



1437 Larimer St.
Denver, CO 80202
720•473•3131
sean.ohearn@enertiagc.com

December 19, 2011

Mr. Carlos Lujan, Ph.D.
State of Colorado
Oil & Gas Conservation Commission
1120 Lincoln Street, Suite 801
Denver, CO 80203

RE: Final Pit Closure Report
Slater Dome Federal 24-9 Well Location
REM No. 6181, DOC No. 2216430

Dear Mr. Lujan:

The following includes a summary of work completed to date/Final Closure Report (Report) for the residual drilling materials pit on the Slater Dome Federal 24-9 well location (SD 24-9). This Report is submitted on behalf of Entek GRB, LLC (Entek) in partial fulfillment of the requirements set forth in the approved workplan for the SD 24-9 pit closure dated October 5, 2011.

Background

SD 24-9 is located on BLM land in Section 24, Township 12 North, Range 88 West, Moffat County, Colorado. The SD 24-9 location has been assigned Location ID No. 419408.

On October 5, 2011, a Form 27 Site Investigation and Remediation Workplan (Workplan) was submitted to COGCC for closure of the unlined pit at the Slater Dome 24-9 well location. The Workplan included: a proposed remediation strategy for the pit; photographs of the pit; a schematic illustrating sample locations (residual drilling materials collected from each side of the pit and background sample locations); and laboratory analysis of the residual drilling material and background soil samples with summary table. COGCC completed its review of the submitted documents and issued a signed Workplan on October 6th. For reference, a copy of the this Workplan is included as Attachment A.

Site Investigation Activities

As outlined in the Workplan, residual drilling material samples were collected along each side of the pit. In addition, two background samples were collected from undisturbed areas in the vicinity of the pit. Figure 2 included in the Workplan (Attachment A) illustrates the sample locations. Residual drilling material samples and were analyzed for COGCC Table 910-1

Mr. Carlos Lujan, Ph.D.

Page 2

parameters. These parameters include the following: total metals; BTEX (benzene, toluene, ethylbenzene, and total xylenes); select semi-volatile organics; total petroleum hydrocarbons (TPH) both volatile (TVPH) and extractable (TEPH); SAR (sodium absorption ratio); EC (electrical conductivity); and pH. Background soil samples were analyzed for total Ar, SAR, EC, and pH.

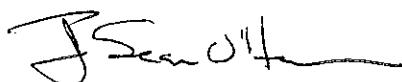
Results of the sampling program are presented in the Workplan. In summary, all parameters included in the analysis were below COGCC limits with the exception of arsenic and SAR. Arsenic concentrations ranged from 2.69 mg/kg to 7.8 mg/kg and SAR levels ranged from 0.74 to 72 in the residual material samples. Background arsenic concentrations and SAR levels were 4.36 mg/kg and 81 (soil sample A) and 4.82 mg/kg and 65.8 (soil sample B). Due to the elevated concentrations/levels of arsenic and SAR in the background soil samples, the residual material sampling results for these parameters were acceptable and the remediation strategy of filling over the residual drilling material with 2' of clean soil was followed.

Remediation Activities

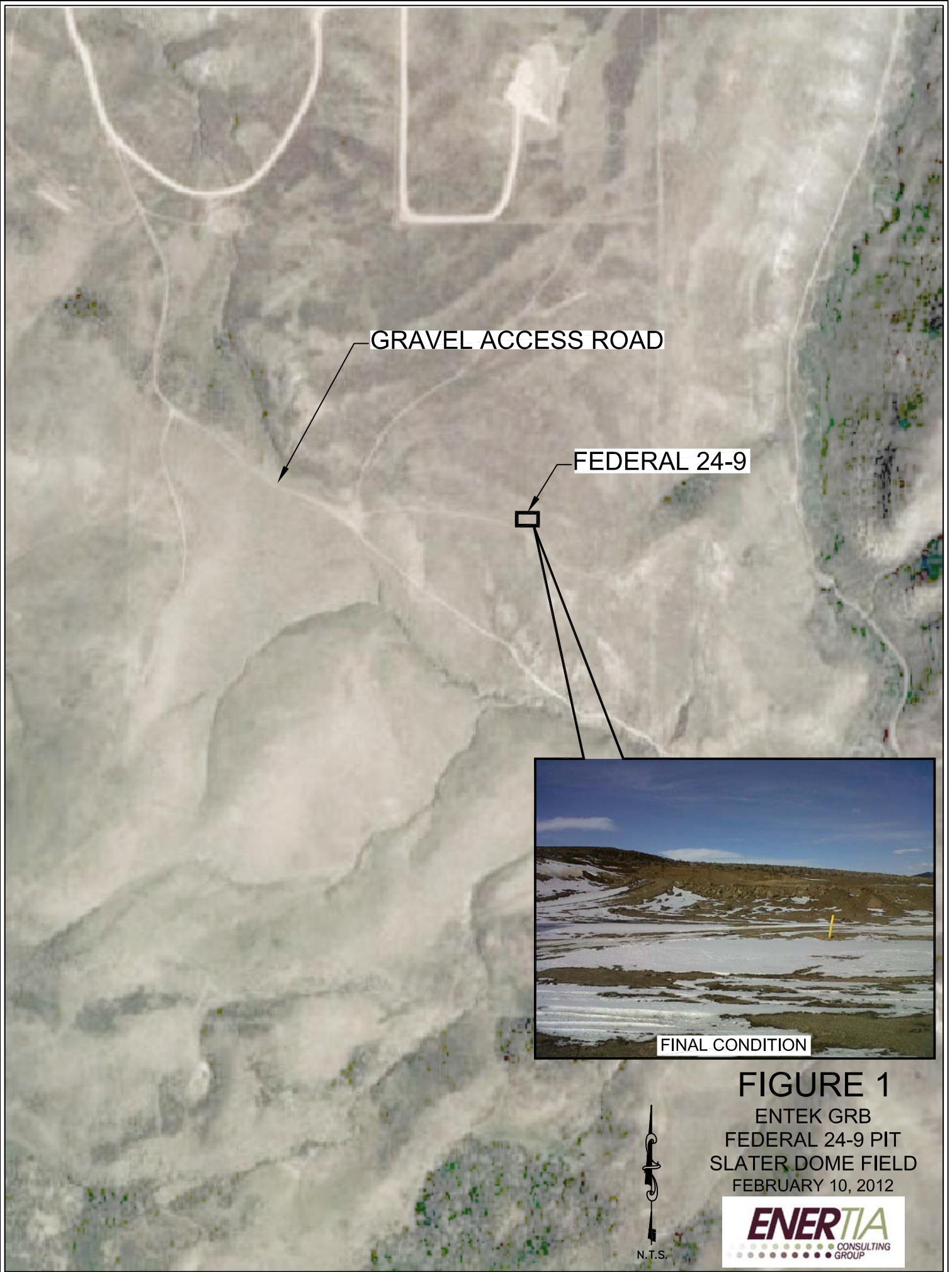
Given the acceptable concentrations of tested parameters in the residual drilling materials, the upper 2+ feet of the pit area was backfilled with clean soil and graded to match existing grade. Figure 1 includes photographs of the backfilled pit. This work was completed on or about October 15, 2011. Once activity at the well location has ceased, the ground surface will be roughened and broadcast seeded in accordance with the revegetation procedures included in the Entek Storm Water Management Plan (SWMP) for its Northeast Sand Wash Basin Development Field. Well location restoration and revegetation shall be conducted in a manner consistent with BLM Best Management Practices for Noxious and Invasive Weed Prevention and the SWMP.

We trust that this Closure Report is acceptable and complete. Please contact me should you have any questions or require additional information.

Sincerely,
ENERTIA CONSULTING GROUP, LLC



J. Sean O'Hearn, P.E., P.G.
Managing Partner



GRAVEL ACCESS ROAD

FEDERAL 24-9

FINAL CONDITION

FIGURE 1
ENTEK GRB
FEDERAL 24-9 PIT
SLATER DOME FIELD
FEBRUARY 10, 2012



N.T.S.

ATTACHMENT A

**SITE INVESTIGATION AND REMEDIATION WORKPLAN
RESIDUAL DRILLING MATERIALS PIT
SLATER DOME FEDERAL 24-9 – LOCATION ID No. 419408**

**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.

CAUSE OF CONDITION BEING INVESTIGATED AND REMEDIATED

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

OGCC Employee:

☐ Spill ☐ Complaint
☐ Inspection ☐ NOAV

Tracking No:

OGCC Operator Number: 10323

Name of Operator: Entek GRB, LLC

Address: 535 16th Street, Suite 620

City: Denver State: CO Zip: 80202

Contact Name and Telephone:

Kristen Stocks

No: (307) 200-1930

Fax: (866) 435-9424

API Number: 05-081-07624

County: Moffatt

Facility Name: Slater Dome

Facility Number: 17851 Location ID # 419408

Well Name: Slater Dome Federal

Well Number: 24-9

Location: (QtrQtr, Sec, Twp, Rng, Meridian): NESE 24, 12N, 89W, 6th Latitude: 40.9793 Longitude: -107.3192

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.): undeveloped rangeland

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):

- ☒ Soils
☐ Vegetation
☐ Groundwater
☐ Surface Water

Extent of Impact:

residual drilling materials contained within unlined pit

How Determined:

visual observation and drilling materials sample taken

REMEDIAL WORKPLAN

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

Residual drilling fluid materials are present in the unlined pit located in the northwest corner of the Slater Dome Federal 24-9 well pad (see Figure 1 for approximate pit location and photographs). Four discrete samples of the residual drilling fluid material were collected and tested for Table 910-1 parameters. In addition, two background samples were also collected. Figure 2 illustrates the sample locations. The sample results, summarized in Table 1 and included as Appendix A, indicate contaminant concentrations within acceptable limits. Accordingly, the proposed initial action will be to leave the residual drilling materials in place and backfill the upper 2' (minimum) of the pit with clean fill material only.

