Connecticut PH-0105, Delaware, Florida NELAC E87688, Georgia E87688 and 943, Idaho OH00923, Illinois 200061 and Reg.5, Indiana C-OH-13, Kansas E-10347, Kentucky (Underground Storage Tank) 3, Kentucky 90146, Louisiana 04061 and LA12004, Maine 2012015, Maryland 339, Massachusetts M-OPH923, Minnesota 409711, Montana CERT0099, New Hampshire 2996, New Jersey OH006, New York 11777, North Carolina 39705 and 631, Ohio Drinking Water 4170, Ohio VAP CL0052, Oklahoma 9940, Oregon OH200001, Pennsylvania 68-01335, Rhode Island LA000317, South Carolina 92016001, Tennessee TN04018, Texas T104704466-11-5, Region 8 8TMS-L, USDA/APHIS P330-11-00244, Utah OH009232011-1, Vermont VT-87688, Virginia 00440 and 1581, Washington C891, West Virginia 248 and 9957C and E87688, Wisconsin 399013010



Summit Environmental Technologies, Inc.  
3310 Win St.  
Cuyahoga Falls, Ohio 44223  
TEL: (330) 253-8211 FAX: (330) 253-4489  
Website: <http://www.settek.com>

**Workorder**  
**Sample Summary**  
WO#: **14110305**  
**12-Nov-14**

---

**CLIENT:** Inter-Mountain Laboratories, Inc.  
**Project:** S1411001

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Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
14110305-001	S1411001-004		10/30/2014	11/5/2014 9:40:00 AM	Solid
14110305-002	S1411001-020		10/30/2014	11/5/2014 9:40:00 AM	Solid



Summit Environmental Technologies, Inc.  
3310 Win St.  
Cuyahoga Falls, Ohio 44223  
TEL: (330) 253-8211 FAX: (330) 253-4489  
Website: <http://www.settek.com>

## Case Narrative

WO#: 14110305  
Date: 11/12/2014

---

**CLIENT:** Inter-Mountain Laboratories, Inc.  
**Project:** S1411001

---

This report in its entirety consists of the documents listed below. All documents contain the Summit Environmental Technologies, Inc. Work Order Number assigned to this report.

Paginated Report including: Cover Letter, Case Narrative, Analytical Results, Applicable Quality Control Summary Reports and copies of the Chain of Custody Documents supplied with this sample set.

Concentrations reported with a J-Flag in the Qualifier Field are values below the Limit of Quantitation (LOQ) but greater than the established Method Detection Limit (MDL).

Method numbers, unless specified as SM (Standard Methods) or ASTM, are EPA methods.

Estimated uncertainty values are available upon request.

Any comments or problems with the analytical events associated with this report are noted below.

---

Original



**SUMMIT**  
ENVIRONMENTAL TECHNOLOGIES, INC  
Analytical Laboratories

Summit Environmental Technologies, Inc.  
3310 Win St.  
Cuyahoga Falls, Ohio 44223  
TEL: (330) 253-8211 FAX: (330) 253-4489  
Website: <http://www.settek.com>

WO#: 14110305  
Date Reported: 11/12/2014  
Company: Inter-Mountain Laboratories, Inc.  
Address: 555 Absaraka  
Sheridan WY 82801  
Received: 11/5/2014  
Project#: S1411001

