



**Beaver Durham 12-32 Pit Closure
COGCC Remediation Number – 7992
Form 4 (Notification of Completion)**

GRMR Oil & Gas LLC, (GRMR) is submitting this Form 4 (Sundry Notice) to report assessment and soil remediation activities associated with the closure of a production pit (Facility ID – 110518) at the Beaver Durham 12-32 (Remediation Number 7992) in the Williams Fork area of operations in Moffat County, Colorado. A topographical Site Location Map is attached as Figure 1.

REPORT OF WORK COMPLETED

LT Environmental (LTE) personnel were contracted by GRMR to excavate hydrocarbon impacted soil identified during the 2013 soil boring activities (Document #400509085). Figure 2 illustrates the pit location and 2013 soil boring locations. Table 1 summarizes the soil sample laboratory analytical results from the 2013 soil borings. The following activities were conducted to remove identified hydrocarbon impacts and verify compliance with Colorado Oil and Gas Conservation Commission (COGCC) Table 910-1.

On August 26, 2015, soil was excavated down to 15 feet (ft) below ground surface (bgs) in the location of SB03. The soil within the excavation was characterized continuously throughout excavation by visually inspecting soil and screened using a photo-ionization detector (PID) to monitor the soil headspace for the presence of volatile organic vapors. Field screening methods indicated the complete removal of hydrocarbon impacted soil within the pothole. One soil confirmation sample was collected from the bottom of the pothole and submitted to ESC Lab Sciences of Mt. Juliet, Tennessee, for laboratory analysis of constituents identified in Colorado COGCC Table 910-1. The pothole location is depicted on the attached Figure 2.

Laboratory analytical results indicate concentrations of analytes in all soil samples that are either within COGCC Table 910-1 concentrations levels or are within background concentrations observed in the area. Laboratory analytical results are summarized in the attached Table 2. Laboratory analytical reports are included as an attachment.

Following these remediation efforts, the excavated area was backfilled with clean fill material to match existing grade. Approximately 15 cubic yards of excavated soil was hauled off and treated to within COGCC Table 910-1 concentration levels by soil shredding.

NOTIFICATION OF COMPLETION

This Sundry Notice is being submitted as the Notification of Completion for COGCC Remediation #7992. If the information provided is satisfactory, please provide regulatory documentation of project completion.

ATTACHMENTS

Figure 1 - Site Location Map
Figure 2 - Site Map
Table 1 – Soil Confirmation Borings
Table 2 – Pothole Soil Confirmation Samples
Laboratory Analytical Reports

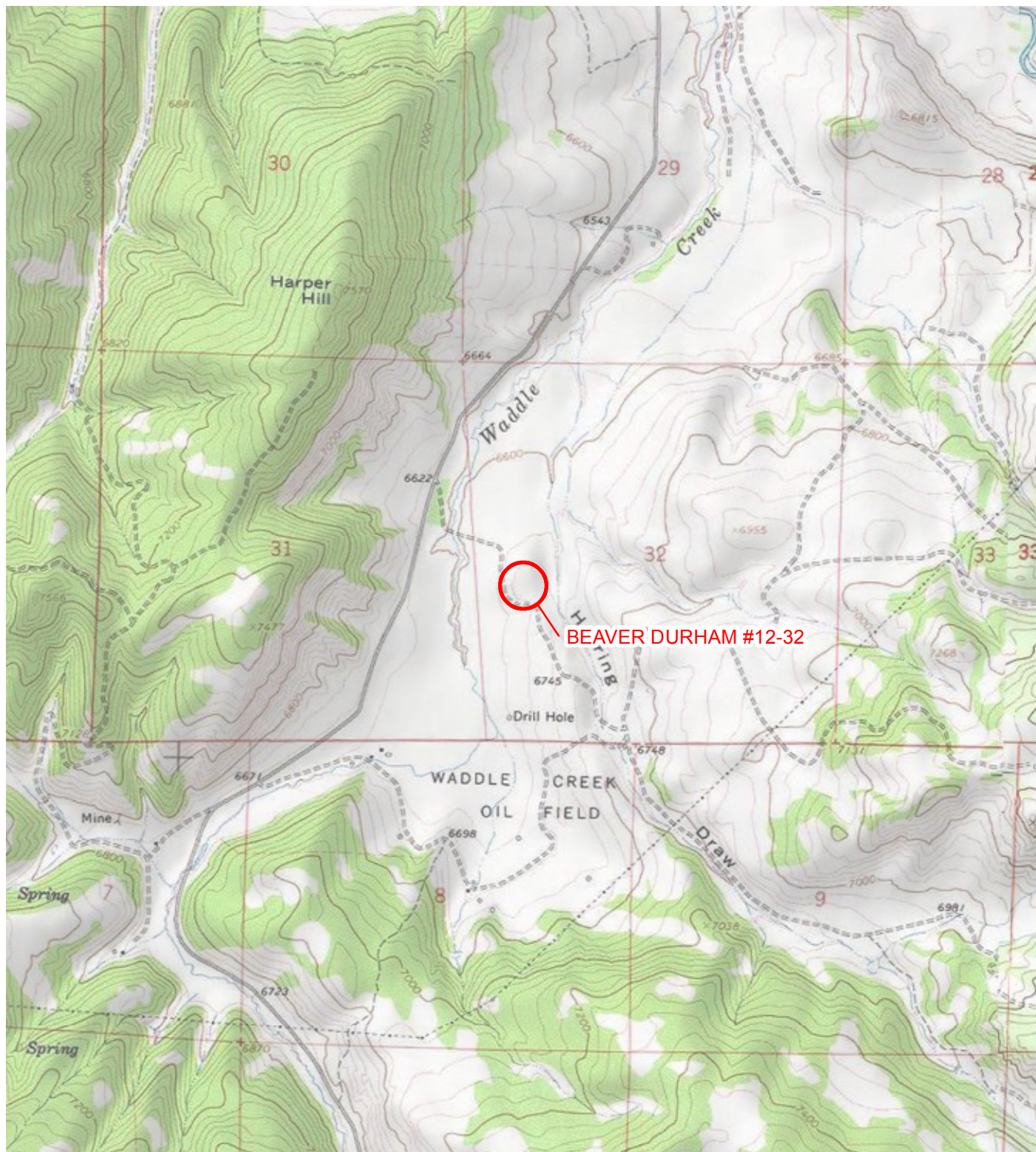


IMAGE COURTESY OF ESRI/USGS

LEGEND

○ SITE LOCATION

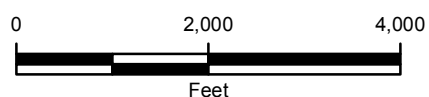
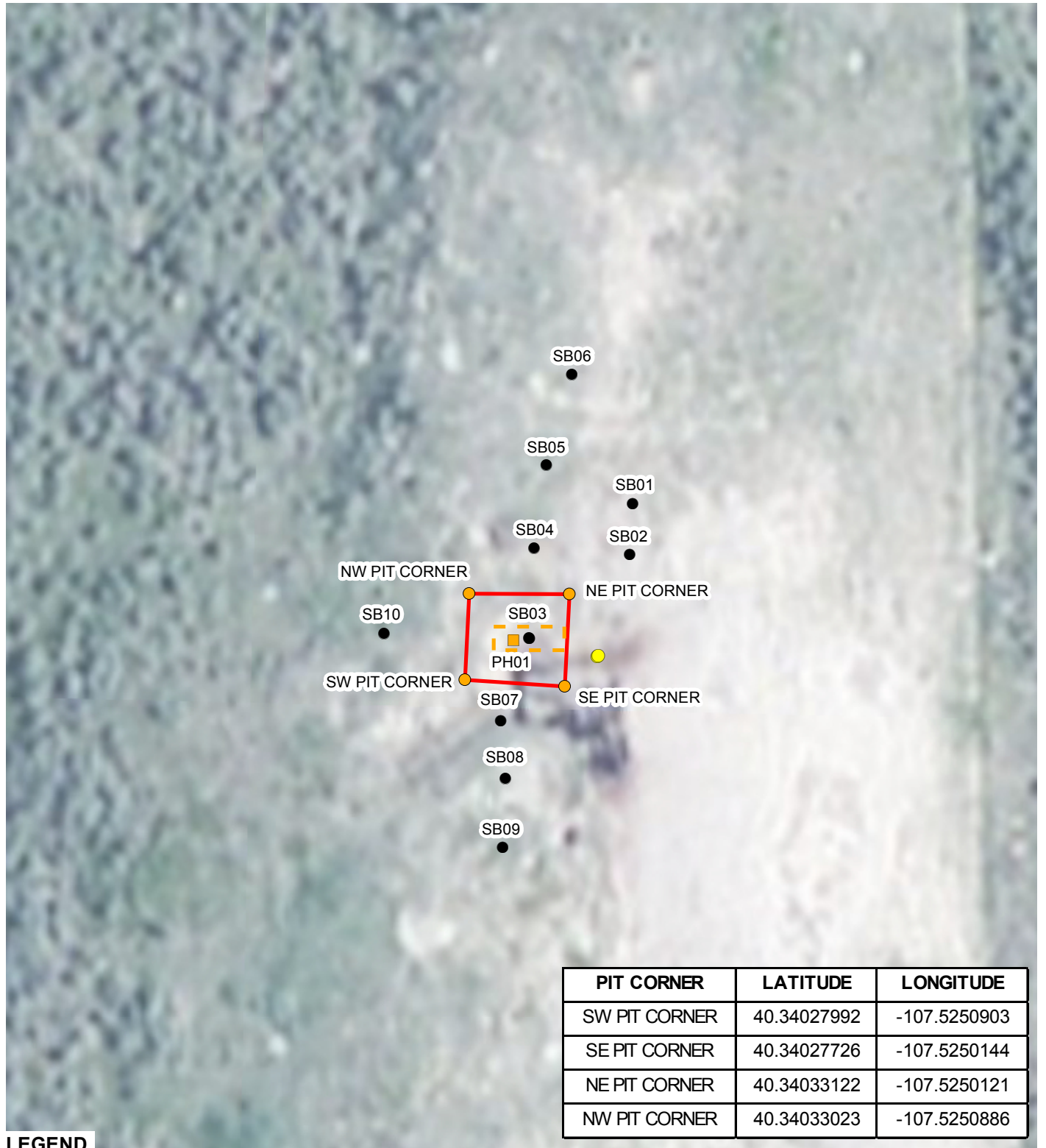


FIGURE 1
SITE LOCATION MAP
BEAVER DURHAM #12-32
NWSW SEC 32-T5N-R90W
MOFFAT COUNTY, COLORADO
SHELL EXPLORATION AND PRODUCTION COMPANY





LEGEND

- BEAVER DURHAM #12-32 WELLHEAD
- PIT CORNER
- SOIL BORING
- POTHOLE SAMPLE
- PIT BOUNDARY
- POTHOLE LOCATION

IMAGE COURTESY OF ESRI

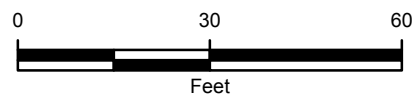


FIGURE 1
SITE MAP
 BEAVER DURHAM #12-32
 NWSW SEC 32-T5N-R90W
 MOFFAT COUNTY, COLORADO
 GRMR OIL & GAS, LLC.