Describe how source is to be removed:

Residual drilling materials to be left in place. Remaining pit volume (upper 2+ feet) to be backfilled with clean fill. Ground surface to be shaped and graded to match existing grade.

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.:

Given the results of the sample analysis, the environmental impact associated with leaving the material in place and covering the material with a minimum of 2' of clean fill is anticipated to be minimal. Once activity on the 24-9 location has ended, the well pad surface will be reclaimed/revegetated in accordance with Entek Storm Water Management Plan requirements.



REMEDIATION WORKPLAN (Cont.)

Tracking Number: _____
Name of Operator: _____
OGCC Operator No: _____
Received Date: SD Federal 24-9
Well Name & No: _____
Facility Name & No: Location # 419408

OGCC Employee: _____

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

Depth to groundwater in the vicinity of the SD Federal 24-9 pit location is reported to be greater than 400'. Accordingly, it is unlikely that groundwater has been impacted by the residual drilling materials.

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.

The residual drilling materials will remain in the pit and backfilled with clean fill material. Once backfilled, the former pit surface will be shaped and graded to match the existing grade around the perimeter of the pit. Once activity at the well location has ceased, the ground surface will be roughened and broadcast seeded in accordance with revegetation procedures included in the Entek Storm Water Management Plan (SWMP). Well location restoration and revegetation shall be conducted in a manner consistent with BLM Best Management Practices for Noxious and Invasive Weed Prevention and the SWMP.

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.):

Remain in pit and covered with a minimum of 2' clean fill.

IMPLEMENTATION SCHEDULE

Date Site Investigation Began: <u>9/23</u>	Date Site Investigation Completed: <u>10/4</u>	Date Remediation Plan Submitted: <u>10/6</u>
Remediation Start Date: <u>10/10</u>	Anticipated Completion Date: <u>10/15</u>	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: Tim Hopkins

Signed: [Signature]

Title: Regional Manager

Date: 10/5/11

OGCC Approved: [Signature]

Title: FOR

Date: 10/06/2011

Chris Canfield
EPS NW Region



GRAVEL ACCESS ROAD

FEDERAL 24-9



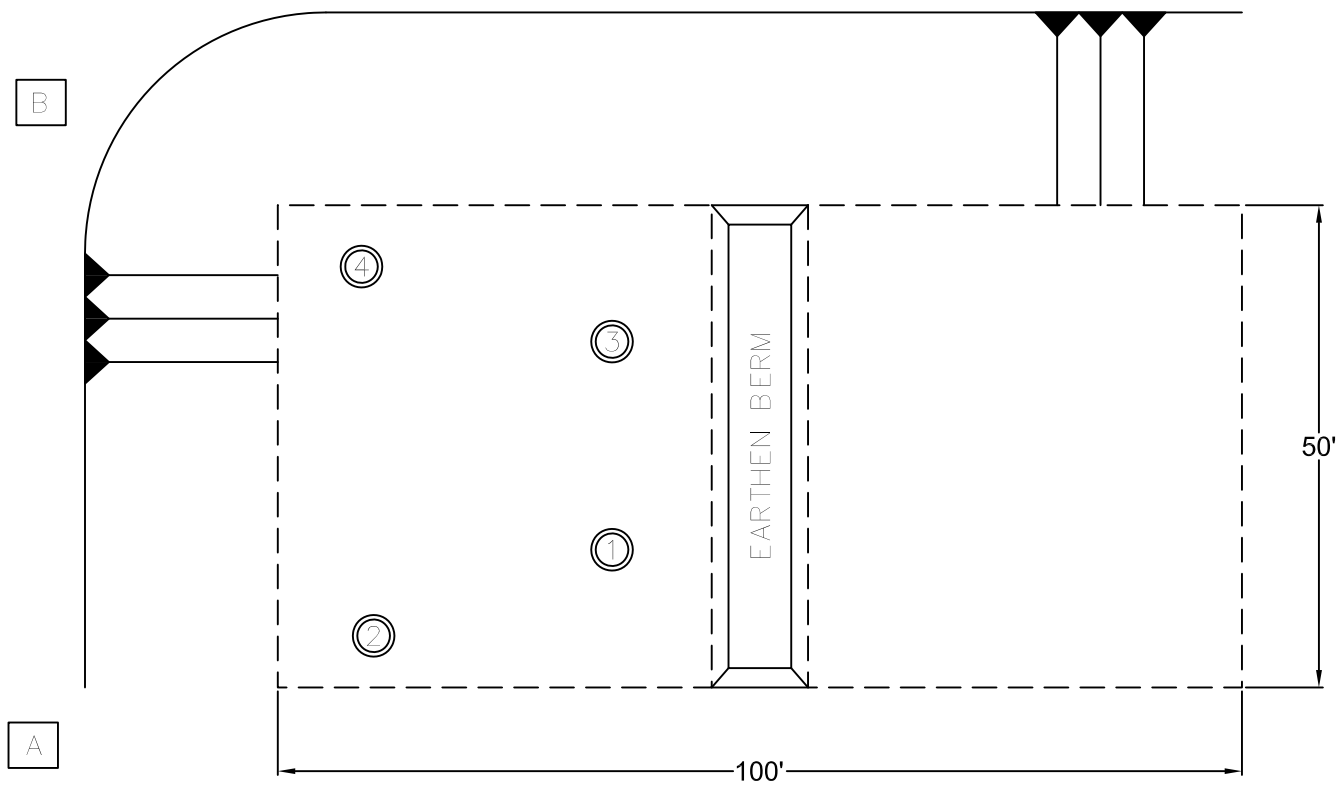
FIGURE 1

ENTEK GRB
FEDERAL 24-9 PIT
SLATER DOME FIELD
OCTOBER 5, 2011



N.T.S.

ENERTIA
CONSULTING
GROUP



LEGEND

	PIT SAMPLE LOCATIONS
	BACKGROUND SAMPLE LOCATIONS
	TOP OF SLOPE
	RESIDUAL MATERIAL PERIMETER
	SLOPE DIRECTION

FIGURE 2
ENTEK GRB
FEDERAL 24-9 PIT
SLATER DOME FIELD
DECEMBER 19, 2011

Table 1 - Federal 24-9 Residual Drilling Material Sample Results
Sample Date - September 23, 2011

Contaminant of Concern	COGCC Limit	LOC 1	LOC 2	LOC 3	LOC 4
Organic Compounds in Residual Drilling Material					
TPH (total volatile and extractable petroleum hydrocarbons)	500 mg/kg	19 mg/kg	5.2 mg/kg	6.3 mg/kg	ND
Benzene	0.17 mg/kg	0.14 mg/kg	0.064 mg/kg	0.026 mg/kg	ND
Toluene	85 mg/kg	0.093 mg/kg	0.066 mg/kg	0.046 mg/kg	ND
Ethylbenzene	100 mg/kg	0.014 mg/kg	0.013 mg/kg	0.011 mg/kg	ND
Xylenes (total)	175 mg/kg	0.11 mg/kg	0.055 mg/kg	0.054 mg/kg	ND
Acenaphthene	1,000 mg/kg	0.0144 mg/kg	0.0155 mg/kg	0.0087 mg/kg	ND
Anthracene	1,000 mg/kg	0.23 mg/kg	0.109 mg/kg	ND	ND
Benzo(A)anthracene	0.22 mg/kg	0.0072 mg/kg	0.0082 mg/kg	0.006 mg/kg	ND
Benzo(B)fluoranthene	0.22 mg/kg	0.0095 mg/kg	0.0075 mg/kg	0.0095 mg/kg	ND
Benzo(K)fluoranthene	2.2 mg/kg	.00685 mg/kg	ND	0.0069 mg/kg	ND
Benzo(A)pyrene	0.022 mg/kg	0.0054 mg/kg	0.0068 mg/kg	ND	ND
Chrysene	22 mg/kg	0.0266 mg/kg	0.018 mg/kg	0.0124 mg/kg	ND
Dibenzo(A,H)anthracene	0.022 mg/kg	ND	ND	ND	ND
Fluoranthene	1,000 mg/kg	0.0106 mg/kg	0.0105 mg/kg	0.0561 mg/kg	ND
Fluorene	1,000 mg/kg	0.101 mg/kg	0.059 mg/kg	0.035 mg/kg	ND
Indeno(1,2,3,C,D)pyrene	0.22 mg/kg	ND	ND	ND	ND
Napthalene	23 mg/kg	0.535 mg/kg	0.246 mg/kg	0.161 mg/kg	ND
Pyrene	1,000 mg/kg	0.020 mg/kg	0.0157 mg/kg	0.0095 mg/kg	ND
Other Parameters					
Electrical Conductivity (EC)	<4 mmhos/cm or 2x background	5.55	6.7	13.3	1.76
Sodium Adsorption Ratio (SAR)	<12	47.4	33.9	72	0.74
pH	6 to 9	8.3	9.1	8.1	8.2