Client ID#	Lab ID#	Collected Analyte	Result	Units	Matrix	Method	DF	RL	Run	Analyst
S1411001-004	001	10/30/2014 Acenaphthene	ND	mg/Kg	Solid	EPA 8270 C	1	0.20	11/12/2014	AKE
S1411001-004	001	10/30/2014 Acenaphthylene	ND	mg/Kg	Solid	EPA 8270 C	1	0.20	11/12/2014	AKE
S1411001-004	001	10/30/2014 Anthracene	ND	mg/Kg	Solid	EPA 8270 C	1	0.20	11/12/2014	AKE
S1411001-004	001	10/30/2014 Benzo(a)anthracene	ND	mg/Kg	Solid	EPA 8270 C	1	0.20	11/12/2014	AKE
S1411001-004	001	10/30/2014 Benzo(a)pyrene	ND	mg/Kg	Solid	EPA 8270 C	1	0.20	11/12/2014	AKE
S1411001-004	001	10/30/2014 Benzo(g,h,i)perylene	ND	mg/Kg	Solid	EPA 8270 C	1	0.20	11/12/2014	AKE
S1411001-004	001	10/30/2014 Benzo(k)fluoranthene	ND	mg/Kg	Solid	EPA 8270 C	1	0.20	11/12/2014	AKE
S1411001-004	001	10/30/2014 Benzo(b)fluoranthene	ND	mg/Kg	Solid	EPA 8270 C	1	0.20	11/12/2014	AKE
S1411001-004	001	10/30/2014 Chrysene	ND	mg/Kg	Solid	EPA 8270 C	1	0.20	11/12/2014	AKE
S1411001-004	001	10/30/2014 Dibenzo (a,h) anthracene	ND	mg/Kg	Solid	EPA 8270 C	1	0.20	11/12/2014	AKE
S1411001-004	001	10/30/2014 Fluoranthene	ND	mg/Kg	Solid	EPA 8270 C	1	0.20	11/12/2014	AKE
S1411001-004	001	10/30/2014 Fluorene	ND	mg/Kg	Solid	EPA 8270 C	1	0.20	11/12/2014	AKE
S1411001-004	001	10/30/2014 Indeno(1,2,3-cd)pyrene	ND	mg/Kg	Solid	EPA 8270 C	1	0.20	11/12/2014	AKE
S1411001-004	001	10/30/2014 Naphthalene	ND	mg/Kg	Solid	EPA 8270 C	1	0.20	11/12/2014	AKE
S1411001-004	001	10/30/2014 Phenanthrene	ND	mg/Kg	Solid	EPA 8270 C	1	0.20	11/12/2014	AKE
S1411001-004	001	10/30/2014 Pyrene	ND	mg/Kg	Solid	EPA 8270 C	1	0.20	11/12/2014	AKE
S1411001-004	001	10/30/2014 Surr: 2-Fluorobiphenyl	1.91	%REC	Solid	EPA 8270 C	1	10-110	11/12/2014	AKE
S1411001-004	001	10/30/2014 Surr: Nitrobenzene-d5	1.95	%REC	Solid	EPA 8270 C	1	11-110	11/12/2014	AKE
S1411001-004	001	10/30/2014 Surr: p-Terphenyl-d14	1.68	%REC	Solid	EPA 8270 C	1	14-145	11/12/2014	AKE