TABLE 1
SOIL CONFIRMATION BORINGS
GRMR PRODUCTION PAD BEAVER DURHAM 12-32
HAMILTON, COLORADO

PARAMETER	COGCC CONCENTRATION LEVELS	UNITS	BD1232-SB01 @ 20-22	BD1232-SB02 @ 20-22	BD1232-SB03 @ 10-12	BD1232-SB03 @ 25-26	BD1232-SB04 @ 20-21	BD1232-SB04 @ 25-26
Sample Date			9/26/2013	9/26/2013	9/27/2013	9/27/2013	9/27/2013	9/27/2013
Sample Type			Confirmation	Confirmation	Confirmation	Confirmation	Confirmation	Confirmation
Arsenic	0.39	mg/kg	0.446	0.438	0.694	0.482	0.623	0.524
Barium	15,000	mg/kg	62.6	81.3	229	71.4	127	83.8
Cadmium	70	mg/kg	0.339	0.580	0.139	0.621	0.292	0.467
Chromium (III)	120,000	mg/kg	2.60	2.22	2.40	2.25	2.38	2.66
Chromium (VI)	23	mg/kg	<1.17	<1.14	<1.06	<1.12	<1.11	<1.15
Copper	3,100	mg/kg	2.54	2.14	0.857	2.55	2.79	2.66
Lead	400	mg/kg	18.4	19.5	4.68	19.3	18.9	19.4
Mercury	23	mg/kg	0.0517	<0.0436	<0.0435	0.0506	0.0589	0.0469
Nickel	1,600	mg/kg	2.68	2.38	1.53	2.62	2.98	2.76
Selenium	390	mg/kg	<0.0445	<0.0423	<0.0397	0.178	<0.0410	0.0725
Silver	390	mg/kg	<0.0889	0.121	<0.0795	0.170	<0.0821	0.118
Zinc	23,000	mg/kg	19.1	19.6	11.8	18.1	19.5	20.6
EC	4.0	mmhos/cm	0.303	0.185	1.46	0.314	0.466	0.342
pH	6 - 9	SU	8.57	8.22	9.37	7.98	7.76	7.95
SAR	12	unitless	1.03	0.500	6.17	0.590	0.610	0.330
TPH-GRO		mg/kg	<0.50	<0.50	230	<0.50	<0.50	<0.50
TPH-DRO		mg/kg	<50	<50	550	<50	<50	<50
TPH	500	mg/kg	<50.50	<50.50	780	<50.50	<50.50	<50.50
Benzene	0.17	mg/kg	<0.0020	<0.0020	0.0091	0.015	<0.0020	<0.0020
Toluene	85	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Ethylbenzene	100	mg/kg	<0.0050	<0.0050	0.68	0.013	<0.0050	<0.0050
Total Xylenes	175	mg/kg	<0.0050	<0.0050	0.95	0.0094	<0.0050	<0.0050
Acenaphthene	1000	mg/kg	<0.005	<0.005	0.0254	<0.005	<0.005	<0.005
Anthracene	1000	mg/kg	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Benzo(A)anthracene	0.22	mg/kg	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Benzo(B)fluoranthene	0.22	mg/kg	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Benzo(K)fluoranthene	2.2	mg/kg	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Benzo(A)pyrene	0.022	mg/kg	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chrysene	22	mg/kg	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dibenzo(A,H)anthracene	0.022	mg/kg	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Fluoranthene	1000	mg/kg	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Fluorene	1000	mg/kg	<0.005	<0.005	0.125	<0.005	<0.005	<0.005
Indeno(1,2,3,C,D)pyrene	0.22	mg/kg	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Naphthalene	23	mg/kg	<0.005	<0.005	0.780	<0.005	<0.005	<0.005
Pyrene	1000	mg/kg	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

NOTES:

< - less than the stated reporting limit

BOLD - indicates result exceeds the COGCC concentration level

COGCC - Colorado Oil and Gas Conservation Commission

EC- electrical conductivity

mg/kg - milligrams per kilogram

mmhos/cm - millimhos per centimeter

SAR- Sodium Adsorption Ratio

SU - standard unit

TPH-GRO - total petroleum hydrocarbons-gasoline range organics

TPH-DRO - total petroleum hydrocarbons-diesel range organics

TPH - combination of TPH-GRO and TPH-DRO



TABLE 1
SOIL CONFIRMATION BORINGS
GRMR PRODUCTION PAD BEAVER DURHAM 12-32
HAMILTON, COLORADO

PARAMETER	COGCC CONCENTRATION LEVELS	UNITS	BD1232-SB05 @ 20-22	BD1232-SB05 @ 25-26	BD1232-SB06 @ 25-26	BD1232-SB07 @ 18-20	BD1232-SB07 @ 22-23.5	BD1232-SB08 @ 17-19
Sample Date			9/27/2013	9/27/2013	9/27/2013	10/8/2013	10/8/2013	10/8/2013
Sample Type			Confirmation	Confirmation	Confirmation	Confirmation	Confirmation	Confirmation
Arsenic	0.39	mg/kg	0.432	0.468	0.403	4.37	3.18	3.95
Barium	15,000	mg/kg	169	270	730	160	86.7	176
Cadmium	70	mg/kg	0.287	0.427	0.269	0.360	0.311	0.605
Chromium (III)	120,000	mg/kg	2.23	2.64	2.54	10.9	10.4	13.3
Chromium (VI)	23	mg/kg	<1.17	<1.14	<1.18	<1.14	<1.12	<1.43
Copper	3,100	mg/kg	2.69	2.72	1.80	17.2	16.1	21.6
Lead	400	mg/kg	19.9	20.6	16.3	17.8	18.0	23.0
Mercury	23	mg/kg	0.0546	<0.0434	0.0490	0.0782	<0.0400	0.0798
Nickel	1,600	mg/kg	2.87	2.48	3.11	21.7	21.1	27.3
Selenium	390	mg/kg	<0.0441	0.0444	<0.0441	0.267	0.335	0.423
Silver	390	mg/kg	0.0887	0.0960	<0.0882	0.0877	0.0940	0.135
Zinc	23,000	mg/kg	18.7	17.8	16.0	90.4	89.4	118
EC	4.0	mmhos/cm	0.321	0.121	0.445	0.482	0.186	0.289
pH	6 - 9	SU	8.60	8.15	8.83	8.60	8.47	8.03
SAR	12	unitless	0.200	0.450	0.890	0.900	1.53	1.11
TPH-GRO		mg/kg	1.5	<0.50	<0.50	<0.50	<0.50	2.4
TPH-DRO		mg/kg	92	<50	<50	<50	<50	<50
TPH	500	mg/kg	93.5	<50.50	<50.50	<50.50	<50.50	2.4
Benzene	0.17	mg/kg	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Toluene	85	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Ethylbenzene	100	mg/kg	<0.0050	<0.0050	<0.0050	0.041	<0.0050	0.18
Total Xylenes	175	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Acenaphthene	1000	mg/kg	0.00634	<0.005	<0.005	<0.005	<0.005	<0.005
Anthracene	1000	mg/kg	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Benzo(A)anthracene	0.22	mg/kg	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Benzo(B)fluoranthene	0.22	mg/kg	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Benzo(K)fluoranthene	2.2	mg/kg	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Benzo(A)pyrene	0.022	mg/kg	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chrysene	22	mg/kg	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dibenzo(A,H)anthracene	0.022	mg/kg	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Fluoranthene	1000	mg/kg	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Fluorene	1000	mg/kg	0.0107	<0.005	<0.005	<0.005	<0.005	<0.005
Indeno(1,2,3,C,D)pyrene	0.22	mg/kg	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Naphthalene	23	mg/kg	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Pyrene	1000	mg/kg	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

NOTES:

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TABLE 1
SOIL CONFIRMATION BORINGS
GRMR PRODUCTION PAD BEAVER DURHAM 12-32
HAMILTON, COLORADO

PARAMETER	COGCC CONCENTRATION LEVELS	UNITS	BD1232-SB08 @ 24-25	BD1232-SB09 @ 13-15	BD1232-SB09 @ 24-25	BD1232-SB10 @ 18-20	BD1232-SB10 @ 24-25
Sample Date			10/8/2013	10/8/2013	10/8/2013	10/8/2013	10/8/2013
Sample Type			Confirmation	Confirmation	Confirmation	Confirmation	Confirmation
Arsenic	0.39	mg/kg	3.50	3.66	3.32	3.67	4.51
Barium	15,000	mg/kg	89.4	103	124	138	188
Cadmium	70	mg/kg	0.490	0.335	0.484	0.234	0.238
Chromium (III)	120,000	mg/kg	10.5	11.6	11.0	11.1	11.0
Chromium (VI)	23	mg/kg	<1.12	<1.12	<1.13	<1.11	<1.12
Copper	3,100	mg/kg	18.9	17.5	18.8	16.6	16.5
Lead	400	mg/kg	16.4	19.4	16.9	18.8	19.2
Mercury	23	mg/kg	0.0463	0.0567	0.0857	0.0550	0.0452
Nickel	1,600	mg/kg	23.0	24.7	23.8	19.9	21.8
Selenium	390	mg/kg	1.24	0.274	0.539	0.227	0.341
Silver	390	mg/kg	0.155	<0.0855	0.124	<0.0846	0.105
Zinc	23,000	mg/kg	99.5	105	103	94.6	96.5
EC	4.0	mmhos/cm	0.299	0.404	0.514	0.367	0.221
pH	6 - 9	SU	8.30	8.90	8.20	8.53	8.20
SAR	12	unitless	1.50	1.74	1.84	0.940	0.720
TPH-GRO		mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
TPH-DRO		mg/kg	<50	<50	<50	<50	<50
TPH	500	mg/kg	<50.50	<50.50	<50.50	<50.50	<50.50
Benzene	0.17	mg/kg	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Toluene	85	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Ethylbenzene	100	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Total Xylenes	175	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Acenaphthene	1000	mg/kg	<0.005	<0.005	<0.005	<0.005	<0.005
Anthracene	1000	mg/kg	<0.005	<0.005	<0.005	<0.005	<0.005
Benzo(A)anthracene	0.22	mg/kg	<0.005	<0.005	<0.005	<0.005	<0.005
Benzo(B)fluoranthene	0.22	mg/kg	<0.005	<0.005	<0.005	<0.005	<0.005
Benzo(K)fluoranthene	2.2	mg/kg	<0.005	<0.005	<0.005	<0.005	<0.005
Benzo(A)pyrene	0.022	mg/kg	<0.005	<0.005	<0.005	<0.005	<0.005
Chrysene	22	mg/kg	<0.005	<0.005	<0.005	<0.005	<0.005
Dibenzo(A,H)anthracene	0.022	mg/kg	<0.005	<0.005	<0.005	<0.005	<0.005
Fluoranthene	1000	mg/kg	<0.005	<0.005	<0.005	<0.005	<0.005
Fluorene	1000	mg/kg	<0.005	<0.005	<0.005	<0.005	<0.005
Indeno(1,2,3,C,D)pyrene	0.22	mg/kg	<0.005	<0.005	<0.005	<0.005	<0.005
Naphthalene	23	mg/kg	<0.005	<0.005	<0.005	<0.005	<0.005
Pyrene	1000	mg/kg	<0.005	<0.005	<0.005	<0.005	<0.005