Elements/Metals in Residual Drilling Material					
Arsenic	0.39 mg/kg	7.8 mg/kg	4.3 mg/kg	5.05 mg/kg	2.69 mg/kg
Barium (LDNR True Total Barium)	15,000 mg/kg	56.2 mg/kg	39.7 mg/kg	96.5 mg/kg	111 mg/kg
Boron (Hot Water Soluble)	2 mg/l	NTF	NTF	NTF	NTF
Cadmium	70 mg/kg	0.457 mg/kg	0.391 mg/kg	0.432 mg/kg	0.23 mg/kg
Chromium (total)	120,000 mg/kg	6.54 mg/kg	3.79 mg/kg	13.1 mg/kg	3.85 mg/kg
Chromium (VI)	23 mg/kg				
Copper	3,100 mg/kg	24.5 mg/kg	18.7 mg/kg	22.5 mg/kg	6.44 mg/kg
Lead (inorganic)	400 mg/kg	16.7 mg/kg	11.6 mg/kg	17 mg/kg	7.77 mg/kg
Mercury	23 mg/kg	ND	ND	0.0536 mg/kg	ND
Nickel (soluble salts)	1,600 mg/kg	16 mg/kg	12.6 mg/kg	18.5 mg/kg	10.2 mg/kg
Selenium	390 mg/kg	1.18 mg/kg	0.978 mg/kg	1.04 mg/kg	0.229 mg/kg
Silver	390 mg/kg	0.161 mg/kg	0.115 mg/kg	0.233 mg/kg	ND
Zinc	23,000 mg/kg	88.3 mg/kg	59 mg/kg	76.6 mg/kg	27.9 mg/kg
Liquid Hydrocarbons in Soil and Groundwater					
Liquid Hydrocarbons including Condensate and Oil	Below Detection Level	NA	NA	NA	NA

24-9 Background Soil Sample Results
Sample Date - September 23, 2011

Contaminant of Concern	COGCC Limit	Back-A	Back-B		
Tested Parameters					
Arsenic (total)	0.39 mg/kg	4.36 mg/kg	4.82 mg/kg		
Sodium Adsorption Ratio (SAR)	<12	81	65.8		
Electrical Conductivity (EC)	<4 mmhos/cm or 2x background	17.6	14.8		
pH	6 to 9	7.7	7.6		

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

October 04, 2011

Kristen Stocks
Entek GRB LLC
535 16th Street Suite 620
Denver, CO 80202
RE: Federal 24-9 Pit Closure

Enclosed are the results of analyses for samples received by Summit Scientific on 09/26/11 08:50. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

DRAFT REPORT
DATA SUBJECT TO CHANGE



Entek GRB LLC
535 16th Street Suite 620
Denver CO, 80202

Project: Federal 24-9 Pit Closure
Project Number: [none]
Project Manager: Kristen Stocks

Reported:
10/04/11 10:59

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
DRAFT: Loc 1	R109143-01	Soil	09/23/11 14:30	09/26/11 08:50
DRAFT: Loc 2	R109143-02	Soil	09/23/11 14:30	09/26/11 08:50
DRAFT: Loc 3	R109143-03	Soil	09/23/11 14:30	09/26/11 08:50
DRAFT: Loc 4	R109143-04	Soil	09/23/11 14:30	09/26/11 08:50
DRAFT: Background A	R109143-05	Soil	09/23/11 14:30	09/26/11 08:50
DRAFT: Background B	R109143-06	Soil	09/23/11 14:30	09/26/11 08:50

DRAFT REPORT

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Entek GRB LLC
535 16th Street Suite 620
Denver CO, 80202

Project: Federal 24-9 Pit Closure

Project Number: [none]
Project Manager: Kristen Stocks

Reported:
10/04/11 10:59

R109143

Summit Scientific

741 Corporate Circle Suite I ♦ Golden, Colorado 80401
303-277-9310 ♦ 303-277-9531 Fax

Page / of

6N70K

Client: Enertia Consulting Group, LLC

Address: 1437 Larimer Street

Project Manager:

J. Sean O'Hearn

City/State/Zip: Denver, CO 80202

E-Mail:

sean.ohern@er

Phone: (720) 473-3131

Fax: (303) 433-1432

Project Name:

Feb. 1 211.9 Lit. Clavator

Sampler Name:

Project Number:

[illegible]

www.s2scientific.com

DRAFT REPORT

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Entek GRB LLC
535 16th Street Suite 620
Denver CO, 80202

Project: Federal 24-9 Pit Closure
Project Number: [none]
Project Manager: Kristen Stocks

Reported:
10/04/11 10:59

DRAFT: Loc 1
R109143-01 (Soil)

Summit Scientific

DRAFT: Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/23/11 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (TEPH-DRO)	ND	50	mg/kg	1	1092610	09/26/11	09/27/11	8015 Full Carbon Chain	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/23/11 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		0.117 %	88.8-124		"	"	"	"	

DRAFT: Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/23/11 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	0.14	0.0050	mg/kg	1	1092609	09/26/11	09/27/11	EPA 8260B	
Toluene	0.093	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.014	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.11	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	19	0.50	"	"	"	"	"	"	

Date Sampled: **09/23/11 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		90.2 %	67.4-143		"	"	"	"	
Surrogate: Toluene-d8		91.3 %	77.3-114		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		83.4 %	78.4-125		"	"	"	"	

DRAFT: Semivolatile Organic Compounds by EPA Method 8270D SIM

Date Sampled: **09/23/11 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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DRAFT REPORT

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Entek GRB LLC
535 16th Street Suite 620
Denver CO, 80202

Project: Federal 24-9 Pit Closure

Project Number: [none]
Project Manager: Kristen Stocks

Reported:
10/04/11 10:59

DRAFT: Loc 1
R109143-01 (Soil)

Summit Scientific

DRAFT: Semivolatile Organic Compounds by EPA Method 8270D SIM

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	14.4	5.00	ug/kg	1	1092901	09/29/11	10/03/11	EPA 8270D SIM	
Acenaphthylene	12.2	5.00	"	"	"	"	"	"	
Anthracene	230	5.00	"	"	"	"	"	"	
Benzo (a) anthracene	7.16	5.00	"	"	"	"	"	"	
Benzo (b) fluoranthene	9.50	5.00	"	"	"	"	"	"	
Benzo (k) fluoranthene	6.85	5.00	"	"	"	"	"	"	
Benzo (g,h,i) perylene	6.48	5.00	"	"	"	"	"	"	
Benzo (a) pyrene	5.42	5.00	"	"	"	"	"	"	
Chrysene	26.6	5.00	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	10.0	"	"	"	"	"	"	
Fluoranthene	10.6	5.00	"	"	"	"	"	"	
Fluorene	101	5.00	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	10.0	"	"	"	"	"	"	
Naphthalene	535	5.00	"	"	"	"	"	"	
Phenanthrene	247	5.00	"	"	"	"	"	"	
Pyrene	20.0	5.00	"	"	"	"	"	"	

Date Sampled: 09/23/11 14:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: Nitrobenzene-d5		92.1 %	21.8-138		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		76.8 %	31.2-131		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		141 %	44.5-144		"	"	"	"	
Surrogate: Terphenyl-dl4		44.3 %	41.7-139		"	"	"	"	

DRAFT: Total Metals by EPA SW846 Method 6020 - Dry Weight Basis

Date Sampled: 09/23/11 14:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	7.80	0.100	mg/kg	1	1092702	09/27/11	10/03/11	EPA 6020A	
Barium	56.2	5.00	"	"	"	"	"	"	
Cadmium	0.457	0.100	"	"	"	"	"	"	
Chromium	6.54	0.100	"	"	"	"	"	"	
Copper	24.5	0.500	"	"	"	"	"	"	
Lead	16.7	0.500	"	"	"	"	"	"	
Nickel	16.0	1.00	"	"	"	"	"	"	

DRAFT REPORT

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Entek GRB LLC
535 16th Street Suite 620
Denver CO, 80202

Project: Federal 24-9 Pit Closure

Project Number: [none]
Project Manager: Kristen Stocks

Reported:
10/04/11 10:59

DRAFT: Loc 1
R109143-01 (Soil)

Summit Scientific

DRAFT: Total Metals by EPA SW846 Method 6020 - Dry Weight Basis

Selenium	1.18	0.100	mg/kg	1	1092702	09/27/11	10/03/11	EPA 6020A	
Silver	0.161	0.100	"	"	"	"	"	"	
Zinc	88.3	5.00	"	"	"	"	"	"	

DRAFT: Total Mercury by EPA SW846 Method 7471/7470

Date Sampled: **09/23/11 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.0500	mg/kg	1	1092712	09/29/11	10/04/11	EPA 7471B	

DRAFT: Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/23/11 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	5.55	0.00100	mmhos/cm	1	1092708	09/27/11	09/27/11	SM 2510B	