Client ID#	Lab ID#	Collected Analyte	Result	Units	Matrix	Method	DF	RL	Run	Analyst
S1411001-020	002	10/30/2014 Acenaphthene	ND	mg/Kg	Solid	EPA 8270 C	1	0.20	11/12/2014	AKE
S1411001-020	002	10/30/2014 Acenaphthylene	ND	mg/Kg	Solid	EPA 8270 C	1	0.20	11/12/2014	AKE
S1411001-020	002	10/30/2014 Anthracene	ND	mg/Kg	Solid	EPA 8270 C	1	0.20	11/12/2014	AKE
S1411001-020	002	10/30/2014 Benzo(a)anthracene	ND	mg/Kg	Solid	EPA 8270 C	1	0.20	11/12/2014	AKE
S1411001-020	002	10/30/2014 Benzo(a)pyrene	ND	mg/Kg	Solid	EPA 8270 C	1	0.20	11/12/2014	AKE
S1411001-020	002	10/30/2014 Benzo(g,h,i)perylene	ND	mg/Kg	Solid	EPA 8270 C	1	0.20	11/12/2014	AKE
S1411001-020	002	10/30/2014 Benzo(k)fluoranthene	ND	mg/Kg	Solid	EPA 8270 C	1	0.20	11/12/2014	AKE
S1411001-020	002	10/30/2014 Benzo(b)fluoranthene	ND	mg/Kg	Solid	EPA 8270 C	1	0.20	11/12/2014	AKE
S1411001-020	002	10/30/2014 Chrysene	ND	mg/Kg	Solid	EPA 8270 C	1	0.20	11/12/2014	AKE
S1411001-020	002	10/30/2014 Dibenzo (a,h) anthracene	ND	mg/Kg	Solid	EPA 8270 C	1	0.20	11/12/2014	AKE
S1411001-020	002	10/30/2014 Fluoranthene	ND	mg/Kg	Solid	EPA 8270 C	1	0.20	11/12/2014	AKE
S1411001-020	002	10/30/2014 Fluorene	ND	mg/Kg	Solid	EPA 8270 C	1	0.20	11/12/2014	AKE
S1411001-020	002	10/30/2014 Indeno(1,2,3-cd)pyrene	ND	mg/Kg	Solid	EPA 8270 C	1	0.20	11/12/2014	AKE
S1411001-020	002	10/30/2014 Naphthalene	ND	mg/Kg	Solid	EPA 8270 C	1	0.20	11/12/2014	AKE
S1411001-020	002	10/30/2014 Phenanthrene	ND	mg/Kg	Solid	EPA 8270 C	1	0.20	11/12/2014	AKE
S1411001-020	002	10/30/2014 Pyrene	ND	mg/Kg	Solid	EPA 8270 C	1	0.20	11/12/2014	AKE
S1411001-020	002	10/30/2014 Surr: 2-Fluorobiphenyl	1.76	%REC	Solid	EPA 8270 C	1	10-110	11/12/2014	AKE
S1411001-020	002	10/30/2014 Surr: Nitrobenzene-d5	2.08	%REC	Solid	EPA 8270 C	1	11-110	11/12/2014	AKE
S1411001-020	002	10/30/2014 Surr: p-Terphenyl-d14	2.07	%REC	Solid	EPA 8270 C	1	14-145	11/12/2014	AKE



**Summit Environmental Technologies, Inc.  
Cooler Receipt Form**

Initials of person inspecting cooler and samples: SC  
 Client: Inter-Mountain Order Number: \_\_\_\_\_  
 Date Received: 11-5-14 Time Received: 0940 Date cooler(s) opened and samples inspected: 11-5-14  
 Number of Coolers/Boxes: 1 N/A  
 Shipper: FED EX UPS DHL Airborne US Postal Walk-in Pickup Other: \_\_\_\_\_  
 Packaging: Peanuts Bubble Wrap Paper Foam None Other: \_\_\_\_\_  
 Tape on cooler/box: \_\_\_\_\_ N N/A  
 Custody Seals intact \_\_\_\_\_ Y N N/A  
 C-O-C in plastic \_\_\_\_\_ Y N N/A  
 Ice  Blue ice \_\_\_\_\_ present / absent / melted N/A  
 Sample Temperature IR Gun #16020459 CF 0.0 °C 15.3 °C N/A  
 Radiological Testing Instrument serial #35127 \_\_\_\_\_ Y N N/A  
 (see page 2 for scan results)  
**\*\*Use 1 sheet per sample for Radiological Testing. If sample is HOT, the Radiological Safety Officer must be notified immediately.**  
 C-O-C filled out properly \_\_\_\_\_ Y N N/A  
 Samples in separate bags \_\_\_\_\_ Y N N/A  
 Sample containers intact\* \_\_\_\_\_ Y N N/A  
 \*If no, list broken sample(s): \_\_\_\_\_  
 \_\_\_\_\_  
 Sample label(s) complete (ID, date, etc.) \_\_\_\_\_ Y N N/A  
 Label(s) agree with C-O-C \_\_\_\_\_ Y N N/A  
 Correct containers used \_\_\_\_\_ Y N N/A  
 Sufficient sample received \_\_\_\_\_ Y N N/A  
 Bubbles absent from 40 mL vials\*\* \_\_\_\_\_ Y N N/A  
 \*\* Samples with bubbles <6mm are acceptable. Indicate bubble size if >6mm. \_\_\_\_\_  
 Was client contacted about samples \_\_\_\_\_ Y N  
 Will client send new samples \_\_\_\_\_ Y N  
 Client contact: \_\_\_\_\_  
 Date/Time: \_\_\_\_\_  
 Logged in by: \_\_\_\_\_  
 Comments: \_\_\_\_\_  
 \_\_\_\_\_