NOTES:

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TPH-GRO - total petroleum hydrocarbons-gasoline range organics

TPH-DRO - total petroleum hydrocarbons-diesel range organics

TPH - combination of TPH-GRO and TPH-DRO



TABLE 2
POTHOLE SOIL CONFIRMATION SAMPLES
GRMR PRODUCTION PAD BEAVER DURHAM 12-32
HAMILTON, COLORADO

PARAMETER	COGCC CONCENTRATION LEVELS	UNITS	20150926-PH01 (Pit) @ 15'
Sample Date			9/26/2015
Sample Type			Confirmation
Arsenic	0.39	mg/kg	3.13
Barium	15,000	mg/kg	92.3
Cadmium	70	mg/kg	<0.50
Chromium (III)	120,000	mg/kg	3.32
Chromium (VI)	23	mg/kg	<15
Copper	3,100	mg/kg	5.81
Lead	400	mg/kg	5.88
Mercury	23	mg/kg	<5.0
Nickel	1,600	mg/kg	6.27
Selenium	390	mg/kg	<50
Silver	390	mg/kg	<0.50
Zinc	23,000	mg/kg	20.9
EC	4.0	mmhos/cm	1.01
pH	6 - 9	SU	7.0
SAR	12	unitless	11.0
TPH-GRO		mg/kg	<50
TPH-DRO		mg/kg	<50
TPH	500	mg/kg	<50
Benzene	0.17	mg/kg	<0.01
Toluene	85	mg/kg	<0.01
Ethylbenzene	100	mg/kg	<0.01
Total Xylenes	175	mg/kg	<0.01
Acenaphthene	1000	mg/kg	<1.0
Anthracene	1000	mg/kg	<1.0
Benzo(A)anthracene	0.22	mg/kg	<0.15
Benzo(B)fluoranthene	0.22	mg/kg	<0.15
Benzo(K)fluoranthene	2.2	mg/kg	<1.5
Benzo(A)pyrene	0.022	mg/kg	<0.015
Chrysene	22	mg/kg	<0.15
Dibenzo(A,H)anthracene	0.022	mg/kg	<0.015
Fluoranthene	1000	mg/kg	<1.0
Fluorene	1000	mg/kg	<1.0
Indeno(1,2,3,C,D)pyrene	0.22	mg/kg	<0.15
Naphthalene	23	mg/kg	<1.0
Pyrene	1000	mg/kg	<1.0

NOTES:

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TPH-GRO - total petroleum hydrocarbons-gasoline range organics

TPH-DRO - total petroleum hydrocarbons-diesel range organics

TPH - combination of TPH-GRO and TPH-DRO

Test Report



October 8, 2015

Client: LT Environmental

Project: BD 12-32 Potholes

Lab ID: 3972

Date Samples Received: 9/29/2015

Number of Samples: 4

Sample Condition: Samples arrived intact and in appropriate sample containers

Sample Temperature: Within acceptable range of 2-6° C, or as specified in EPA Method

The quality control procedures associated with the requested analyses were satisfactorily passed before the samples were run.

Thank you for allowing eAnalytics Laboratory to provide laboratory services for you.

Sincerely,

A handwritten signature in black ink, appearing to read "Chris Dieken".

Christopher Dieken
Quality Assurance Manager

A handwritten signature in black ink, appearing to read "Todd Rhea".

Todd Rhea
Laboratory Manager

eAnalytics Laboratory

4130 Clydesdale Parkway Loveland CO 80538

Chain of Custody

eANALYTICS
LABORATORY

Chain of Custody Form

[illegible]

WO # 3972

eAnalytics Laboratory

Page 1 of 1

eAnalytics Laboratory

4130 Clydesdale Parkway Loveland CO 80538

The results contained within this report relate only to the items analyzed

eANALYTICS

LABORATORY

Client: LT Environmental

Lab ID: 3972

Project: BD 12-32 Potholes

Analysis: Volatile Organics
TPHMethod: EPA8260
EPA8260/8015

Sample Name							Date Sampled	Date Analyzed	Lab ID	
					TPH GRO	TPH DRO				
	Benzene	Toluene	Ethyl- benzene	Total Xylenes	C6-C10	C10-C28				
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg				
20150926-PH01(Pit) @ 15'	< 0.01	< 0.01	< 0.01	< 0.01	< 50	< 50	09/26/15	10/01/15	3972	1
20150926-PH02(Well) @ 18'	< 0.01	< 0.01	< 0.01	0.016	< 50	< 50	09/26/15	10/01/15	3972	2
20150926-PH03(Well) @ 12'	< 0.01	< 0.01	< 0.01	< 0.01	< 50	< 50	09/26/15	10/01/15	3972	3
20150926-PH04(Well) @ 17'	0.010	< 0.01	0.143	0.171	< 50	< 50	09/26/15	10/01/15	3972	4

eAnalytics Laboratory

4130 Clydesdale Parkway Loveland CO 80538

eANALYTICS
LABORATORY

Client: LT Environmental

Lab ID: 3972

Project: BD 12-32 Potholes

Analysis: pH
EC
SARMethod: EPA9045D
USDA 60 (3)
USDA 60 (20B)

Sample Name	pH	EC	SAR	Date Sampled	Date Analyzed	Lab ID	
	su	mmhos/cm	ratio				
20150926-PH01(Pit) @ 15'	7.0	1.01	11.0	09/26/15	10/01/15	3972	1
20150926-PH02(Well) @ 18'	6.9	0.656	1.30	09/26/15	10/01/15	3972	2
20150926-PH03(Well) @ 12'	6.9	0.620	0.21	09/26/15	10/01/15	3972	3
20150926-PH04(Well) @ 17'	6.9	0.584	0.36	09/26/15	10/01/15	3972	4

eAnalytics Laboratory

4130 Clydesdale Parkway Loveland CO 80538

eANALYTICS
LABORATORY

Client: LT Environmental

Lab ID: 3972

Project: BD 12-32 Potholes

Analysis: Table 910 metals

Method: EPA6010/7196/7471

Sample Name	As	Ba	B	Cd	Cr (III)	Cr (VI)	Cu	Pb	Date Sampled	Date Analyzed	Lab ID	
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg				
20150926-PH01(Pit) @ 15'	3.13	92.3	< 1.2	< 0.50	3.32	< 15	5.81	5.88	09/26/15	10/02/15	3972	1
20150926-PH02(Well) @ 18'	2.84	77.1	< 1.2	< 0.50	4.43	< 15	8.95	7.39	09/26/15	10/02/15	3972	2
20150926-PH03(Well) @ 12'	3.05	105	< 1.2	< 0.50	3.27	< 15	5.53	5.88	09/26/15	10/02/15	3972	3
20150926-PH04(Well) @ 17'	2.75	73.8	< 1.2	< 0.50	4.70	< 15	8.85	8.42	09/26/15	10/02/15	3972	4

eAnalytics Laboratory

4130 Clydesdale Parkway Loveland CO 80538

eANALYTICS
LABORATORY

Client: LT Environmental

Lab ID: 3972

Project: BD 12-32 Potholes

Analysis: Table 910 metals

Method: EPA6010/7196/7471

Sample Name	Hg	Ni	Se	Ag	Zn	Date Sampled	Date Analyzed	Lab ID	
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg				
20150926-PH01(Pit) @ 15'	< 5.0	6.27	< 5.0	< 0.50	20.9	09/26/15	10/02/15	3972	1
20150926-PH02(Well) @ 18'	< 5.0	9.93	< 5.0	< 0.50	24.9	09/26/15	10/02/15	3972	2
20150926-PH03(Well) @ 12'	< 5.0	8.70	< 5.0	< 0.50	19.2	09/26/15	10/02/15	3972	3
20150926-PH04(Well) @ 17'	< 5.0	10.5	< 5.0	< 0.50	30.7	09/26/15	10/02/15	3972	4

eAnalytics Laboratory

4130 Clydesdale Parkway Loveland CO 80538

eANALYTICS

LABORATORY

Client: LT Environmental

Sample Name: 20150926-PH01(Pit) @ 15'

Project: BD 12-32 Potholes

Lab ID: 3972 1

Date Sampled: 9/26/2015

Analysis: PAH

Date Analyzed: 10/3/2015

Method: EPA8270 SIM

Surrogate Recoveries

Surrogate	% Recovery	Surrogate	% Recovery
2,4,6-Tribromophenol (70%-130%)	72	Nitrobenzene-d5 (70%-130%)	100
2-Fluorobiphenyl (70%-130%)	113	2-Fluorophenol (70%-130%)	102

Compound	CAS #	Result (mg/kg)	Compound	CAS #	Result (mg/kg)
Acenaphthene	83-32-9	< 1.0	Chrysene	218-01-9	< 0.15
Acenaphthylene	208-96-8	< 1.0	Dibenzo(a,h)-anthracene	53-70-3	< 0.015
Anthracene	120-12-7	< 1.0	Fluoranthene	206-44-0	< 1.0
Benzo(a)-anthracene	56-55-3	< 0.15	Fluorene	86-73-7	< 1.0
Benzo(a)-pyrene	50-32-8	< 0.015	Indeno(1,2,3-C,D)-pyrene	193-39-5	< 0.15
Benzo(b)fluoranthene	205-99-2	< 0.15	Naphthalene	91-20-3	< 1.0
Benzo(g,h,i)-perylene	191-24-2	< 1.0	Phenanthrene	85-01-8	< 1.0
Benzo(k)-fluoranthene	207-08-9	< 1.5	Pyrene	129-00-0	< 1.0

eAnalytics Laboratory

4130 Clydesdale Parkway Loveland CO 80538

eANALYTICS

LABORATORY

Client: LT Environmental

Sample Name: 20150926-PH02(Well) @ 18'

Project: BD 12-32 Potholes

Lab ID: 3972 2

Date Sampled: 9/26/2015

Analysis: PAH

Date Analyzed: 10/3/2015

Method: EPA8270 SIM

Surrogate Recoveries

Surrogate	% Recovery	Surrogate	% Recovery
2,4,6-Tribromophenol (70%-130%)	79	Nitrobenzene-d5 (70%-130%)	101
2-Fluorobiphenyl (70%-130%)	111	2-Fluorophenol (70%-130%)	115

Compound	CAS #	Result (mg/kg)	Compound	CAS #	Result (mg/kg)
Acenaphthene	83-32-9	< 1.0	Chrysene	218-01-9	< 0.15
Acenaphthylene	208-96-8	< 1.0	Dibenzo(a,h)-anthracene	53-70-3	< 0.015
Anthracene	120-12-7	< 1.0	Fluoranthene	206-44-0	< 1.0
Benzo(a)-anthracene	56-55-3	< 0.15	Fluorene	86-73-7	< 1.0
Benzo(a)-pyrene	50-32-8	< 0.015	Indeno(1,2,3-C,D)-pyrene	193-39-5	< 0.15
Benzo(b)fluoranthene	205-99-2	< 0.15	Naphthalene	91-20-3	< 1.0
Benzo(g,h,i)-perylene	191-24-2	< 1.0	Phenanthrene	85-01-8	< 1.0
Benzo(k)-fluoranthene	207-08-9	< 1.5	Pyrene	129-00-0	< 1.0

eAnalytics Laboratory

4130 Clydesdale Parkway Loveland CO 80538

eANALYTICS

LABORATORY

Client: LT Environmental

Sample Name: 20150926-PH03(Well) @ 12'