Date Sampled: **09/23/11 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.3		pH Units	"	1092709	09/27/11	09/27/11	EPA 9045B	

DRAFT: Soluble Nutrients by EPA 6020/USDA60 6(2, 3A) - Dry Weight Basis

Date Sampled: **09/23/11 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	825	2.50	mg/kg	1	1092606	09/26/11	09/30/11	EPA 6020/USDA60 6(2, 3A)	
Magnesium	88.3	1.00	"	"	"	"	"	"	
Sodium	5360	5.00	"	"	"	"	"	"	

Date Sampled: **09/23/11 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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DRAFT REPORT

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Entek GRB LLC
535 16th Street Suite 620
Denver CO, 80202

Project: Federal 24-9 Pit Closure

Project Number: [none]
Project Manager: Kristen Stocks

Reported:
10/04/11 10:59

DRAFT: Loc 1
R109143-01 (Soil)

Summit Scientific

DRAFT: Soluble Nutrients by EPA 6020/USDA60 6(2, 3A) - Dry Weight Basis

Sodium Adsorption Ratio	47.4	units	1	1093003	09/30/11	09/30/11	EPA 6020/USDA6 0 6(2, 3A)
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Entek GRB LLC
535 16th Street Suite 620
Denver CO, 80202

Project: Federal 24-9 Pit Closure
Project Number: [none]
Project Manager: Kristen Stocks

Reported:
10/04/11 10:59

DRAFT: Loc 2
R109143-02 (Soil)

Summit Scientific

DRAFT: Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/23/11 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (TEPH-DRO)	ND	50	mg/kg	1	1092610	09/26/11	09/27/11	8015 Full Carbon Chain	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/23/11 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		0.114 %	88.8-124		"	"	"	"	

DRAFT: Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/23/11 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	0.064	0.0050	mg/kg	1	1092609	09/26/11	09/27/11	EPA 8260B	
Toluene	0.066	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.013	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.055	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	5.2	0.50	"	"	"	"	"	"	

Date Sampled: **09/23/11 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		97.4 %	67.4-143		"	"	"	"	
Surrogate: Toluene-d8		91.8 %	77.3-114		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		91.2 %	78.4-125		"	"	"	"	

DRAFT: Semivolatile Organic Compounds by EPA Method 8270D SIM

Date Sampled: **09/23/11 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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DRAFT REPORT

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Entek GRB LLC
535 16th Street Suite 620
Denver CO, 80202

Project: Federal 24-9 Pit Closure

Project Number: [none]
Project Manager: Kristen Stocks

Reported:
10/04/11 10:59

DRAFT: Loc 2
R109143-02 (Soil)

Summit Scientific

DRAFT: Semivolatile Organic Compounds by EPA Method 8270D SIM

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	15.5	5.00	ug/kg	1	1092901	09/29/11	10/03/11	EPA 8270D SIM	
Acenaphthylene	6.19	5.00	"	"	"	"	"	"	
Anthracene	109	5.00	"	"	"	"	"	"	
Benzo (a) anthracene	8.19	5.00	"	"	"	"	"	"	
Benzo (b) fluoranthene	7.54	5.00	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	5.00	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	5.00	"	"	"	"	"	"	
Benzo (a) pyrene	6.78	5.00	"	"	"	"	"	"	
Chrysene	18.0	5.00	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	10.0	"	"	"	"	"	"	
Fluoranthene	10.5	5.00	"	"	"	"	"	"	
Fluorene	59.0	5.00	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	10.0	"	"	"	"	"	"	
Naphthalene	246	5.00	"	"	"	"	"	"	
Phenanthrene	118	5.00	"	"	"	"	"	"	
Pyrene	15.7	5.00	"	"	"	"	"	"	

Date Sampled: 09/23/11 14:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: Nitrobenzene-d5		68.7 %	21.8-138		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		80.3 %	31.2-131		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		124 %	44.5-144		"	"	"	"	
Surrogate: Terphenyl-dl4		50.3 %	41.7-139		"	"	"	"	

DRAFT: Total Metals by EPA SW846 Method 6020 - Dry Weight Basis

Date Sampled: 09/23/11 14:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	4.30	0.0770	mg/kg	1	1092702	09/27/11	10/03/11	EPA 6020A	
Barium	39.7	3.85	"	"	"	"	"	"	
Cadmium	0.391	0.0770	"	"	"	"	"	"	
Chromium	3.79	0.0770	"	"	"	"	"	"	
Copper	18.7	0.385	"	"	"	"	"	"	
Lead	11.6	0.385	"	"	"	"	"	"	
Nickel	12.6	0.770	"	"	"	"	"	"	

DRAFT REPORT

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Entek GRB LLC
535 16th Street Suite 620
Denver CO, 80202

Project: Federal 24-9 Pit Closure

Project Number: [none]
Project Manager: Kristen Stocks

Reported:
10/04/11 10:59

DRAFT: Loc 2
R109143-02 (Soil)

Summit Scientific

DRAFT: Total Metals by EPA SW846 Method 6020 - Dry Weight Basis

Selenium	0.978	0.0770	mg/kg	1	1092702	09/27/11	10/03/11	EPA 6020A	
Silver	0.115	0.0770	"	"	"	"	"	"	
Zinc	59.0	3.85	"	"	"	"	"	"	

DRAFT: Total Mercury by EPA SW846 Method 7471/7470

Date Sampled: **09/23/11 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.0500	mg/kg	1	1092712	09/29/11	10/04/11	EPA 7471B	

DRAFT: Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/23/11 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	6.70	0.00100	mmhos/cm	1	1092708	09/27/11	09/27/11	SM 2510B	

Date Sampled: **09/23/11 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	9.1		pH Units	"	1092709	09/27/11	09/27/11	EPA 9045B	

DRAFT: Soluble Nutrients by EPA 6020/USDA60 6(2, 3A) - Dry Weight Basis

Date Sampled: **09/23/11 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	1250	2.50	mg/kg	1	1092606	09/26/11	09/30/11	EPA 6020/USDA60 6(2, 3A)	
Magnesium	106	1.00	"	"	"	"	"	"	
Sodium	4650	5.00	"	"	"	"	"	"	

Date Sampled: **09/23/11 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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DRAFT REPORT

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Entek GRB LLC
535 16th Street Suite 620
Denver CO, 80202

Project: Federal 24-9 Pit Closure

Project Number: [none]
Project Manager: Kristen Stocks

Reported:
10/04/11 10:59

DRAFT: Loc 2
R109143-02 (Soil)

Summit Scientific

DRAFT: Soluble Nutrients by EPA 6020/USDA60 6(2, 3A) - Dry Weight Basis

Sodium Adsorption Ratio	33.9	units	1	1093003	09/30/11	09/30/11	EPA 6020/USDA6 0 6(2, 3A)
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Entek GRB LLC
535 16th Street Suite 620
Denver CO, 80202

Project: Federal 24-9 Pit Closure

Project Number: [none]
Project Manager: Kristen Stocks

Reported:
10/04/11 10:59

DRAFT: Loc 3
R109143-03 (Soil)

Summit Scientific

DRAFT: Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/23/11 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (TEPH-DRO)	ND	50	mg/kg	1	1092610	09/26/11	09/27/11	8015 Full Carbon Chain	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/23/11 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		0.113 %	88.8-124		"	"	"	"	

DRAFT: Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/23/11 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	0.026	0.0050	mg/kg	1	1092609	09/26/11	09/27/11	EPA 8260B	
Toluene	0.046	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.011	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.054	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	6.3	0.50	"	"	"	"	"	"	

Date Sampled: **09/23/11 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		100 %	67.4-143		"	"	"	"	
Surrogate: Toluene-d8		89.5 %	77.3-114		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		91.6 %	78.4-125		"	"	"	"	

DRAFT: Semivolatile Organic Compounds by EPA Method 8270D SIM

Date Sampled: **09/23/11 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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DRAFT REPORT

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Entek GRB LLC
535 16th Street Suite 620
Denver CO, 80202

Project: Federal 24-9 Pit Closure

Project Number: [none]
Project Manager: Kristen Stocks

Reported:
10/04/11 10:59

DRAFT: Loc 3
R109143-03 (Soil)

Summit Scientific

DRAFT: Semivolatile Organic Compounds by EPA Method 8270D SIM

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	8.69	5.00	ug/kg	1	1092901	09/29/11	10/03/11	EPA 8270D SIM	
Acenaphthylene	5.08	5.00	"	"	"	"	"	"	
Anthracene	ND	5.00	"	"	"	"	"	"	
Benzo (a) anthracene	5.95	5.00	"	"	"	"	"	"	
Benzo (b) fluoranthene	9.48	5.00	"	"	"	"	"	"	
Benzo (k) fluoranthene	6.91	5.00	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	5.00	"	"	"	"	"	"	
Benzo (a) pyrene	ND	5.00	"	"	"	"	"	"	
Chrysene	12.4	5.00	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	10.0	"	"	"	"	"	"	
Fluoranthene	5.61	5.00	"	"	"	"	"	"	
Fluorene	35.0	5.00	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	10.0	"	"	"	"	"	"	
Naphthalene	161	5.00	"	"	"	"	"	"	
Phenanthrene	68.1	5.00	"	"	"	"	"	"	
Pyrene	9.48	5.00	"	"	"	"	"	"	