**Inter-Mountain Labs**  
 Sheridan, WY and Gillette, WY

**- CHAIN OF CUSTODY RECORD -**

Page 1 of 3

All shaded fields must be completed.  
 This is a legal document: any misrepresentation may be construed as fraud.

# **155924**

Client Name <u>Enter</u>		Project Identification <u>Robidoux 13-7 P/T Closure</u>		Sampler (Signature/Attestation of Authenticity) <u>Mike Kasten</u>		Telephone # <u>920-843-2323</u>	
Report Address		Contact Name <u>Cindy Adams</u>		ANALYSES / PARAMETERS			
Invoice Address		Email <u>cadams@bksenvironmental.com</u>					
		Phone <u>307-922-2931</u>					
		Purchase Order #		Quote #			

ITEM	LAB ID <i>(Lab Use Only)</i>	DATE SAMPLED	TIME	SAMPLE IDENTIFICATION	Matrix	# of Containers	ANALYSES / PARAMETERS						REMARKS	
1	5411001	10/30/14	VAR	#1 0-3 Bag	SL	1								Contact Cindy Adams for Parameters
2		10/20/14		#1 3-6	SL	1								
3		10/30/14		#1 6-9	SL	1								
4		10/30/14		#1 9-12	SL	1								
5		10/30/14		#2 0-3	SL	1								
6		10/30/14		#2 3-6	SL	1								
7		10/30/14		#2 6-9	SL	1								
8		10/20/14		#2 9-12	SL	1								
9		10/30/14		#3 0-3	SL	1								
10		10/30/14		#3 3-6	SL	1								
11		10/30/14		#3 6-9	SL	1								
12		10/30/14		#3 9-12	SL	1								
13		10/30/14		#4 0-3	SL	1								
14		10/30/14		#4 3-6	SL	1								

LAB COMMENTS	Relinquished By (Signature/Printed)	DATE	TIME	Received By (Signature/Printed)	DATE	TIME
	<u>Mike Kasten</u> / Mike Kasten	10/30/14	9:49pm	<u>Karee Speer</u>	10/31/14	

SHIPPING INFO	MATRIX CODES	TURNAROUND TIMES	COMPLIANCE INFORMATION	ADDITIONAL REMARKS
<input type="checkbox"/> UPS <input type="checkbox"/> Fed Express <input type="checkbox"/> US Mail <input type="checkbox"/> Hand Carried <input type="checkbox"/> Other _____	Water WT Soil SL Solid SD Filter FT Other OT	<b>Check desired service</b> <input type="checkbox"/> Standard turnaround <input type="checkbox"/> <b>RUSH - 5 Working Days</b> <input type="checkbox"/> <b>URGENT - &lt; 2 Working Days</b> <b>Rush &amp; Urgent Surcharges will be applied</b>	Compliance Monitoring? Y / N Program (SDWA, NPDES,...) PWSID / Permit # Chlorinated? Y / N Sample Disposal: Lab Client	



**Inter-Mountain Labs**  
Sheridan, WY and Gillette, WY

**- CHAIN OF CUSTODY RECORD -**

All shaded fields must be completed.

This is a legal document: any misrepresentation may be construed as fraud.