Project: BD 12-32 Potholes

Lab ID: 3972 3

Date Sampled: 9/26/2015

Analysis: PAH

Date Analyzed: 10/3/2015

Method: EPA8270 SIM

Surrogate Recoveries

Surrogate	% Recovery	Surrogate	% Recovery
2,4,6-Tribromophenol (70%-130%)	73	Nitrobenzene-d5 (70%-130%)	89
2-Fluorobiphenyl (70%-130%)	105	2-Fluorophenol (70%-130%)	106

Compound	CAS #	Result (mg/kg)	Compound	CAS #	Result (mg/kg)
Acenaphthene	83-32-9	< 1.0	Chrysene	218-01-9	< 0.15
Acenaphthylene	208-96-8	< 1.0	Dibenzo(a,h)-anthracene	53-70-3	< 0.015
Anthracene	120-12-7	< 1.0	Fluoranthene	206-44-0	< 1.0
Benzo(a)-anthracene	56-55-3	< 0.15	Fluorene	86-73-7	< 1.0
Benzo(a)-pyrene	50-32-8	< 0.015	Indeno(1,2,3-C,D)-pyrene	193-39-5	< 0.15
Benzo(b)fluoranthene	205-99-2	< 0.15	Naphthalene	91-20-3	< 1.0
Benzo(g,h,i)-perylene	191-24-2	< 1.0	Phenanthrene	85-01-8	< 1.0
Benzo(k)-fluoranthene	207-08-9	< 1.5	Pyrene	129-00-0	< 1.0

eAnalytics Laboratory

4130 Clydesdale Parkway Loveland CO 80538

eANALYTICS

L A B O R A T O R Y

Client: LT Environmental

Sample Name: 20150926-PH04(Well) @ 17'

Project: BD 12-32 Potholes

Lab ID: 3972 4

Date Sampled: 9/26/2015

Analysis: PAH

Date Analyzed: 10/3/2015

Method: EPA8270 SIM

Surrogate Recoveries

Surrogate	% Recovery	Surrogate	% Recovery
2,4,6-Tribromophenol (70%-130%)	80	Nitrobenzene-d5 (70%-130%)	109
2-Fluorobiphenyl (70%-130%)	107	2-Fluorophenol (70%-130%)	104

Compound	CAS #	Result (mg/kg)	Compound	CAS #	Result (mg/kg)
Acenaphthene	83-32-9	< 1.0	Chrysene	218-01-9	< 0.15
Acenaphthylene	208-96-8	< 1.0	Dibenzo(a,h)-anthracene	53-70-3	< 0.015
Anthracene	120-12-7	< 1.0	Fluoranthene	206-44-0	< 1.0
Benzo(a)-anthracene	56-55-3	< 0.15	Fluorene	86-73-7	< 1.0
Benzo(a)-pyrene	50-32-8	< 0.015	Indeno(1,2,3-C,D)-pyrene	193-39-5	< 0.15
Benzo(b)fluoranthene	205-99-2	< 0.15	Naphthalene	91-20-3	< 1.0
Benzo(g,h,i)-perylene	191-24-2	< 1.0	Phenanthrene	85-01-8	< 1.0
Benzo(k)-fluoranthene	207-08-9	< 1.5	Pyrene	129-00-0	< 1.0

eAnalytics Laboratory

4130 Clydesdale Parkway Loveland CO 80538

eANALYTICS
LABORATORY

Client: LT Environmental

Lab ID: 3972

Project: BD 12-32 Potholes

Method: EPA8260

Sample Name	Dibromo- fluoromethane % Recovery	1,2 Dichloro- ethane-D4 % Recovery	Toluene-D8 % Recovery	Bromo- fluorobenzene % Recovery	Date Sampled	Date Analyzed	Lab ID
20150926-PH01(Pit) @ 15'	103	91	98	100	09/26/15	10/01/15	3972 1
20150926-PH02(Well) @ 18'	93	102	101	94	09/26/15	10/01/15	3972 2
20150926-PH03(Well) @ 12'	104	103	96	96	09/26/15	10/01/15	3972 3
20150926-PH04(Well) @ 17'	94	92	98	104	09/26/15	10/01/15	3972 4

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eANALYTICS

LABORATORY

Client: LT Environmental

Lab ID: 3972

Project: BD 12-32 Potholes

Analysis: Volatile Organics
TPHMethod: EPA8260
EPA8260/8015

Sample Name	Benzene	Toluene	Ethyl- benzene	Total Xylenes	TPH GRO C6-C10	TPH DRO C10-C28	Date Analyzed	Lab ID		
	% Rec	% Rec	% Rec	% Rec	% Rec	% Rec				
Laboratory Control Sample	95	104	94	97	100	104	10/01/15	LCS	3972	1
(70-130%)										
Method Blank	< 0.01	< 0.01	< 0.01	< 0.01	< 50	< 50	10/01/15	MB	3972	1
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg				

eAnalytics Laboratory

4130 Clydesdale Parkway Loveland CO 80538

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

October 08, 2013

Rob Fishburn
LT Environmental, Inc.
4600 West 60th Avenue
Arvada, CO 80003
RE: SHE - Beaver Durham 12-32

Enclosed are the results of analyses for samples received by Summit Scientific on 10/01/13 14:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Joseph J Egry IV
Laboratory Director

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: SHE - Beaver Durham 12-32

Project Number: 0343-12009
Project Manager: Rob Fishburn

Reported:
10/08/13 09:48

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BD1232-SB01@20-22'	R310015-01	Soil	09/26/13 15:40	10/01/13 14:00
BD1232-SB02@20-22'	R310015-02	Soil	09/26/13 16:20	10/01/13 14:00
BD1232-SB03@10-12'	R310015-03	Soil	09/27/13 07:35	10/01/13 14:00
BD1232-SB03@25-26'	R310015-04	Soil	09/27/13 08:10	10/01/13 14:00
BD1232-SB04@20-21'	R310015-05	Soil	09/27/13 09:05	10/01/13 14:00
BD1232-SB04@25-26'	R310015-06	Soil	09/27/13 09:20	10/01/13 14:00
BD1232-SB05@20-22'	R310015-07	Soil	09/27/13 10:20	10/01/13 14:00
BD1232-SB05@25-26'	R310015-08	Soil	09/27/13 10:30	10/01/13 14:00
BD1232-SB06@25-26'	R310015-09	Soil	09/27/13 11:45	10/01/13 14:00

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: SHE - Beaver Durham 12-32

Project Number: 0343-12009
Project Manager: Rob Fishburn

Reported:
10/08/13 09:48

R30015

Summit Scientific
S₂

741 Corporate Circle Suite 1 • Golden, Colorado 80401
303-277-9310 • 303-374-5933 Fax

Client: LT Environmental
Address: 830 Megan Avenue, Unit B
City/State/Zip: Rifle, CO 81650
Phone: 970-285-5985
Sample Name: 11/05/13 11/04/13
Project Manager: Rob Fishburn
E-Mail: rfishburn@ltenv.com
Project Name: Beaver Durham 12-32
Fax: 970-285-2467
Project Number: 0343-12009

Page 1 of 1

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix		Analyze For:		Special Instructions
				HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	
80152 - 5840-20-22	9/24/13	1540	3									
80152 - 5840-20-22	9/24/13	1620	3									
80152 - 5840-20-22	9/27/13	0735	3									
80152 - 5840-20-22	9/27/13	0800	3									
80152 - 5840-20-21	9/27/13	0805	3									
80152 - 5840-20-21	9/27/13	0920	3									
80152 - 5840-20-22	9/27/13	1020	3									
80152 - 5840-20-22	9/27/13	1030	3									
80152 - 5840-20-22	9/27/13	1145	3									
Retinquished by: <u>[Signature]</u> Date/Time: <u>9/24/13 1400</u>				Received by: <u>[Signature]</u> Date/Time: <u>9-30-13 1400</u>				Turn Around Time (Check): <input checked="" type="checkbox"/> Same Day <input type="checkbox"/> 72 Hours <input type="checkbox"/> Standard <input type="checkbox"/> 48 Hours				Notes:
Retinquished by: <u>[Signature]</u> Date/Time: <u>9-30-13 1420</u>				Received by: <u>[Signature]</u> Date/Time: <u>9-30-13 1400</u>				Sample Integrity: <u>5:7</u>				Notes:
Retinquished by: <u>[Signature]</u> Date/Time: <u>9-30-13 1420</u>				Received by: <u>[Signature]</u> Date/Time: <u>9-30-13 1400</u>				Sample Integrity: <u>5:7</u>				Notes:

www.s2scientific.com

[Signature]



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: SHE - Beaver Durham 12-32

Project Number: 0343-12009
Project Manager: Rob Fishburn

Reported:
10/08/13 09:48

BD1232-SB01@20-22'
R310015-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/26/13 15:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	3100115	10/01/13	10/03/13	8015M	

Date Sampled: **09/26/13 15:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		89.5 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/26/13 15:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	3100114	10/01/13	10/03/13	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **09/26/13 15:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		123 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.1 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	21-167		"	"	"	"	

Semivolatile Organic Compounds by EPA Method 8270D SIM

Date Sampled: **09/26/13 15:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	5.00	ug/kg	1	3100210	10/02/13	10/03/13	EPA 8270D SIM	
Anthracene	ND	5.00	"	"	"	"	"	"	

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: SHE - Beaver Durham 12-32

Project Number: 0343-12009
Project Manager: Rob Fishburn

Reported:
10/08/13 09:48

BD1232-SB01@20-22'

R310015-01 (Soil)

Summit Scientific

Semivolatile Organic Compounds by EPA Method 8270D SIM

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) anthracene	ND	5.00	ug/kg	1	3100210	10/02/13	10/03/13	EPA 8270D SIM	
Benzo (b) fluoranthene	ND	5.00	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	5.00	"	"	"	"	"	"	
Benzo (a) pyrene	ND	5.00	"	"	"	"	"	"	
Chrysene	ND	5.00	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	5.00	"	"	"	"	"	"	
Fluoranthene	ND	5.00	"	"	"	"	"	"	
Fluorene	ND	5.00	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	5.00	"	"	"	"	"	"	
Naphthalene	ND	5.00	"	"	"	"	"	"	
Pyrene	ND	5.00	"	"	"	"	"	"	

Date Sampled: 09/26/13 15:40

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		102 %	50-150		"	"	"	"	
Surrogate: Fluoranthene-d10		88.9 %	50-150		"	"	"	"	

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: 09/26/13 15:40

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.446	0.0889	mg/kg dry	1	3100303	10/03/13	10/04/13	EPA 6020A	
Barium	62.6	0.0889	"	"	"	"	"	"	
Cadmium	0.339	0.0889	"	"	"	"	"	"	
Chromium	3.77	0.445	"	"	"	"	"	"	
Copper	2.54	0.445	"	"	"	"	"	"	
Lead	18.4	0.0889	"	"	"	"	"	"	
Nickel	2.68	0.0889	"	"	"	"	"	"	
Selenium	ND	0.0445	"	"	"	"	"	"	
Silver	ND	0.0889	"	"	"	"	"	"	
Zinc	19.1	8.89	"	"	"	"	"	"	