Date Sampled: 09/23/11 14:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: Nitrobenzene-d5		64.5 %	21.8-138		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		87.3 %	31.2-131		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		130 %	44.5-144		"	"	"	"	
Surrogate: Terphenyl-dl4		53.4 %	41.7-139		"	"	"	"	

DRAFT: Total Metals by EPA SW846 Method 6020 - Dry Weight Basis

Date Sampled: 09/23/11 14:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	5.05	0.163	mg/kg	1	1092702	09/27/11	10/03/11	EPA 6020A	
Barium	96.5	8.16	"	"	"	"	"	"	
Cadmium	0.432	0.163	"	"	"	"	"	"	
Chromium	13.1	0.163	"	"	"	"	"	"	
Copper	22.5	0.816	"	"	"	"	"	"	
Lead	17.0	0.816	"	"	"	"	"	"	
Nickel	18.5	1.63	"	"	"	"	"	"	

DRAFT REPORT

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Entek GRB LLC
535 16th Street Suite 620
Denver CO, 80202

Project: Federal 24-9 Pit Closure

Project Number: [none]
Project Manager: Kristen Stocks

Reported:
10/04/11 10:59

DRAFT: Loc 3
R109143-03 (Soil)

Summit Scientific

DRAFT: Total Metals by EPA SW846 Method 6020 - Dry Weight Basis

Selenium	1.04	0.163	mg/kg	1	1092702	09/27/11	10/03/11	EPA 6020A	
Silver	0.233	0.163	"	"	"	"	"	"	
Zinc	76.6	8.16	"	"	"	"	"	"	

DRAFT: Total Mercury by EPA SW846 Method 7471/7470

Date Sampled: **09/23/11 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	0.0536	0.0500	mg/kg	1	1092712	09/29/11	10/04/11	EPA 7471B	

DRAFT: Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/23/11 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	13.3	0.00100	mmhos/cm	1	1092708	09/27/11	09/27/11	SM 2510B	

Date Sampled: **09/23/11 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.1		pH Units	"	1092709	09/27/11	09/27/11	EPA 9045B	

DRAFT: Soluble Nutrients by EPA 6020/USDA60 6(2, 3A) - Dry Weight Basis

Date Sampled: **09/23/11 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	1190	2.50	mg/kg	1	1092606	09/26/11	09/30/11	EPA 6020/USDA60 6(2, 3A)	
Magnesium	78.4	1.00	"	"	"	"	"	"	
Sodium	9490	5.00	"	"	"	"	"	"	

Date Sampled: **09/23/11 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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DRAFT REPORT

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Entek GRB LLC
535 16th Street Suite 620
Denver CO, 80202

Project: Federal 24-9 Pit Closure

Project Number: [none]
Project Manager: Kristen Stocks

Reported:
10/04/11 10:59

DRAFT: Loc 3
R109143-03 (Soil)

Summit Scientific

DRAFT: Soluble Nutrients by EPA 6020/USDA60 6(2, 3A) - Dry Weight Basis

Sodium Adsorption Ratio	72.0	units	1	1093003	09/30/11	09/30/11	EPA 6020/USDA6 0 6(2, 3A)
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Entek GRB LLC
535 16th Street Suite 620
Denver CO, 80202

Project: Federal 24-9 Pit Closure

Project Number: [none]
Project Manager: Kristen Stocks

Reported:
10/04/11 10:59

DRAFT: Loc 4
R109143-04 (Soil)

Summit Scientific

DRAFT: Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/23/11 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (TEPH-DRO)	ND	50	mg/kg	1	1092610	09/26/11	09/27/11	8015 Full Carbon Chain	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/23/11 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		0.121 %	88.8-124		"	"	"	"	

DRAFT: Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/23/11 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0050	mg/kg	1	1092609	09/26/11	09/27/11	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **09/23/11 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		105 %	67.4-143		"	"	"	"	
Surrogate: Toluene-d8		93.7 %	77.3-114		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.5 %	78.4-125		"	"	"	"	

DRAFT: Semivolatile Organic Compounds by EPA Method 8270D SIM

Date Sampled: **09/23/11 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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DRAFT REPORT

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Entek GRB LLC
535 16th Street Suite 620
Denver CO, 80202

Project: Federal 24-9 Pit Closure

Project Number: [none]
Project Manager: Kristen Stocks

Reported:
10/04/11 10:59

DRAFT: Loc 4
R109143-04 (Soil)

Summit Scientific

DRAFT: Semivolatile Organic Compounds by EPA Method 8270D SIM

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	5.00	ug/kg	1	1092901	09/29/11	10/03/11	EPA 8270D SIM	
Acenaphthylene	ND	5.00	"	"	"	"	"	"	
Anthracene	ND	5.00	"	"	"	"	"	"	
Benzo (a) anthracene	ND	5.00	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	5.00	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	5.00	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	5.00	"	"	"	"	"	"	
Benzo (a) pyrene	ND	5.00	"	"	"	"	"	"	
Chrysene	ND	5.00	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	10.0	"	"	"	"	"	"	
Fluoranthene	ND	5.00	"	"	"	"	"	"	
Fluorene	ND	5.00	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	10.0	"	"	"	"	"	"	
Naphthalene	ND	5.00	"	"	"	"	"	"	
Phenanthrene	ND	5.00	"	"	"	"	"	"	
Pyrene	ND	5.00	"	"	"	"	"	"	

Date Sampled: 09/23/11 14:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: Nitrobenzene-d5		114 %	21.8-138		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		91.4 %	31.2-131		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		120 %	44.5-144		"	"	"	"	
Surrogate: Terphenyl-dl4		53.9 %	41.7-139		"	"	"	"	

DRAFT: Total Metals by EPA SW846 Method 6020 - Dry Weight Basis

Date Sampled: 09/23/11 14:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	2.69	0.0736	mg/kg	1	1092702	09/27/11	10/03/11	EPA 6020A	
Barium	111	3.68	"	"	"	"	"	"	
Cadmium	0.230	0.0736	"	"	"	"	"	"	
Chromium	3.85	0.0736	"	"	"	"	"	"	
Copper	6.44	0.368	"	"	"	"	"	"	
Lead	7.77	0.368	"	"	"	"	"	"	

DRAFT REPORT

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Entek GRB LLC
535 16th Street Suite 620
Denver CO, 80202

Project: Federal 24-9 Pit Closure

Project Number: [none]
Project Manager: Kristen Stocks

Reported:
10/04/11 10:59

DRAFT: Loc 4
R109143-04 (Soil)

Summit Scientific

DRAFT: Total Metals by EPA SW846 Method 6020 - Dry Weight Basis

Nickel	10.2	0.736	mg/kg	1	1092702	09/27/11	10/03/11	EPA 6020A	
Selenium	0.229	0.0736	"	"	"	"	"	"	
Silver	ND	0.0736	"	"	"	"	"	"	
Zinc	27.9	3.68	"	"	"	"	"	"	

DRAFT: Total Mercury by EPA SW846 Method 7471/7470

Date Sampled: **09/23/11 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.0500	mg/kg	1	1092712	09/29/11	10/04/11	EPA 7471B	

DRAFT: Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/23/11 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.76	0.00100	mmhos/cm	1	1092708	09/27/11	09/27/11	SM 2510B	

Date Sampled: **09/23/11 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.2		pH Units	"	1092709	09/27/11	09/27/11	EPA 9045B	

DRAFT: Soluble Nutrients by EPA 6020/USDA60 6(2, 3A) - Dry Weight Basis

Date Sampled: **09/23/11 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	562	2.50	mg/kg	1	1092606	09/26/11	09/30/11	EPA 6020/USDA60 6(2, 3A)	
Magnesium	143	1.00	"	"	"	"	"	"	
Sodium	75.4	5.00	"	"	"	"	"	"	

DRAFT REPORT

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Entek GRB LLC
535 16th Street Suite 620
Denver CO, 80202

Project: Federal 24-9 Pit Closure
Project Number: [none]
Project Manager: Kristen Stocks

Reported:
10/04/11 10:59

DRAFT: Loc 4
R109143-04 (Soil)

Summit Scientific

DRAFT: Soluble Nutrients by EPA 6020/USDA60 6(2, 3A) - Dry Weight Basis

Date Sampled: **09/23/11 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.740		units	1	1093003	09/30/11	09/30/11	EPA 6020/USDA6 0 6(2, 3A)	

DRAFT REPORT

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Entek GRB LLC
535 16th Street Suite 620
Denver CO, 80202

Project: Federal 24-9 Pit Closure
Project Number: [none]
Project Manager: Kristen Stocks

Reported:
10/04/11 10:59

DRAFT: Background A
R109143-05 (Soil)

Summit Scientific

DRAFT: Total Metals by EPA SW846 Method 6020 - Dry Weight Basis

Date Sampled: **09/23/11 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	4.36	0.158	mg/kg	1	1092702	09/27/11	10/03/11	EPA 6020	

DRAFT: Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/23/11 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	17.6	0.00100	mmhos/cm	1	1092708	09/27/11	09/27/11	SM 2510B	