# **155925**

Client Name <u>Entek</u>	Project Identification <u>Bobidoux 134 Pit closure</u>	Sampler (Signature/Attestation of Authenticity) <u>Mike Kasten</u>	Telephone #
-----------------------------	---	---	-------------

Report Address	Contact Name <u>Cindy Adams</u>	ANALYSES / PARAMETERS
Invoice Address	Email	
	Phone	
	Purchase Order #	

ITEM	LAB ID (Lab Use Only)	DATE SAMPLED	TIME SAMPLED	SAMPLE IDENTIFICATION	Matrix	# of Containers	REMARKS										
1	<u>51411001</u>	<u>10/30/14</u>	<u>VAR</u>	<u>#4 6-9</u>	<u>Bag</u>	<u>SL</u>	<u>1</u>	<u>Contact Cindy Adams for parameters</u>									
2		<u>10/30/14</u>		<u>#4 9-12</u>		<u>SL</u>	<u>1</u>										
3		<u>10/30/14</u>		<u>#5 0-3</u>		<u>SL</u>	<u>1</u>										
4		<u>10/30/14</u>		<u>#5 3-6</u>		<u>SL</u>	<u>1</u>										
5		<u>10/30/14</u>		<u>#5 6-9</u>		<u>SL</u>	<u>1</u>										
6		<u>10/20/14</u>		<u>#5 9-12</u>		<u>SL</u>	<u>1</u>										
7		<u>10/30/14</u>		<u>#1 0-3</u>	<u>Glass jar</u>	<u>SL</u>	<u>2</u>										
8		<u>10/30/14</u>		<u>#1 3-6</u>		<u>SL</u>	<u>2</u>										
9		<u>10/20/14</u>		<u>#1 6-9</u>		<u>SL</u>	<u>2</u>										
10		<u>10/30/14</u>		<u>#1 9-12</u>		<u>SL</u>	<u>2</u>										
11		<u>10/30/14</u>		<u>#2 0-3</u>		<u>SL</u>	<u>2</u>										
12		<u>10/30/14</u>		<u>#2 3-6</u>		<u>SL</u>	<u>2</u>										
13		<u>10/30/14</u>		<u>#2 6-9</u>		<u>SL</u>	<u>2</u>										
14		<u>10/30/14</u>		<u>#2 9-12</u>		<u>SL</u>	<u>2</u>										

LAB COMMENTS	Relinquished By (Signature/Printed) <u>Mike Kasten / Mike Kasten</u>	DATE <u>10/31/14</u>	TIME <u>9:40pm</u>	Received By (Signature/Printed) <u>Kate Ascor</u>	DATE <u>10/31/14</u>	TIME
--------------	---	-------------------------	-----------------------	--	-------------------------	------

SHIPPING INFO	MATRIX CODES	TURNAROUND TIMES	COMPLIANCE INFORMATION	ADDITIONAL REMARKS
<input type="checkbox"/> UPS <input type="checkbox"/> Fed Express <input type="checkbox"/> US Mail <input type="checkbox"/> Hand Carried <input type="checkbox"/> Other _____	Water WT Soil SL Solid SD Filter FT Other OT	<b>Check desired service</b> <input type="checkbox"/> Standard turnaround <input type="checkbox"/> <b>RUSH - 5 Working Days</b> <input type="checkbox"/> <b>URGENT - &lt; 2 Working Days</b> <b>Rush &amp; Urgent Surcharges will be applied</b>	Compliance Monitoring? Y/N Program (SDWA, NPDES,...) PWSID / Permit # Chlorinated? Y/N Sample Disposal: Lab Client	



**Inter-Mountain Labs**  
 Sheridan, WY and Gillette, WY

**- CHAIN OF CUSTODY RECORD -**

Page **3** of **3**

All shaded fields must be completed.

This is a legal document: any misrepresentation may be construed as fraud.

# **155926**

Client Name <b>Entek</b>		Project Identification <b>Robidoux 13-7 Pct Closure</b>			Sampler (Signature/Attestation of Authenticity) <b>Mike Kasten</b>			Telephone #			
Report Address		Contact Name			ANALYSES / PARAMETERS						
Invoice Address		Email									
		Phone									
		Purchase Order #		Quote #		REMARKS					