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: SHE - Beaver Durham 12-32
Project Number: 0343-12009
Project Manager: Rob Fishburn

Reported:
10/08/13 09:48

BD1232-SB01@20-22'
R310015-01 (Soil)

Summit Scientific

Total Mercury by EPA Method 7471/7470/245.1

Date Sampled: **09/26/13 15:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	0.0517	0.0433	mg/kg dry	1	3100203	10/02/13	10/02/13	EPA 7471	

Hexavalent Chromium by EPA 7196

Date Sampled: **09/26/13 15:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	1.17	mg/kg dry	1	3100206	10/02/13	10/03/13	EPA 7196	

Calculated Analytes

Date Sampled: **09/26/13 15:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium+3 Calculated	2.60	1.00	mg/kg	1	3100801	10/08/13	10/08/13	Calculation	

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

Date Sampled: **09/26/13 15:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	271	9.11	mg/kg dry	1	3100306	10/03/13	10/03/13	EPA 6020/Mod. USDA60 6(2, 3A)	
Magnesium	116	4.56	"	"	"	"	"	"	
Sodium	80.8	4.56	"	"	"	"	"	"	

Date Sampled: **09/26/13 15:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.03		units	"	3100204	10/02/13	10/07/13	"	

Physical Parameters by APHA/ASTM/EPA Methods

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: SHE - Beaver Durham 12-32
Project Number: 0343-12009
Project Manager: Rob Fishburn

Reported:
10/08/13 09:48

BD1232-SB01@20-22'
R310015-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/26/13 15:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.303	0.0100	mmhos/cm	1	3100409	10/04/13	10/04/13	SM 2510B	

Date Sampled: **09/26/13 15:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.57	0.100	pH Units	"	3100410	10/04/13	10/04/13	EPA 9045	

Date Sampled: **09/26/13 15:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	85.8		%	"	3100407	10/04/13	10/04/13	% calculation	

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: SHE - Beaver Durham 12-32
Project Number: 0343-12009
Project Manager: Rob Fishburn

Reported:
10/08/13 09:48

BD1232-SB02@20-22'
R310015-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/26/13 16:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	3100115	10/01/13	10/03/13	8015M	

Date Sampled: **09/26/13 16:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		84.7 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/26/13 16:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	3100114	10/01/13	10/03/13	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **09/26/13 16:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		115 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	21-167		"	"	"	"	

Semivolatile Organic Compounds by EPA Method 8270D SIM

Date Sampled: **09/26/13 16:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	5.00	ug/kg	1	3100210	10/02/13	10/03/13	EPA 8270D SIM	
Anthracene	ND	5.00	"	"	"	"	"	"	

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: SHE - Beaver Durham 12-32

Project Number: 0343-12009
Project Manager: Rob Fishburn

Reported:
10/08/13 09:48

BD1232-SB02@20-22'

R310015-02 (Soil)

Summit Scientific

Semivolatile Organic Compounds by EPA Method 8270D SIM

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) anthracene	ND	5.00	ug/kg	1	3100210	10/02/13	10/03/13	EPA 8270D SIM	
Benzo (b) fluoranthene	ND	5.00	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	5.00	"	"	"	"	"	"	
Benzo (a) pyrene	ND	5.00	"	"	"	"	"	"	
Chrysene	ND	5.00	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	5.00	"	"	"	"	"	"	
Fluoranthene	ND	5.00	"	"	"	"	"	"	
Fluorene	ND	5.00	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	5.00	"	"	"	"	"	"	
Naphthalene	ND	5.00	"	"	"	"	"	"	
Pyrene	ND	5.00	"	"	"	"	"	"	

Date Sampled: 09/26/13 16:20

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		95.3 %	50-150		"	"	"	"	
Surrogate: Fluoranthene-d10		94.6 %	50-150		"	"	"	"	

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: 09/26/13 16:20

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.438	0.0846	mg/kg dry	1	3100303	10/03/13	10/04/13	EPA 6020A	
Barium	81.3	0.0846	"	"	"	"	10/05/13	"	
Cadmium	0.580	0.0846	"	"	"	"	10/04/13	"	
Chromium	3.36	0.423	"	"	"	"	"	"	
Copper	2.14	0.423	"	"	"	"	"	"	
Lead	19.5	0.0846	"	"	"	"	"	"	
Nickel	2.38	0.0846	"	"	"	"	"	"	
Selenium	ND	0.0423	"	"	"	"	"	"	
Silver	0.121	0.0846	"	"	"	"	"	"	
Zinc	19.6	8.46	"	"	"	"	"	"	

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: SHE - Beaver Durham 12-32
Project Number: 0343-12009
Project Manager: Rob Fishburn

Reported:
10/08/13 09:48

BD1232-SB02@20-22'
R310015-02 (Soil)

Summit Scientific

Total Mercury by EPA Method 7471/7470/245.1

Date Sampled: **09/26/13 16:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.0436	mg/kg dry	1	3100203	10/02/13	10/02/13	EPA 7471	

Hexavalent Chromium by EPA 7196

Date Sampled: **09/26/13 16:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	1.14	mg/kg dry	1	3100206	10/02/13	10/03/13	EPA 7196	

Calculated Analytes

Date Sampled: **09/26/13 16:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium+3 Calculated	2.22	1.00	mg/kg	1	3100801	10/08/13	10/08/13	Calculation	

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

Date Sampled: **09/26/13 16:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	179	8.56	mg/kg dry	1	3100306	10/03/13	10/03/13	EPA 6020/Mod. USDA60 6(2, 3A)	
Magnesium	75.4	4.28	"	"	"	"	"	"	
Sodium	31.4	4.28	"	"	"	"	"	"	

Date Sampled: **09/26/13 16:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.500		units	"	3100204	10/02/13	10/07/13	"	

Physical Parameters by APHA/ASTM/EPA Methods

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: SHE - Beaver Durham 12-32
Project Number: 0343-12009
Project Manager: Rob Fishburn

Reported:
10/08/13 09:48

BD1232-SB02@20-22'
R310015-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/26/13 16:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.185	0.0100		mmhos/cm	1	3100409	10/04/13	10/04/13	SM 2510B	

Date Sampled: **09/26/13 16:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.22	0.100		pH Units	"	3100410	10/04/13	10/04/13	EPA 9045	

Date Sampled: **09/26/13 16:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	87.4			%	"	3100407	10/04/13	10/04/13	% calculation	

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LT Environmental, Inc.
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Arvada CO, 80003

Project: SHE - Beaver Durham 12-32
Project Number: 0343-12009
Project Manager: Rob Fishburn

Reported:
10/08/13 09:48

BD1232-SB03@10-12'
R310015-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/27/13 07:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	550	50	mg/kg	1	3100115	10/01/13	10/03/13	8015M	

Date Sampled: **09/27/13 07:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		94.2 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/27/13 07:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	0.0091	0.0020	mg/kg	1	3100114	10/01/13	10/03/13	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.68	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.95	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	230	5.0	"	10	"	"	10/03/13	"	

Date Sampled: **09/27/13 07:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		110 %	23-173		"	"	10/03/13	"	
Surrogate: Toluene-d8		178 %	20-170		"	"	"	"	S-02
Surrogate: 4-Bromofluorobenzene		124 %	21-167		"	"	"	"	

Semivolatile Organic Compounds by EPA Method 8270D SIM

Date Sampled: **09/27/13 07:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	25.4	5.00	ug/kg	1	3100210	10/02/13	10/03/13	EPA 8270D SIM	
Anthracene	ND	5.00	"	"	"	"	"	"	

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: SHE - Beaver Durham 12-32

Project Number: 0343-12009
Project Manager: Rob Fishburn

Reported:
10/08/13 09:48

BD1232-SB03@10-12'

R310015-03 (Soil)

Summit Scientific

Semivolatile Organic Compounds by EPA Method 8270D SIM

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) anthracene	ND	5.00	ug/kg	1	3100210	10/02/13	10/03/13	EPA 8270D SIM	
Benzo (b) fluoranthene	ND	5.00	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	5.00	"	"	"	"	"	"	
Benzo (a) pyrene	ND	5.00	"	"	"	"	"	"	
Chrysene	ND	5.00	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	5.00	"	"	"	"	"	"	
Fluoranthene	ND	5.00	"	"	"	"	"	"	
Fluorene	125	5.00	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	5.00	"	"	"	"	"	"	
Naphthalene	780	50.0	"	10	"	"	"	"	
Pyrene	ND	5.00	"	1	"	"	"	"	

Date Sampled: **09/27/13 07:35**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		75.2 %	50-150		"	"	"	"	
Surrogate: Fluoranthene-d10		105 %	50-150		"	"	"	"	

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **09/27/13 07:35**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.694	0.0795	mg/kg dry	1	3100303	10/03/13	10/04/13	EPA 6020A	
Barium	229	0.0795	"	"	"	"	10/05/13	"	
Cadmium	0.139	0.0795	"	"	"	"	10/04/13	"	
Chromium	3.46	0.397	"	"	"	"	"	"	
Copper	0.857	0.397	"	"	"	"	"	"	
Lead	4.68	0.0795	"	"	"	"	"	"	
Nickel	1.53	0.0795	"	"	"	"	"	"	
Selenium	ND	0.0397	"	"	"	"	"	"	
Silver	ND	0.0795	"	"	"	"	"	"	
Zinc	11.8	7.95	"	"	"	"	"	"	

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: SHE - Beaver Durham 12-32
Project Number: 0343-12009
Project Manager: Rob Fishburn

Reported:
10/08/13 09:48

BD1232-SB03@10-12'
R310015-03 (Soil)

Summit Scientific

Total Mercury by EPA Method 7471/7470/245.1

Date Sampled: **09/27/13 07:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.0435	mg/kg dry	1	3100203	10/02/13	10/02/13	EPA 7471	

Hexavalent Chromium by EPA 7196

Date Sampled: **09/27/13 07:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	1.06	mg/kg dry	1	3100206	10/02/13	10/03/13	EPA 7196	

Calculated Analytes

Date Sampled: **09/27/13 07:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium+3 Calculated	2.40	1.00	mg/kg	1	3100801	10/08/13	10/08/13	Calculation	

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

Date Sampled: **09/27/13 07:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	232	8.11	mg/kg dry	1	3100306	10/03/13	10/03/13	EPA 6020/Mod. USDA60 6(2, 3A)	
Magnesium	36.5	4.06	"	"	"	"	"	"	
Sodium	383	4.06	"	"	"	"	"	"	

Date Sampled: **09/27/13 07:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	6.17		units	"	3100204	10/02/13	10/07/13	"	

Physical Parameters by APHA/ASTM/EPA Methods

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: SHE - Beaver Durham 12-32

Project Number: 0343-12009
Project Manager: Rob Fishburn

Reported:
10/08/13 09:48

BD1232-SB03@10-12'

R310015-03 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/27/13 07:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.46	0.0100	mmhos/cm	1	3100409	10/04/13	10/04/13	SM 2510B	

Date Sampled: **09/27/13 07:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	9.37	0.100	pH Units	"	3100410	10/04/13	10/04/13	EPA 9045	

Date Sampled: **09/27/13 07:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	94.3		%	"	3100407	10/04/13	10/04/13	% calculation	