Date Sampled: **09/23/11 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.7		pH Units	"	1092709	09/27/11	09/27/11	EPA 9045B	

DRAFT: Soluble Nutrients by EPA 6020/USDA60 6(2, 3A) - Dry Weight Basis

Date Sampled: **09/23/11 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	2000	2.50	mg/kg	1	1092606	09/26/11	09/30/11	EPA 6020/USDA60 6(2, 3A)	
Magnesium	66.1	1.00	"	"	"	"	"	"	
Sodium	13500	5.00	"	"	"	"	"	"	

Date Sampled: **09/23/11 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	81.0		units	"	1093003	09/30/11	09/30/11	"	

DRAFT REPORT

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535 16th Street Suite 620
Denver CO, 80202

Project: Federal 24-9 Pit Closure
Project Number: [none]
Project Manager: Kristen Stocks

Reported:
10/04/11 10:59

DRAFT: Background B
R109143-06 (Soil)

Summit Scientific

DRAFT: Total Metals by EPA SW846 Method 6020 - Dry Weight Basis

Date Sampled: **09/23/11 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	4.82	0.163	mg/kg	1	1092702	09/27/11	10/03/11	EPA 6020	

DRAFT: Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/23/11 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	14.8	0.00100	mmhos/cm	1	1092708	09/27/11	09/27/11	SM 2510B	

Date Sampled: **09/23/11 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.6		pH Units	"	1092709	09/27/11	09/27/11	EPA 9045B	

DRAFT: Soluble Nutrients by EPA 6020/USDA60 6(2, 3A) - Dry Weight Basis

Date Sampled: **09/23/11 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	2360	2.50	mg/kg	1	1092606	09/26/11	09/30/11	EPA 6020/USDA60 6(2, 3A)	
Magnesium	73.5	1.00	"	"	"	"	"	"	
Sodium	11900	5.00	"	"	"	"	"	"	

Date Sampled: **09/23/11 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	65.8		units	"	1093003	09/30/11	09/30/11	"	

DRAFT REPORT

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Entek GRB LLC
535 16th Street Suite 620
Denver CO, 80202

Project: Federal 24-9 Pit Closure
Project Number: [none]
Project Manager: Kristen Stocks

Reported:
10/04/11 10:59

DRAFT: Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1092610 - EPA 3550A

Blank (1092610-BLK1)

Prepared & Analyzed: 09/26/11

C10-C28 (TEPH-DRO)	ND	50	mg/kg
C28-C36 (TEPH-ORO)	ND	50	"

Surrogate: o-Terphenyl	14.5	"	10000	0.145	88.8-124
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LCS (1092610-BS1)

Prepared & Analyzed: 09/26/11

C10-C28 (TEPH-DRO)	610	50	mg/kg	501	122	85-129	11.8
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LCS Dup (1092610-BSD1)

Prepared & Analyzed: 09/26/11

C10-C28 (TEPH-DRO)	579	50	mg/kg	501	116	85-129	5.18	11.8
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Matrix Spike (1092610-MS1)

Source: R109142-01

Prepared & Analyzed: 09/26/11

C10-C28 (TEPH-DRO)	614	50	mg/kg	501	40.8	114	77.3-134	8.39
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Matrix Spike Dup (1092610-MSD1)

Source: R109142-01

Prepared & Analyzed: 09/26/11

C10-C28 (TEPH-DRO)	612	50	mg/kg	501	40.8	114	77.3-134	0.228	8.39
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DRAFT REPORT

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Entek GRB LLC
535 16th Street Suite 620
Denver CO, 80202

Project: Federal 24-9 Pit Closure
Project Number: [none]
Project Manager: Kristen Stocks

Reported:
10/04/11 10:59

DRAFT: Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1092609 - EPA 5030 Soil MS

Blank (1092609-BLK1)

Prepared & Analyzed: 09/26/11

Benzene	ND	0.0050	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.0050	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0394		"	0.0400		98.4	67.4-143			
Surrogate: Toluene-d8	0.0373		"	0.0400		93.2	77.3-114			
Surrogate: 4-Bromofluorobenzene	0.0382		"	0.0400		95.6	78.4-125			

LCS (1092609-BS1)

Prepared & Analyzed: 09/26/11

Benzene	0.0871	0.0050	mg/kg	0.100		87.1	61-139		11.1	
Toluene	0.0923	0.0050	"	0.100		92.3	64-132		10.9	
Ethylbenzene	0.0967	0.0050	"	0.100		96.7	68.7-135		20	
m,p-Xylene	0.197	0.010	"	0.200		98.6	70.4-129		20	
o-Xylene	0.0903	0.0050	"	0.100		90.3	66.9-126		20	
Surrogate: 1,2-Dichloroethane-d4	0.0388		"	0.0400		97.0	67.4-143			
Surrogate: Toluene-d8	0.0380		"	0.0400		95.0	77.3-114			
Surrogate: 4-Bromofluorobenzene	0.0375		"	0.0400		93.7	78.4-125			

LCS Dup (1092609-BSD1)

Prepared & Analyzed: 09/26/11

Benzene	0.0863	0.0050	mg/kg	0.100		86.3	61-139	0.934	11.1	
Toluene	0.0918	0.0050	"	0.100		91.8	64-132	0.521	10.9	
Ethylbenzene	0.0971	0.0050	"	0.100		97.1	68.7-135	0.433	20	
m,p-Xylene	0.198	0.010	"	0.200		98.9	70.4-129	0.319	20	
o-Xylene	0.0898	0.0050	"	0.100		89.8	66.9-126	0.600	20	
Surrogate: 1,2-Dichloroethane-d4	0.0385		"	0.0400		96.2	67.4-143			
Surrogate: Toluene-d8	0.0374		"	0.0400		93.6	77.3-114			
Surrogate: 4-Bromofluorobenzene	0.0373		"	0.0400		93.2	78.4-125			

DRAFT REPORT

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Entek GRB LLC
535 16th Street Suite 620
Denver CO, 80202

Project: Federal 24-9 Pit Closure
Project Number: [none]
Project Manager: Kristen Stocks

Reported:
10/04/11 10:59

DRAFT: Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1092609 - EPA 5030 Soil MS

Matrix Spike (1092609-MS1)		Source: R109142-01			Prepared & Analyzed: 09/26/11					
Benzene	0.0853	0.0050	mg/kg	0.100	ND	85.3	42.9-137		17.9	
Toluene	0.0907	0.0050	"	0.100	ND	90.7	42.6-130		11.9	
Ethylbenzene	0.0943	0.0050	"	0.100	ND	94.3	39-133		20	
m,p-Xylene	0.193	0.010	"	0.200	ND	96.7	34.7-134		20	
o-Xylene	0.0896	0.0050	"	0.100	ND	89.6	41.3-126		20	
Surrogate: 1,2-Dichloroethane-d4	0.0426		"	0.0400		106	67.4-143			
Surrogate: Toluene-d8	0.0375		"	0.0400		93.8	77.3-114			
Surrogate: 4-Bromofluorobenzene	0.0388		"	0.0400		96.9	78.4-125			
Matrix Spike Dup (1092609-MSD1)		Source: R109142-01			Prepared & Analyzed: 09/26/11					
Benzene	0.0865	0.0050	mg/kg	0.100	ND	86.5	42.9-137	1.43	17.9	
Toluene	0.0922	0.0050	"	0.100	ND	92.2	42.6-130	1.67	11.9	
Ethylbenzene	0.0936	0.0050	"	0.100	ND	93.6	39-133	0.671	20	
m,p-Xylene	0.192	0.010	"	0.200	ND	96.0	34.7-134	0.732	20	
o-Xylene	0.0886	0.0050	"	0.100	ND	88.6	41.3-126	1.08	20	
Surrogate: 1,2-Dichloroethane-d4	0.0433		"	0.0400		108	67.4-143			
Surrogate: Toluene-d8	0.0379		"	0.0400		94.8	77.3-114			
Surrogate: 4-Bromofluorobenzene	0.0380		"	0.0400		95.0	78.4-125			

DRAFT REPORT

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Entek GRB LLC
535 16th Street Suite 620
Denver CO, 80202

Project: Federal 24-9 Pit Closure
Project Number: [none]
Project Manager: Kristen Stocks

Reported:
10/04/11 10:59

DRAFT: Semivolatile Organic Compounds by EPA Method 8270D SIM - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1092901 - EPA 5030 Soil MS

Blank (1092901-BLK1)

Prepared: 09/29/11 Analyzed: 10/02/11

Acenaphthene	ND	5.00	ug/kg							
Acenaphthylene	ND	5.00	"							
Anthracene	ND	5.00	"							
Benzo (a) anthracene	ND	5.00	"							
Benzo (b) fluoranthene	ND	5.00	"							
Benzo (k) fluoranthene	ND	5.00	"							
Benzo (g,h,i) perylene	ND	5.00	"							
Benzo (a) pyrene	ND	5.00	"							
Chrysene	ND	5.00	"							
Dibenz (a,h) anthracene	ND	10.0	"							
Fluoranthene	ND	5.00	"							
Fluorene	ND	5.00	"							
Indeno (1,2,3-cd) pyrene	ND	10.0	"							
Naphthalene	ND	5.00	"							
Phenanthrene	ND	5.00	"							
Pyrene	ND	5.00	"							
<i>Surrogate: Nitrobenzene-d5</i>	26.4		"	33.3		79.1	21.8-138			
<i>Surrogate: 2-Fluorobiphenyl</i>	28.8		"	33.1		86.9	31.2-131			
<i>Surrogate: 2,4,6-Tribromophenol</i>	17.2		"	33.3		51.7	44.5-144			
<i>Surrogate: Terphenyl-d14</i>	15.8		"	32.7		48.4	41.7-139			