ITEM	LAB ID (Lab Use Only)	DATE SAMPLED	TIME SAMPLED	SAMPLE IDENTIFICATION		Matrix	# of Containers							REMARKS	
1	S1411001	10/30/14	VAR	#3	0-3	66>5 jar	SL	2							Contact Cindy Adams for parameters
2		10/30/14		#3	3-6		SL	2							
3		10/30/14		#3	6-9		SL	2							
4		10/30/14		#3	9-12		SL	2							
5		10/30/14		#4	0-3		SL	2							
6		10/30/14		#4	3-6		SL	2							
7		10/30/14		#4	6-9		SL	2							
8		10/30/14		#4	9-12		SL	2							
9		10/30/14		#5	0-3		SL	2							
10		10/30/14		#5	3-6		SL	2							
11		10/30/14		#5	6-9		SL	2							
12		10/30/14	✓	#5	9-12		SL	2							

LAB COMMENTS	Relinquished By (Signature/Printed)	DATE	TIME	Received By (Signature/Printed)	DATE	TIME
	<i>Mike Kasten</i> / Mike Kasten	10/30/14	9:40pm	<i>Karen Seco</i>	10/31/14	

SHIPPING INFO	MATRIX CODES	TURNAROUND TIMES	COMPLIANCE INFORMATION	ADDITIONAL REMARKS
<input type="checkbox"/> UPS <input type="checkbox"/> Fed Express <input type="checkbox"/> US Mail <input type="checkbox"/> Hand Carried <input type="checkbox"/> Other _____	Water WT Soil SL Solid SD Filter FT Other OT	<b>Check desired service</b> <input type="checkbox"/> Standard turnaround <input type="checkbox"/> <b>RUSH - 5 Working Days</b> <input type="checkbox"/> <b>URGENT - &lt; 2 Working Days</b> <b>Rush &amp; Urgent Surcharges will be applied</b>	Compliance Monitoring? Y / N Program (SDWA, NPDES,...) PWSID / Permit # Chlorinated? Y / N Sample Disposal: Lab Client	

Company Name: **Entek GRB LLC**

Facility Name: **Robidoux 13-7 Pit**

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## **Attachment F**

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### **Revised COGCC Form 27 Detailing Proposed Remediation Plan**

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State of Colorado  
**Oil and Gas Conservation Commission**



1120 Lincoln Street, Suite 801, Denver, Colorado 80203 (303)894-2100 Fax:(303)894-2109

FOR OGCC USE ONLY

---

OGCC Employee:

Spill       Complaint  
 Inspection       NOAV

Tracking No:

**SITE INVESTIGATION AND REMEDIATION WORKPLAN**

This form shall be submitted to the Director for approval prior to the initiation of site investigation and remediation activities. Form 27 is intended to be used whenever possible. Additional documentation will be required when large volumes of soil and groundwater have been impacted or involve large facilities with multiple source areas. See Rule 910. Attach as many pages as needed to fully describe the proposed work.

**CAUSE OF CONDITION BEING INVESTIGATED AND REMEDIATED**

Spill or Release     Plug & Abandon     Central Facility Closure     Site/Facility Closure     Other (describe): Soil sampling of former reserve pit

OGCC Operator Number: <u>10323</u>	Contact Name and Telephone: <u>Kristen Stocks</u>
Name of Operator: <u>Entek GRB LLC</u>	No: <u>307-200-1930</u>
Address: <u>535 16th St., Suite 620</u>	Fax: <u>866-435-9424</u>
City: <u>Denver</u> State: <u>CO</u> Zip: <u>80202</u>	

API Number: <u>05-081-07232</u>	County: <u>Moffat</u>
Facility Name: <u>Robidoux 13-7 Pit</u>	Facility Number: <u>289419</u>
Well Name: <u>Robidoux</u>	Well Number: <u>13-7</u>
Location: (QtrQtr, Sec, Twp, Rng, Meridian): <u>SWNE Sec 13, 12N, 89W, 6th</u> Latitude: <u>40.995334</u> Longitude: <u>-107.325237</u>	

**TECHNICAL CONDITIONS**

Type of Waste Causing Impact (crude oil, condensate, produced water, etc): Residual drilling materials

Site Conditions: Is location within a sensitive area (according to Rule 901e)?     Y     N    If yes, attach evaluation.