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Arvada CO, 80003

Project: SHE - Beaver Durham 12-32
Project Number: 0343-12009
Project Manager: Rob Fishburn

Reported:
10/08/13 09:48

BD1232-SB03@25-26'
R310015-04 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/27/13 08:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	3100115	10/01/13	10/03/13	8015M	

Date Sampled: **09/27/13 08:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		99.9 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/27/13 08:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	0.015	0.0020	mg/kg	1	3100114	10/01/13	10/03/13	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.013	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.0094	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **09/27/13 08:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		119 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.7 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	21-167		"	"	"	"	

Semivolatile Organic Compounds by EPA Method 8270D SIM

Date Sampled: **09/27/13 08:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	5.00	ug/kg	1	3100210	10/02/13	10/03/13	EPA 8270D SIM	
Anthracene	ND	5.00	"	"	"	"	"	"	

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4600 West 60th Avenue
Arvada CO, 80003

Project: SHE - Beaver Durham 12-32

Project Number: 0343-12009
Project Manager: Rob Fishburn

Reported:
10/08/13 09:48

BD1232-SB03@25-26'

R310015-04 (Soil)

Summit Scientific

Semivolatile Organic Compounds by EPA Method 8270D SIM

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) anthracene	ND	5.00	ug/kg	1	3100210	10/02/13	10/03/13	EPA 8270D SIM	
Benzo (b) fluoranthene	ND	5.00	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	5.00	"	"	"	"	"	"	
Benzo (a) pyrene	ND	5.00	"	"	"	"	"	"	
Chrysene	ND	5.00	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	5.00	"	"	"	"	"	"	
Fluoranthene	ND	5.00	"	"	"	"	"	"	
Fluorene	ND	5.00	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	5.00	"	"	"	"	"	"	
Naphthalene	ND	5.00	"	"	"	"	"	"	
Pyrene	ND	5.00	"	"	"	"	"	"	

Date Sampled: **09/27/13 08:10**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		94.2 %	50-150		"	"	"	"	
Surrogate: Fluoranthene-d10		89.0 %	50-150		"	"	"	"	

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **09/27/13 08:10**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.482	0.0843	mg/kg dry	1	3100303	10/03/13	10/04/13	EPA 6020A	
Barium	71.4	0.0843	"	"	"	"	10/05/13	"	
Cadmium	0.621	0.0843	"	"	"	"	10/04/13	"	
Chromium	3.37	0.421	"	"	"	"	"	"	
Copper	2.55	0.421	"	"	"	"	"	"	
Lead	19.3	0.0843	"	"	"	"	"	"	
Nickel	2.62	0.0843	"	"	"	"	"	"	
Selenium	0.178	0.0421	"	"	"	"	"	"	
Silver	0.170	0.0843	"	"	"	"	"	"	
Zinc	18.1	8.43	"	"	"	"	"	"	

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: SHE - Beaver Durham 12-32
Project Number: 0343-12009
Project Manager: Rob Fishburn

Reported:
10/08/13 09:48

BD1232-SB03@25-26'
R310015-04 (Soil)

Summit Scientific

Total Mercury by EPA Method 7471/7470/245.1

Date Sampled: **09/27/13 08:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	0.0506	0.0449	mg/kg dry	1	3100203	10/02/13	10/02/13	EPA 7471	

Hexavalent Chromium by EPA 7196

Date Sampled: **09/27/13 08:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	1.12	mg/kg dry	1	3100206	10/02/13	10/03/13	EPA 7196	

Calculated Analytes

Date Sampled: **09/27/13 08:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium+3 Calculated	2.25	1.00	mg/kg	1	3100801	10/08/13	10/08/13	Calculation	

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

Date Sampled: **09/27/13 08:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	189	8.64	mg/kg dry	1	3100306	10/03/13	10/03/13	EPA 6020/Mod. USDA60 6(2, 3A)	
Magnesium	97.1	4.32	"	"	"	"	"	"	
Sodium	40.3	4.32	"	"	"	"	"	"	

Date Sampled: **09/27/13 08:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.590		units	"	3100204	10/02/13	10/07/13	"	

Physical Parameters by APHA/ASTM/EPA Methods

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: SHE - Beaver Durham 12-32
Project Number: 0343-12009
Project Manager: Rob Fishburn

Reported:
10/08/13 09:48

BD1232-SB03@25-26'
R310015-04 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/27/13 08:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.314	0.0100	mmhos/cm	1	3100409	10/04/13	10/04/13	SM 2510B	

Date Sampled: **09/27/13 08:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.98	0.100	pH Units	"	3100410	10/04/13	10/04/13	EPA 9045	

Date Sampled: **09/27/13 08:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	89.2		%	"	3100407	10/04/13	10/04/13	% calculation	

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: SHE - Beaver Durham 12-32

Project Number: 0343-12009
Project Manager: Rob Fishburn

Reported:
10/08/13 09:48

BD1232-SB04@20-21'

R310015-05 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/27/13 09:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	3100115	10/01/13	10/03/13	8015M	

Date Sampled: **09/27/13 09:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		90.5 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/27/13 09:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	3100114	10/01/13	10/03/13	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **09/27/13 09:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		118 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	21-167		"	"	"	"	

Semivolatile Organic Compounds by EPA Method 8270D SIM

Date Sampled: **09/27/13 09:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	5.00	ug/kg	1	3100210	10/02/13	10/03/13	EPA 8270D SIM	
Anthracene	ND	5.00	"	"	"	"	"	"	

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: SHE - Beaver Durham 12-32

Project Number: 0343-12009
Project Manager: Rob Fishburn

Reported:
10/08/13 09:48

BD1232-SB04@20-21'

R310015-05 (Soil)

Summit Scientific

Semivolatile Organic Compounds by EPA Method 8270D SIM

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) anthracene	ND	5.00	ug/kg	1	3100210	10/02/13	10/03/13	EPA 8270D SIM	
Benzo (b) fluoranthene	ND	5.00	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	5.00	"	"	"	"	"	"	
Benzo (a) pyrene	ND	5.00	"	"	"	"	"	"	
Chrysene	ND	5.00	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	5.00	"	"	"	"	"	"	
Fluoranthene	ND	5.00	"	"	"	"	"	"	
Fluorene	ND	5.00	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	5.00	"	"	"	"	"	"	
Naphthalene	ND	5.00	"	"	"	"	"	"	
Pyrene	ND	5.00	"	"	"	"	"	"	

Date Sampled: **09/27/13 09:05**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		97.9 %	50-150		"	"	"	"	
Surrogate: Fluoranthene-d10		91.6 %	50-150		"	"	"	"	

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **09/27/13 09:05**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.623	0.0821	mg/kg dry	1	3100303	10/03/13	10/04/13	EPA 6020A	
Barium	127	0.0821	"	"	"	"	10/05/13	"	
Cadmium	0.292	0.0821	"	"	"	"	10/04/13	"	
Chromium	3.49	0.410	"	"	"	"	"	"	
Copper	2.79	0.410	"	"	"	"	"	"	
Lead	18.9	0.0821	"	"	"	"	"	"	
Nickel	2.98	0.0821	"	"	"	"	"	"	
Selenium	ND	0.0410	"	"	"	"	"	"	
Silver	ND	0.0821	"	"	"	"	"	"	
Zinc	19.5	8.21	"	"	"	"	"	"	

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: SHE - Beaver Durham 12-32
Project Number: 0343-12009
Project Manager: Rob Fishburn

Reported:
10/08/13 09:48

BD1232-SB04@20-21'
R310015-05 (Soil)

Summit Scientific

Total Mercury by EPA Method 7471/7470/245.1

Date Sampled: **09/27/13 09:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	0.0589	0.0481	mg/kg dry	1	3100203	10/02/13	10/02/13	EPA 7471	

Hexavalent Chromium by EPA 7196

Date Sampled: **09/27/13 09:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	1.11	mg/kg dry	1	3100206	10/02/13	10/03/13	EPA 7196	

Calculated Analytes

Date Sampled: **09/27/13 09:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium+3 Calculated	2.38	1.00	mg/kg	1	3100801	10/08/13	10/08/13	Calculation	

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

Date Sampled: **09/27/13 09:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	143	8.80	mg/kg dry	1	3100306	10/03/13	10/03/13	EPA 6020/Mod. USDA60 6(2, 3A)	
Magnesium	62.4	4.40	"	"	"	"	"	"	
Sodium	35.0	4.40	"	"	"	"	"	"	

Date Sampled: **09/27/13 09:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.610		units	"	3100204	10/02/13	10/07/13	"	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: SHE - Beaver Durham 12-32

Project Number: 0343-12009
Project Manager: Rob Fishburn

Reported:
10/08/13 09:48

BD1232-SB04@20-21'

R310015-05 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/27/13 09:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.466	0.0100	mmhos/cm	1	3100409	10/04/13	10/04/13	SM 2510B	

Date Sampled: **09/27/13 09:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.76	0.100	pH Units	"	3100410	10/04/13	10/04/13	EPA 9045	

Date Sampled: **09/27/13 09:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	89.7		%	"	3100407	10/04/13	10/04/13	% calculation	

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: SHE - Beaver Durham 12-32
Project Number: 0343-12009
Project Manager: Rob Fishburn

Reported:
10/08/13 09:48

BD1232-SB04@25-26'
R310015-06 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/27/13 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	3100115	10/01/13	10/03/13	8015M	

Date Sampled: **09/27/13 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		87.9 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/27/13 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	3100114	10/01/13	10/03/13	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **09/27/13 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		118 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	21-167		"	"	"	"	

Semivolatile Organic Compounds by EPA Method 8270D SIM

Date Sampled: **09/27/13 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	5.00	ug/kg	1	3100210	10/02/13	10/03/13	EPA 8270D SIM	
Anthracene	ND	5.00	"	"	"	"	"	"	

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LT Environmental, Inc.
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Arvada CO, 80003

Project: SHE - Beaver Durham 12-32

Project Number: 0343-12009
Project Manager: Rob Fishburn

Reported:
10/08/13 09:48

BD1232-SB04@25-26'

R310015-06 (Soil)

Summit Scientific

Semivolatile Organic Compounds by EPA Method 8270D SIM

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) anthracene	ND	5.00	ug/kg	1	3100210	10/02/13	10/03/13	EPA 8270D SIM	
Benzo (b) fluoranthene	ND	5.00	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	5.00	"	"	"	"	"	"	
Benzo (a) pyrene	ND	5.00	"	"	"	"	"	"	
Chrysene	ND	5.00	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	5.00	"	"	"	"	"	"	
Fluoranthene	ND	5.00	"	"	"	"	"	"	
Fluorene	ND	5.00	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	5.00	"	"	"	"	"	"	
Naphthalene	ND	5.00	"	"	"	"	"	"	
Pyrene	ND	5.00	"	"	"	"	"	"	

Date Sampled: **09/27/13 09:20**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		101 %	50-150		"	"	"	"	
Surrogate: Fluoranthene-d10		96.5 %	50-150		"	"	"	"	