LCS (1092901-BS1)

Prepared: 09/29/11 Analyzed: 10/02/11

Acenaphthene	30.4	5.00	ug/kg	33.3	91.1	30-120	30
Acenaphthylene	28.9	5.00	"	33.3	86.8	30-120	30
Anthracene	32.1	5.00	"	33.3	96.3	30-120	30
Benzo (a) anthracene	16.6	5.00	"	33.3	49.7	30-120	30
Benzo (b) fluoranthene	18.3	5.00	"	33.3	54.8	30-120	30
Benzo (k) fluoranthene	15.5	5.00	"	33.3	46.6	30-120	30
Benzo (g,h,i) perylene	17.0	5.00	"	33.3	51.0	30-120	30
Benzo (a) pyrene	18.3	5.00	"	33.3	54.9	30-120	30
Chrysene	10.7	5.00	"	33.3	32.2	30-120	30
Dibenz (a,h) anthracene	18.1	10.0	"	33.3	54.2	30-120	30
Fluoranthene	29.5	5.00	"	33.3	88.4	30-120	30
Fluorene	30.2	5.00	"	33.3	90.7	30-120	30
Indeno (1,2,3-cd) pyrene	16.7	10.0	"	33.3	50.0	30-120	30
Naphthalene	29.0	5.00	"	33.3	87.0	30-120	30
Phenanthrene	32.2	5.00	"	33.3	96.7	30-120	30
Pyrene	15.2	5.00	"	33.3	45.7	30-120	30

DRAFT REPORT

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Entek GRB LLC
535 16th Street Suite 620
Denver CO, 80202

Project: Federal 24-9 Pit Closure
Project Number: [none]
Project Manager: Kristen Stocks

Reported:
10/04/11 10:59

DRAFT: Semivolatile Organic Compounds by EPA Method 8270D SIM - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1092901 - EPA 5030 Soil MS

LCS (1092901-BS1)

Prepared: 09/29/11 Analyzed: 10/02/11

Surrogate: Nitrobenzene-d5	27.1		ug/kg	33.3		81.2	21.8-138		
Surrogate: 2-Fluorobiphenyl	24.5		"	33.1		73.9	31.2-131		
Surrogate: 2,4,6-Tribromophenol	23.8		"	33.3		71.3	44.5-144		
Surrogate: Terphenyl-d14	14.5		"	32.7		44.3	41.7-139		

LCS Dup (1092901-BS1)

Prepared: 09/29/11 Analyzed: 10/02/11

Acenaphthene	29.8	5.00	ug/kg	33.3		89.4	30-120	1.82	30
Acenaphthylene	30.9	5.00	"	33.3		92.7	30-120	6.64	30
Anthracene	30.9	5.00	"	33.3		92.6	30-120	3.94	30
Benzo (a) anthracene	16.4	5.00	"	33.3		49.2	30-120	1.09	30
Benzo (b) fluoranthene	17.9	5.00	"	33.3		53.8	30-120	1.76	30
Benzo (k) fluoranthene	15.0	5.00	"	33.3		45.0	30-120	3.40	30
Benzo (g,h,i) perylene	16.6	5.00	"	33.3		49.9	30-120	2.09	30
Benzo (a) pyrene	18.6	5.00	"	33.3		55.8	30-120	1.66	30
Chrysene	10.4	5.00	"	33.3		31.2	30-120	3.10	30
Dibenz (a,h) anthracene	18.0	10.0	"	33.3		53.9	30-120	0.664	30
Fluoranthene	28.1	5.00	"	33.3		84.4	30-120	4.70	30
Fluorene	29.3	5.00	"	33.3		87.8	30-120	3.18	30
Indeno (1,2,3-cd) pyrene	16.7	10.0	"	33.3		50.0	30-120	0.0940	30
Naphthalene	30.5	5.00	"	33.3		91.4	30-120	4.89	30
Phenanthrene	30.8	5.00	"	33.3		92.4	30-120	4.51	30
Pyrene	15.1	5.00	"	33.3		45.4	30-120	0.555	30
Surrogate: Nitrobenzene-d5	28.6		"	33.3		85.9	21.8-138		
Surrogate: 2-Fluorobiphenyl	23.6		"	33.1		71.3	31.2-131		
Surrogate: 2,4,6-Tribromophenol	19.2		"	33.3		57.7	44.5-144		
Surrogate: Terphenyl-d14	14.0		"	32.7		42.9	41.7-139		

Matrix Spike (1092901-MS1)

Source: R109142-03

Prepared: 09/29/11 Analyzed: 10/02/11

Acenaphthene	29.1	5.00	ug/kg	33.3	ND	87.4	30-120		30
Acenaphthylene	27.9	5.00	"	33.3	ND	83.7	30-120		30
Anthracene	33.1	5.00	"	33.3	ND	99.3	30-120		30
Benzo (a) anthracene	15.7	5.00	"	33.3	ND	47.1	30-120		30
Benzo (b) fluoranthene	17.5	5.00	"	33.3	ND	52.6	30-120		30
Benzo (k) fluoranthene	16.0	5.00	"	33.3	ND	47.9	30-120		30
Benzo (g,h,i) perylene	16.4	5.00	"	33.3	ND	49.3	30-120		30
Benzo (a) pyrene	18.3	5.00	"	33.3	ND	54.8	30-120		30
Chrysene	10.7	5.00	"	33.3	ND	32.1	30-120		30
Dibenz (a,h) anthracene	17.5	10.0	"	33.3	ND	52.6	30-120		30

DRAFT REPORT

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Entek GRB LLC
535 16th Street Suite 620
Denver CO, 80202

Project: Federal 24-9 Pit Closure
Project Number: [none]
Project Manager: Kristen Stocks

Reported:
10/04/11 10:59

DRAFT: Semivolatile Organic Compounds by EPA Method 8270D SIM - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1092901 - EPA 5030 Soil MS

Matrix Spike (1092901-MS1)		Source: R109142-03			Prepared: 09/29/11		Analyzed: 10/02/11			
Fluoranthene	30.0	5.00	ug/kg	33.3	ND	90.1	30-120		30	
Fluorene	29.1	5.00	"	33.3	ND	87.2	30-120		30	
Indeno (1,2,3-cd) pyrene	15.7	10.0	"	33.3	ND	47.1	30-120		30	
Naphthalene	28.2	5.00	"	33.3	ND	84.6	30-120		30	
Phenanthrene	31.0	5.00	"	33.3	ND	93.1	30-120		30	
Pyrene	15.0	5.00	"	33.3	ND	44.9	30-120		30	
<i>Surrogate: Nitrobenzene-d5</i>	<i>27.0</i>		<i>"</i>	<i>33.3</i>		<i>81.1</i>	<i>21.8-138</i>			
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>24.7</i>		<i>"</i>	<i>33.1</i>		<i>74.7</i>	<i>31.2-131</i>			
<i>Surrogate: 2,4,6-Tribromophenol</i>	<i>23.9</i>		<i>"</i>	<i>33.3</i>		<i>71.8</i>	<i>44.5-144</i>			
<i>Surrogate: Terphenyl-d14</i>	<i>13.8</i>		<i>"</i>	<i>32.7</i>		<i>42.2</i>	<i>41.7-139</i>			

Matrix Spike Dup (1092901-MSD1)		Source: R109142-03			Prepared: 09/29/11		Analyzed: 10/02/11			
Acenaphthene	26.4	5.00	ug/kg	33.3	ND	79.1	30-120	10.1	30	
Acenaphthylene	26.6	5.00	"	33.3	ND	79.8	30-120	4.70	30	
Anthracene	29.0	5.00	"	33.3	ND	87.0	30-120	13.2	30	
Benzo (a) anthracene	14.0	5.00	"	33.3	ND	42.0	30-120	11.5	30	
Benzo (b) fluoranthene	15.8	5.00	"	33.3	ND	47.4	30-120	10.3	30	
Benzo (k) fluoranthene	13.7	5.00	"	33.3	ND	41.0	30-120	15.5	30	
Benzo (g,h,i) perylene	14.8	5.00	"	33.3	ND	44.5	30-120	10.2	30	
Benzo (a) pyrene	16.1	5.00	"	33.3	ND	48.2	30-120	12.7	30	
Chrysene	12.0	5.00	"	33.3	ND	36.1	30-120	11.9	30	
Dibenz (a,h) anthracene	15.8	10.0	"	33.3	ND	47.4	30-120	10.5	30	
Fluoranthene	27.2	5.00	"	33.3	ND	81.7	30-120	9.75	30	
Fluorene	26.9	5.00	"	33.3	ND	80.8	30-120	7.59	30	
Indeno (1,2,3-cd) pyrene	14.3	10.0	"	33.3	ND	43.0	30-120	9.20	30	
Naphthalene	24.7	5.00	"	33.3	ND	74.0	30-120	13.4	30	
Phenanthrene	28.0	5.00	"	33.3	ND	83.9	30-120	10.4	30	
Pyrene	13.0	5.00	"	33.3	ND	39.1	30-120	13.7	30	
<i>Surrogate: Nitrobenzene-d5</i>	<i>23.5</i>		<i>"</i>	<i>33.3</i>		<i>70.4</i>	<i>21.8-138</i>			
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>21.4</i>		<i>"</i>	<i>33.1</i>		<i>64.6</i>	<i>31.2-131</i>			
<i>Surrogate: 2,4,6-Tribromophenol</i>	<i>29.3</i>		<i>"</i>	<i>33.3</i>		<i>87.8</i>	<i>44.5-144</i>			
<i>Surrogate: Terphenyl-d14</i>	<i>15.3</i>		<i>"</i>	<i>32.7</i>		<i>47.0</i>	<i>41.7-139</i>			