Adjacent land use (cultivated, irrigated, dry land farming, industrial, residential, etc.): rural residential

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: silt

Potential receptors (water wells within 1/4 mi, surface waters, etc.): Unnamed oxbow pond & wetlands area located approx 250 ft SW of pit location. Depth to shallow groundwater is unknown

Description of Impact (if previously provided, refer to that form or document):

Impacted Media (check):	Extent of Impact:	How Determined:
<input checked="" type="checkbox"/> Soils	<u>Refer to the attached Figure 1 and Table 1</u>	<u>Soil sampling</u>
<input type="checkbox"/> Vegetation	_____	_____
<input type="checkbox"/> Groundwater	_____	_____
<input type="checkbox"/> Surface Water	_____	_____

**REMEDIATION WORKPLAN**

**Describe initial action taken** (if previously provided, refer to that form or document):

Entek filed an initial Form 27 for the historical pit at the Robidoux 13-7 well site on 10/15/2012. A sampling work plan was included in the revised Form 27 that Entek filed on 5/1/2014. The COGCC conditionally approved the work plan on 5/20/14 (remediation tracking #8432). Five soil borings (Borings #1 to #5) were advanced within the former pit footprint on 10/30/2014. Samples were collected from 4 sampling intervals (0'-3', 3'-6', 6'-9' & 9'-12') per boring. Discrete samples were collected from the bottom of each interval depth and analyzed for COGCC 910-1 constituents. Sample results indicated that only one boring was impacted with contaminants exceeding the COGCC's Table 910-1 limits. Boring #3, collected from the center of the pit at the 3'-6' sample interval had elevated total petroleum hydrocarbons (TPH) up to 890 Mg/Kg. Figure 1 illustrates the general location of the pit and the 5 boring locations. Table 1 summarizes the sampling results.

**Describe how source is to be removed:**

Based on the analytical data collected during soil sampling activities, soil impacts above regulatory standards remain between 3 to 6 feet bgs. The soil will be excavated in the area around boring #3, which is located in the approximate center of the former pit. The extent of impacted soil to be excavated will be at a depth > 6 feet bgs until visibly clean soil is observed. The lateral and vertical extent of the excavation will be guided by field screening using visible and olfactory observations.

**Describe how remediation of existing impacts is to be accomplished, including removal and disposal at an injection well or licensed facility, land treatment on site, removal of impacted groundwater, insitu bioremediation, burning of oily vegetation, etc.:**

The impacted material that is removed during excavation activities will be stockpiled on site. The excavator will be used to mix and aerate the excavated material. Once the mixed soils have been well mixed and aerated, the natural attenuation process is expected to be completed one week after being exposed to the atmosphere. Subsequent to the attenuation period, post-treatment samples will be collected and analyzed to verify the soil mixing activities were successful in mitigating petroleumhydrocarbon impacts at the Site.



Tracking Number: 8432  
Name of Operator: Entek GRB LLC  
COGCC Operator No: 10323  
Received Date:  
Well Name & No: Robidoux 13-7  
Facility Name & No: Robidoux 13-7 & 289419

Page 2  
**REMEDIATION WORKPLAN (Cont.)**

OGCC Employee:

**If groundwater has been impacted, describe proposed monitoring plan** (# of wells or sample points, sampling schedule, analytical methods, etc.)  
No groundwater was encountered during soil sampling activities to 12' bgs. Should groundwater impacted above regulatory standards be encountered during future excavation activities, Entek will submit a subsequent report summarizing the proposed monitoring plan and remediation strategy.