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **09/27/13 09:20**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.524	0.0857	mg/kg dry	1	3100303	10/03/13	10/04/13	EPA 6020A	
Barium	83.8	0.0857	"	"	"	"	10/05/13	"	
Cadmium	0.467	0.0857	"	"	"	"	10/04/13	"	
Chromium	3.81	0.429	"	"	"	"	"	"	
Copper	2.66	0.429	"	"	"	"	"	"	
Lead	19.4	0.0857	"	"	"	"	"	"	
Nickel	2.76	0.0857	"	"	"	"	"	"	
Selenium	0.0725	0.0429	"	"	"	"	"	"	
Silver	0.118	0.0857	"	"	"	"	"	"	
Zinc	20.6	8.57	"	"	"	"	"	"	

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Project: SHE - Beaver Durham 12-32

Project Number: 0343-12009
Project Manager: Rob Fishburn

Reported:
10/08/13 09:48

BD1232-SB04@25-26'

R310015-06 (Soil)

Summit Scientific

Total Mercury by EPA Method 7471/7470/245.1

Date Sampled: **09/27/13 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	0.0469	0.0442	mg/kg dry	1	3100203	10/02/13	10/02/13	EPA 7471	

Hexavalent Chromium by EPA 7196

Date Sampled: **09/27/13 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	1.15	mg/kg dry	1	3100206	10/02/13	10/03/13	EPA 7196	

Calculated Analytes

Date Sampled: **09/27/13 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium+3 Calculated	2.66	1.00	mg/kg	1	3100801	10/08/13	10/08/13	Calculation	

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

Date Sampled: **09/27/13 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	169	8.87	mg/kg dry	1	3100306	10/03/13	10/03/13	EPA 6020/Mod. USDA60 6(2, 3A)	
Magnesium	76.2	4.44	"	"	"	"	"	"	
Sodium	20.5	4.44	"	"	"	"	"	"	

Date Sampled: **09/27/13 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.330		units	"	3100204	10/02/13	10/07/13	"	

Physical Parameters by APHA/ASTM/EPA Methods

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4600 West 60th Avenue
Arvada CO, 80003

Project: SHE - Beaver Durham 12-32

Project Number: 0343-12009
Project Manager: Rob Fishburn

Reported:
10/08/13 09:48

BD1232-SB04@25-26'

R310015-06 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/27/13 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.342	0.0100	mmhos/cm	1	3100409	10/04/13	10/04/13	SM 2510B	

Date Sampled: **09/27/13 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.95	0.100	pH Units	"	3100410	10/04/13	10/04/13	EPA 9045	

Date Sampled: **09/27/13 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	86.9		%	"	3100407	10/04/13	10/04/13	% calculation	

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Arvada CO, 80003

Project: SHE - Beaver Durham 12-32
Project Number: 0343-12009
Project Manager: Rob Fishburn

Reported:
10/08/13 09:48

BD1232-SB05@20-22'
R310015-07 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/27/13 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	92	50	mg/kg	1	3100115	10/01/13	10/03/13	8015M	

Date Sampled: **09/27/13 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		95.3 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/27/13 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	3100114	10/01/13	10/03/13	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	1.5	0.50	"	"	"	"	"	"	

Date Sampled: **09/27/13 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		116 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	21-167		"	"	"	"	

Semivolatile Organic Compounds by EPA Method 8270D SIM

Date Sampled: **09/27/13 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	6.34	5.00	ug/kg	1	3100210	10/02/13	10/03/13	EPA 8270D SIM	
Anthracene	ND	5.00	"	"	"	"	"	"	

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BD1232-SB05@20-22'

R310015-07 (Soil)

Summit Scientific

Semivolatile Organic Compounds by EPA Method 8270D SIM

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) anthracene	ND	5.00	ug/kg	1	3100210	10/02/13	10/03/13	EPA 8270D SIM	
Benzo (b) fluoranthene	ND	5.00	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	5.00	"	"	"	"	"	"	
Benzo (a) pyrene	ND	5.00	"	"	"	"	"	"	
Chrysene	ND	5.00	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	5.00	"	"	"	"	"	"	
Fluoranthene	ND	5.00	"	"	"	"	"	"	
Fluorene	10.7	5.00	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	5.00	"	"	"	"	"	"	
Naphthalene	ND	5.00	"	"	"	"	"	"	
Pyrene	ND	5.00	"	"	"	"	"	"	

Date Sampled: **09/27/13 10:20**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		93.8 %	50-150		"	"	"	"	
Surrogate: Fluoranthene-d10		76.2 %	50-150		"	"	"	"	

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **09/27/13 10:20**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.432	0.0883	mg/kg dry	1	3100303	10/03/13	10/04/13	EPA 6020A	
Barium	169	0.0883	"	"	"	"	10/05/13	"	
Cadmium	0.287	0.0883	"	"	"	"	10/04/13	"	
Chromium	3.40	0.441	"	"	"	"	"	"	
Copper	2.69	0.441	"	"	"	"	"	"	
Lead	19.9	0.0883	"	"	"	"	"	"	
Nickel	2.87	0.0883	"	"	"	"	"	"	
Selenium	ND	0.0441	"	"	"	"	"	"	
Silver	0.0887	0.0883	"	"	"	"	"	"	
Zinc	18.7	8.83	"	"	"	"	"	"	

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: SHE - Beaver Durham 12-32
Project Number: 0343-12009
Project Manager: Rob Fishburn

Reported:
10/08/13 09:48

BD1232-SB05@20-22'
R310015-07 (Soil)

Summit Scientific

Total Mercury by EPA Method 7471/7470/245.1

Date Sampled: **09/27/13 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	0.0546	0.0446	mg/kg dry	1	3100203	10/02/13	10/02/13	EPA 7471	

Hexavalent Chromium by EPA 7196

Date Sampled: **09/27/13 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	1.17	mg/kg dry	1	3100206	10/02/13	10/03/13	EPA 7196	

Calculated Analytes

Date Sampled: **09/27/13 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium+3 Calculated	2.23	1.00	mg/kg	1	3100801	10/08/13	10/08/13	Calculation	

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

Date Sampled: **09/27/13 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	290	9.07	mg/kg dry	1	3100306	10/03/13	10/03/13	EPA 6020/Mod. USDA60 6(2, 3A)	
Magnesium	92.1	4.54	"	"	"	"	"	"	
Sodium	15.4	4.54	"	"	"	"	"	"	

Date Sampled: **09/27/13 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.200		units	"	3100204	10/02/13	10/07/13	"	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Project: SHE - Beaver Durham 12-32
Project Number: 0343-12009
Project Manager: Rob Fishburn

Reported:
10/08/13 09:48

BD1232-SB05@20-22'
R310015-07 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/27/13 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.321	0.0100	mmhos/cm	1	3100409	10/04/13	10/04/13	SM 2510B	

Date Sampled: **09/27/13 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.60	0.100	pH Units	"	3100410	10/04/13	10/04/13	EPA 9045	

Date Sampled: **09/27/13 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	85.5		%	"	3100407	10/04/13	10/04/13	% calculation	

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: SHE - Beaver Durham 12-32
Project Number: 0343-12009
Project Manager: Rob Fishburn

Reported:
10/08/13 09:48

BD1232-SB05@25-26'
R310015-08 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/27/13 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	3100115	10/01/13	10/03/13	8015M	

Date Sampled: **09/27/13 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		97.0 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/27/13 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	3100114	10/01/13	10/03/13	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **09/27/13 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		118 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.5 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		106 %	21-167		"	"	"	"	

Semivolatile Organic Compounds by EPA Method 8270D SIM

Date Sampled: **09/27/13 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	5.00	ug/kg	1	3100210	10/02/13	10/03/13	EPA 8270D SIM	
Anthracene	ND	5.00	"	"	"	"	"	"	

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: SHE - Beaver Durham 12-32

Project Number: 0343-12009
Project Manager: Rob Fishburn

Reported:
10/08/13 09:48

BD1232-SB05@25-26'

R310015-08 (Soil)

Summit Scientific

Semivolatile Organic Compounds by EPA Method 8270D SIM

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) anthracene	ND	5.00	ug/kg	1	3100210	10/02/13	10/03/13	EPA 8270D SIM	
Benzo (b) fluoranthene	ND	5.00	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	5.00	"	"	"	"	"	"	
Benzo (a) pyrene	ND	5.00	"	"	"	"	"	"	
Chrysene	ND	5.00	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	5.00	"	"	"	"	"	"	
Fluoranthene	ND	5.00	"	"	"	"	"	"	
Fluorene	ND	5.00	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	5.00	"	"	"	"	"	"	
Naphthalene	ND	5.00	"	"	"	"	"	"	
Pyrene	ND	5.00	"	"	"	"	"	"	

Date Sampled: **09/27/13 10:30**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		91.2 %	50-150		"	"	"	"	
Surrogate: Fluoranthene-d10		84.3 %	50-150		"	"	"	"	

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **09/27/13 10:30**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.468	0.0843	mg/kg dry	1	3100303	10/03/13	10/04/13	EPA 6020A	
Barium	270	0.0843	"	"	"	"	10/05/13	"	
Cadmium	0.427	0.0843	"	"	"	"	10/04/13	"	
Chromium	3.78	0.422	"	"	"	"	"	"	
Copper	2.72	0.422	"	"	"	"	"	"	
Lead	20.6	0.0843	"	"	"	"	"	"	
Nickel	2.48	0.0843	"	"	"	"	"	"	
Selenium	0.0444	0.0422	"	"	"	"	"	"	
Silver	0.0960	0.0843	"	"	"	"	"	"	
Zinc	17.8	8.43	"	"	"	"	"	"	

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: SHE - Beaver Durham 12-32
Project Number: 0343-12009
Project Manager: Rob Fishburn

Reported:
10/08/13 09:48

BD1232-SB05@25-26'
R310015-08 (Soil)

Summit Scientific

Total Mercury by EPA Method 7471/7470/245.1

Date Sampled: **09/27/13 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.0434	mg/kg dry	1	3100203	10/02/13	10/02/13	EPA 7471	

Hexavalent Chromium by EPA 7196

Date Sampled: **09/27/13 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	1.14	mg/kg dry	1	3100206	10/02/13	10/03/13	EPA 7196	

Calculated Analytes

Date Sampled: **09/27/13 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium+3 Calculated	2.64	1.00	mg/kg	1	3100801	10/08/13	10/08/13	Calculation	

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

Date Sampled: **09/27/13 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	232	8.72	mg/kg dry	1	3100306	10/03/13	10/03/13	EPA 6020/Mod. USDA60 6(2, 3A)	
Magnesium	94.2	4.36	"	"	"	"	"	"	
Sodium	32.4	4.36	"	"	"	"	"	"	

Date Sampled: **09/27/13 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.450		units	"	3100204	10/02/13	10/07/13	"	

Physical Parameters by APHA/ASTM/EPA Methods

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: SHE - Beaver Durham 12-32

Project Number: 0343-12009
Project Manager: Rob Fishburn

Reported:
10/08/13 09:48

BD1232-SB05@25-26'

R310015-08 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/27/13 10:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.121	0.0100		mmhos/cm	1	3100409	10/04/13	10/04/13	SM 2510B	

Date Sampled: **09/27/13 10:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.15	0.100		pH Units	"	3100410	10/04/13	10/04/13	EPA 9045	

Date Sampled: **09/27/13 10:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	88.1			%	"	3100407	10/04/13	10/04/13	% calculation	

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: SHE - Beaver Durham 12-32
Project Number: 0343-12009
Project Manager: Rob Fishburn