DRAFT REPORT

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Entek GRB LLC
535 16th Street Suite 620
Denver CO, 80202

Project: Federal 24-9 Pit Closure
Project Number: [none]
Project Manager: Kristen Stocks

Reported:
10/04/11 10:59

DRAFT: Total Metals by EPA SW846 Method 6020 - Dry Weight Basis - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1092702 - EPA 3050B

Blank (1092702-BLK1)

Prepared: 09/27/11 Analyzed: 10/03/11

Arsenic	ND	0.100	mg/kg
Arsenic	ND	0.100	"
Barium	ND	5.00	"
Cadmium	ND	0.100	"
Chromium	ND	0.100	"
Copper	ND	0.500	"
Lead	ND	0.500	"
Nickel	0.608	0.500	"
Selenium	ND	0.100	"
Silver	ND	0.100	"
Zinc	ND	5.00	"

LCS (1092702-BS1)

Prepared: 09/27/11 Analyzed: 10/03/11

Arsenic	2.83	0.100	mg/kg	2.54	112	80-120	20
Arsenic	2.83	0.100	"	2.54	112	80-120	20
Barium	170	5.00	"	224	75.8	80-120	20
Cadmium	1.04	0.100	"	1.02	103	80-120	20
Chromium	10.8	0.100	"	10.0	108	80-120	20
Copper	23.7	0.500	"	20.0	118	80-120	20
Lead	76.9	0.500	"	75.0	103	80-120	20
Nickel	13.1	0.500	"	15.1	86.4	80-120	20
Selenium	1.07	0.100	"	1.15	92.8	80-120	20
Silver	1.63	0.100	"	1.54	106	80-120	20
Zinc	84.5	5.00	"	75.0	113	80-120	20

LCS Dup (1092702-BSD1)

Prepared: 09/27/11 Analyzed: 10/03/11

Arsenic	2.55	0.100	mg/kg	2.54	100	80-120	10.5	20
Arsenic	2.55	0.100	"	2.54	100	80-120	10.5	20
Barium	172	5.00	"	224	76.6	80-120	1.09	20
Cadmium	1.03	0.100	"	1.02	101	80-120	1.63	20
Chromium	11.0	0.100	"	10.0	109	80-120	1.55	20
Copper	20.9	0.500	"	20.0	104	80-120	12.6	20
Lead	77.4	0.500	"	75.0	103	80-120	0.625	20
Nickel	12.9	0.500	"	15.1	85.2	80-120	1.50	20
Selenium	1.04	0.100	"	1.15	90.3	80-120	2.66	20
Silver	1.60	0.100	"	1.54	104	80-120	1.63	20
Zinc	75.9	5.00	"	75.0	101	80-120	10.8	20

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Denver CO, 80202

Project: Federal 24-9 Pit Closure
Project Number: [none]
Project Manager: Kristen Stocks

Reported:
10/04/11 10:59

DRAFT: Total Metals by EPA SW846 Method 6020 - Dry Weight Basis - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1092702 - EPA 3050B

Matrix Spike (1092702-MS1)		Source: R109141-04			Prepared: 09/27/11		Analyzed: 10/03/11			
Arsenic	7.08	0.100	mg/kg	2.33	5.21	80.4	75-125		25	
Arsenic	7.08	0.100	"	2.33	5.21	80.4	75-125		20	
Barium	337	5.00	"	206	106	112	75-125		25	
Cadmium	2.75	0.100	"	0.931	1.77	105	75-125		25	
Chromium	8.94	0.100	"	9.22	3.97	53.9	75-125		25	QM-07
Copper	245	0.500	"	18.4	182	344	75-125		25	QM-07
Lead	740	0.500	"	68.8	443	432	75-125		25	QM-07
Nickel	16.5	0.500	"	13.9	9.00	54.2	75-125		25	QM-07
Selenium	1.65	0.100	"	1.06	0.673	92.4	75-125		25	
Silver	2.67	0.100	"	1.42	1.27	98.8	75-125		25	
Zinc	580	5.00	"	68.8	418	236	75-125		25	QM-07

DRAFT REPORT

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Denver CO, 80202

Project: Federal 24-9 Pit Closure
Project Number: [none]
Project Manager: Kristen Stocks

Reported:
10/04/11 10:59

DRAFT: Total Mercury by EPA SW846 Method 7471/7470 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1092712 - EPA 3050B

Blank (1092712-BLK1)				Prepared: 09/29/11 Analyzed: 10/04/11						
Mercury	ND	0.0500	mg/kg							
LCS (1092712-BS1)				Prepared: 09/29/11 Analyzed: 10/04/11						
Mercury	0.382	0.0500	mg/kg	0.400		95.6	80-120		20	
LCS Dup (1092712-BSD1)				Prepared: 09/29/11 Analyzed: 10/04/11						
Mercury	0.358	0.0500	mg/kg	0.400		89.4	80-120	6.64	20	
Matrix Spike (1092712-MS1)				Source: R109141-13		Prepared: 09/29/11 Analyzed: 10/04/11				
Mercury	1.42	0.0500	mg/kg	0.252	1.50	NR	75-125		20	QM-4X
Matrix Spike Dup (1092712-MSD1)				Source: R109141-13		Prepared: 09/29/11 Analyzed: 10/04/11				
Mercury	2.02	0.0500	mg/kg	0.262	1.50	198	75-125	35.1	20	QM-4X

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Project: Federal 24-9 Pit Closure
Project Number: [none]
Project Manager: Kristen Stocks

Reported:
10/04/11 10:59

DRAFT: Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1092708 - General Preparation

Duplicate (1092708-DUP1)	Source: R109142-01			Prepared & Analyzed: 09/27/11						
Specific Conductance (EC)	1.04	0.00100	mmhos/cm		0.862			19.1	20	

Batch 1092709 - General Preparation

Duplicate (1092709-DUP1)	Source: R109142-01			Prepared & Analyzed: 09/27/11						
pH	8.9		pH Units		8.9			0.449	20	

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535 16th Street Suite 620
Denver CO, 80202

Project: Federal 24-9 Pit Closure
Project Number: [none]
Project Manager: Kristen Stocks

Reported:
10/04/11 10:59

DRAFT: Soluble Nutrients by EPA 6020/USDA60 6(2, 3A) - Dry Weight Basis - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1092606 - General Preparation

Blank (1092606-BLK1)

Prepared: 09/26/11 Analyzed: 09/30/11

Calcium	ND	2.50	mg/kg							
Magnesium	ND	1.00	"							
Sodium	ND	5.00	"							

LCS (1092606-BS1)

Prepared: 09/26/11 Analyzed: 09/30/11

Calcium	189	2.50	mg/kg	200		94.5	70-130		25	
Magnesium	68.3	1.00	"	80.0		85.3	70-130		25	
Sodium	319	5.00	"	400		79.8	70-130		25	

LCS Dup (1092606-BSD1)

Prepared: 09/26/11 Analyzed: 09/30/11

Calcium	166	2.50	mg/kg	200		83.1	70-130	12.9	25	
Magnesium	70.1	1.00	"	80.0		87.6	70-130	2.62	25	
Sodium	323	5.00	"	400		80.7	70-130	1.15	25	

Matrix Spike (1092606-MS1)

Source: R109142-05

Prepared: 09/26/11 Analyzed: 09/30/11

Calcium	589	2.50	mg/kg	165	395	117	70-130		25	
Magnesium	116	1.00	"	66.0	73.3	64.6	70-130		25	QM-07
Sodium	238	5.00	"	330	41.2	59.8	70-130		25	QM-07

Matrix Spike Dup (1092606-MSD1)

Source: R109142-05

Prepared: 09/26/11 Analyzed: 09/30/11

Calcium	586	2.50	mg/kg	165	395	116	70-130	0.363	25	
Magnesium	120	1.00	"	66.0	73.3	71.3	70-130	3.77	25	
Sodium	259	5.00	"	330	41.2	66.0	70-130	8.31	25	QM-07

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Entek GRB LLC
535 16th Street Suite 620
Denver CO, 80202

Project: Federal 24-9 Pit Closure

Project Number: [none]
Project Manager: Kristen Stocks

Reported:
10/04/11 10:59

Notes and Definitions

QM-4X	The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

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