**Describe reclamation plan.** Discuss existing and new grade recontouring; method and testing of compaction alleviation; and reseeding program, including location of new seed, seed mix and noxious weed prevention. Attach diagram or drawing. Use additional sheet for description if required.  
Once it's determined that the TPH-impacted material has been removed, discrete confirmation soil samples will be collected from the base and sidewalls of the excavation. Two representative post-treatment samples will be collected from the remediated material. The closure samples and post-treatment samples will be submitted to ACZ labs in Steamboat Springs, Colorado for TPH analysis (GRO and DRO) by US EPA Method 8015 Modified. Once lab results indicate the confirmation samples are below the COGCC levels, the excavation will be backfilled. Native fill material will be placed from the surface to the bottom of the excavation. An excavator will be used to compact the fill material. The excavation will be completely backfilled to ground surface and re-contoured to match pre-existing surface conditions. The surface will be re-seeded using a seed mix recommended by the property owner. A detailed summary of the reclamation plan is provided in Section 3 of the attached Remediation Work Plan.

Attach samples and analytical results taken to verify remediation of impacts. Show locations of samples on an onsite schematic or drawing.

Is further site investigation required?  Y  N If yes, describe:  
See attached analytical results from soil samples collected on 10/30/2014. Based on the analytical data collected during the sampling activities, soil impacts above regulatory standards for TPH exist between 3 feet and 6 feet bgs in the approx. center of the former pit. Results of the soil sampling activities are summarized in Table 1 and Section 2 of the attached Remediation Work Plan.

**Final disposition of E&P waste** (landtreated and disposed onsite, name of licensed disposal facility, recycling, reuse, etc.):  
The impacted material that is removed during excavation activities will be stockpiled on site. The excavator will be used to mix and aerate the excavated material. Once the mixed soils have been well mixed and aerated, the natural attenuation process is expected to be completed one week after being exposed to the atmosphere. Subsequent to the attenuation period, post-treatment samples will be collected and analyzed to verify the soil mixing activities were successful in mitigating petroleum hydrocarbon impacts at the Site.

**IMPLEMENTATION SCHEDULE**

Date Site Investigation Began: 10/30/14 Date Site Investigation Completed: 10/30/14 Date Remediation Plan Submitted: 10/6/16  
Remediation Start Date: Anticipated Completion Date: Actual Completion Date:

I hereby certify that the statements made in this form are, to the best of my knowledge true, correct, and complete.  
Print Name: Knsten Stocks Signed: *[Signature]*  
Title: Sr Staff Engineer, Entek Energy Date: 10/14/16

OGCC Approved: *[Signature]* Title: EPS Date: 10/19/16

See Below for Conditions of Approval

**Remediation Project Number: 8432    Robidoux 13-7**

**Location ID: 313233**

**Pit Facility ID #289419**

**Entek GRB LLC., SWNE Section 13, T12N, R89W, 6 PM, Moffat County, Colorado, Form 27 Conditions of Approval (COAs)**

**Conditions of Approval:**

Conditionally approved, however, additional information or activities may be required during the course of remediation/reclamation.

COGCC approval is contingent on Operator providing notice to Environmental staff Kris Neidel ([kris.neidel@state.co.us](mailto:kris.neidel@state.co.us)) or [970-871-1963](tel:970-871-1963) a minimum of 72 hrs prior to conducting field operations.

Field screening shall be guided by PetroFlag or an equivalent method. A photoionization detector (PID), visual, and olfactory screening are NOT capable of detecting parts per million (ppm) of heavier end hydrocarbons such as DRO.

The operator shall collect discrete samples to adequately characterize impacted material. Composite samples will NOT be accepted for this purpose. Current COGCC Rules and Regulations regarding pit closures and clean-up standards shall be applied, specifically, but not limited to, the 900 and 1000 series rules.

The stockpile during treatment and post treatment must be adequately bermed with clean impermeable material to prevent surface water run on and run off.

The operator shall collect discrete samples to adequately characterize the post-treatment material. Composite samples will NOT be accepted for this purpose.

Samples shall be collected and analyzed for BTEX, TPH GRO and DRO. At least one sample shall be analyzed for the entire Table 910-1 constituents.

Surface reclamation must meet the COGCC 1000 series rules. Approval of this Form 27 does not imply approval of the reclamation plan submitted by the operator. The operator shall contact the COGCC regional reclamation specialist regarding compliance with 1000 series Rules.