Reported:
10/08/13 09:48

BD1232-SB06@25-26'
R310015-09 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/27/13 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	3100115	10/01/13	10/03/13	8015M	

Date Sampled: **09/27/13 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		87.8 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/27/13 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	3100114	10/01/13	10/03/13	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **09/27/13 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		113 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.8 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	21-167		"	"	"	"	

Semivolatile Organic Compounds by EPA Method 8270D SIM

Date Sampled: **09/27/13 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	5.00	ug/kg	1	3100210	10/02/13	10/03/13	EPA 8270D SIM	
Anthracene	ND	5.00	"	"	"	"	"	"	

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Project: SHE - Beaver Durham 12-32

Project Number: 0343-12009
Project Manager: Rob Fishburn

Reported:
10/08/13 09:48

BD1232-SB06@25-26'

R310015-09 (Soil)

Summit Scientific

Semivolatile Organic Compounds by EPA Method 8270D SIM

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) anthracene	ND	5.00	ug/kg	1	3100210	10/02/13	10/03/13	EPA 8270D SIM	
Benzo (b) fluoranthene	ND	5.00	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	5.00	"	"	"	"	"	"	
Benzo (a) pyrene	ND	5.00	"	"	"	"	"	"	
Chrysene	ND	5.00	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	5.00	"	"	"	"	"	"	
Fluoranthene	ND	5.00	"	"	"	"	"	"	
Fluorene	ND	5.00	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	5.00	"	"	"	"	"	"	
Naphthalene	ND	5.00	"	"	"	"	"	"	
Pyrene	ND	5.00	"	"	"	"	"	"	

Date Sampled: **09/27/13 11:45**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		88.1 %	50-150		"	"	"	"	
Surrogate: Fluoranthene-d10		79.3 %	50-150		"	"	"	"	

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **09/27/13 11:45**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.403	0.0882	mg/kg dry	1	3100303	10/03/13	10/04/13	EPA 6020A	
Barium	730	0.0882	"	"	"	"	10/05/13	"	
Cadmium	0.269	0.0882	"	"	"	"	10/04/13	"	
Chromium	3.72	0.441	"	"	"	"	"	"	
Copper	1.80	0.441	"	"	"	"	"	"	
Lead	16.3	0.0882	"	"	"	"	"	"	
Nickel	3.11	0.0882	"	"	"	"	"	"	
Selenium	ND	0.0441	"	"	"	"	"	"	
Silver	ND	0.0882	"	"	"	"	"	"	
Zinc	16.0	8.82	"	"	"	"	"	"	

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4600 West 60th Avenue
Arvada CO, 80003

Project: SHE - Beaver Durham 12-32
Project Number: 0343-12009
Project Manager: Rob Fishburn

Reported:
10/08/13 09:48

BD1232-SB06@25-26'
R310015-09 (Soil)

Summit Scientific

Total Mercury by EPA Method 7471/7470/245.1

Date Sampled: **09/27/13 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	0.0490	0.0480	mg/kg dry	1	3100203	10/02/13	10/02/13	EPA 7471	

Hexavalent Chromium by EPA 7196

Date Sampled: **09/27/13 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	1.18	mg/kg dry	1	3100206	10/02/13	10/03/13	EPA 7196	

Calculated Analytes

Date Sampled: **09/27/13 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium+3 Calculated	2.54	1.00	mg/kg	1	3100801	10/08/13	10/08/13	Calculation	

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

Date Sampled: **09/27/13 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	279	8.85	mg/kg dry	1	3100306	10/03/13	10/03/13	EPA 6020/Mod. USDA60 6(2, 3A)	
Magnesium	137	4.42	"	"	"	"	"	"	
Sodium	72.5	4.42	"	"	"	"	"	"	

Date Sampled: **09/27/13 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.890		units	"	3100204	10/02/13	10/07/13	"	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
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Project: SHE - Beaver Durham 12-32

Project Number: 0343-12009
Project Manager: Rob Fishburn

Reported:
10/08/13 09:48

BD1232-SB06@25-26'

R310015-09 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/27/13 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.445	0.0100	mmhos/cm	1	3100409	10/04/13	10/04/13	SM 2510B	

Date Sampled: **09/27/13 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.83	0.100	pH Units	"	3100410	10/04/13	10/04/13	EPA 9045	

Date Sampled: **09/27/13 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	84.9		%	"	3100407	10/04/13	10/04/13	% calculation	

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4600 West 60th Avenue
Arvada CO, 80003

Project: SHE - Beaver Durham 12-32

Project Number: 0343-12009
Project Manager: Rob Fishburn

Reported:
10/08/13 09:48

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 3100115 - EPA 3550A

Blank (3100115-BLK1)

Prepared: 10/01/13 Analyzed: 10/03/13

C10-C28 (DRO) ND 50 mg/kg

LCS (3100115-BS1)

Prepared: 10/01/13 Analyzed: 10/03/13

C10-C28 (DRO) 514 50 mg/kg 501 103 73-134

LCS Dup (3100115-BSD1)

Prepared: 10/01/13 Analyzed: 10/03/13

C10-C28 (DRO) 528 50 mg/kg 501 105 73-134 2.71 11

Matrix Spike (3100115-MS1)

Source: R310015-01

Prepared: 10/01/13 Analyzed: 10/03/13

C10-C28 (DRO) 450 50 mg/kg 480 ND 93.9 50-148

Matrix Spike Dup (3100115-MSD1)

Source: R310015-01

Prepared: 10/01/13 Analyzed: 10/03/13

C10-C28 (DRO) 452 50 mg/kg 466 ND 96.9 50-148 0.356 13

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Arvada CO, 80003

Project: SHE - Beaver Durham 12-32
Project Number: 0343-12009
Project Manager: Rob Fishburn

Reported:
10/08/13 09:48

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 3100114 - EPA 5030 Soil MS

Blank (3100114-BLK1)

Prepared: 10/01/13 Analyzed: 10/03/13

Benzene	ND	0.0020	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	0.0449	"	0.0397	113	23-173
Surrogate: Toluene-d8	0.0392	"	0.0400	97.9	20-170
Surrogate: 4-Bromofluorobenzene	0.0418	"	0.0400	104	21-167

LCS (3100114-BS1)

Prepared: 10/01/13 Analyzed: 10/03/13

Benzene	0.0869	0.0020	mg/kg	0.100	86.9	58-130
Toluene	0.101	0.0050	"	0.100	101	61-134
Ethylbenzene	0.116	0.0050	"	0.100	116	74-139
m,p-Xylene	0.221	0.010	"	0.200	110	73-137
o-Xylene	0.116	0.0050	"	0.100	116	73-141
<hr/>						
Surrogate: 1,2-Dichloroethane-d4	0.0434		"	0.0397	109	23-173
Surrogate: Toluene-d8	0.0392		"	0.0400	98.1	20-170
Surrogate: 4-Bromofluorobenzene	0.0407		"	0.0400	102	21-167

LCS Dup (3100114-BSD1)

Prepared: 10/01/13 Analyzed: 10/03/13

Benzene	0.0869	0.0020	mg/kg	0.100	86.9	58-130	0.00	13
Toluene	0.102	0.0050	"	0.100	102	61-134	0.385	16
Ethylbenzene	0.116	0.0050	"	0.100	116	74-139	0.129	12
m,p-Xylene	0.223	0.010	"	0.200	112	73-137	1.12	14
o-Xylene	0.116	0.0050	"	0.100	116	73-141	0.596	12
<hr/>								
Surrogate: 1,2-Dichloroethane-d4	0.0448		"	0.0397	113	23-173		
Surrogate: Toluene-d8	0.0394		"	0.0400	98.6	20-170		
Surrogate: 4-Bromofluorobenzene	0.0406		"	0.0400	102	21-167		

Summit Scientific

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Project: SHE - Beaver Durham 12-32

Project Number: 0343-12009
Project Manager: Rob Fishburn

Reported:
10/08/13 09:48

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 3100114 - EPA 5030 Soil MS

Matrix Spike (3100114-MS1)		Source: R310015-01			Prepared: 10/01/13		Analyzed: 10/03/13			
Benzene	0.0837	0.0020	mg/kg	0.0965	ND	86.7	30-131			
Toluene	0.0974	0.0050	"	0.0965	ND	101	30-134			
Ethylbenzene	0.113	0.0050	"	0.0965	ND	117	22-153			
m,p-Xylene	0.216	0.010	"	0.193	ND	112	10-159			
o-Xylene	0.112	0.0050	"	0.0965	ND	116	31-151			
Surrogate: 1,2-Dichloroethane-d4	0.0453		"	0.0383		118	23-173			
Surrogate: Toluene-d8	0.0380		"	0.0386		98.4	20-170			
Surrogate: 4-Bromofluorobenzene	0.0393		"	0.0386		102	21-167			
Matrix Spike Dup (3100114-MSD1)		Source: R310015-01			Prepared: 10/01/13		Analyzed: 10/03/13			
Benzene	0.0858	0.0020	mg/kg	0.0973	ND	88.2	30-131	2.52	34	
Toluene	0.101	0.0050	"	0.0973	ND	103	30-134	3.21	30	
Ethylbenzene	0.116	0.0050	"	0.0973	ND	119	22-153	2.63	24	
m,p-Xylene	0.222	0.010	"	0.195	ND	114	10-159	2.91	68	
o-Xylene	0.116	0.0050	"	0.0973	ND	119	31-151	3.55	38	
Surrogate: 1,2-Dichloroethane-d4	0.0465		"	0.0386		121	23-173			
Surrogate: Toluene-d8	0.0384		"	0.0389		98.8	20-170			
Surrogate: 4-Bromofluorobenzene	0.0400		"	0.0389		103	21-167			

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: SHE - Beaver Durham 12-32
Project Number: 0343-12009
Project Manager: Rob Fishburn

Reported:
10/08/13 09:48

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 3100210 - EPA 5030 Soil MS

Blank (3100210-BLK1)

Prepared: 10/02/13 Analyzed: 10/03/13

Acenaphthene	ND	5.00	ug/kg							
Anthracene	ND	5.00	"							
Benzo (a) anthracene	ND	5.00	"							
Benzo (b) fluoranthene	ND	5.00	"							
Benzo (k) fluoranthene	ND	5.00	"							
Benzo (a) pyrene	ND	5.00	"							
Chrysene	ND	5.00	"							
Dibenz (a,h) anthracene	ND	5.00	"							
Fluoranthene	ND	5.00	"							
Fluorene	ND	5.00	"							
Indeno (1,2,3-cd) pyrene	ND	5.00	"							
Naphthalene	ND	5.00	"							
Pyrene	ND	5.00	"							
Surrogate: 2-Methylnaphthalene-d10	36.3		"	34.8		104	50-150			
Surrogate: Fluoranthene-d10	31.8		"	34.5		92.3	50-150			

LCS (3100210-BS1)

Prepared: 10/02/13 Analyzed: 10/03/13

Acenaphthene	33.3	5.00	ug/kg	33.3		100	48-131			
Anthracene	30.6	5.00	"	33.3		91.9	48-135			
Benzo (a) anthracene	34.4	5.00	"	33.3		103	37-142			
Benzo (b) fluoranthene	34.6	5.00	"	33.3		104	35-139			
Benzo (k) fluoranthene	28.8	5.00	"	33.3		86.5	30-139			
Benzo (a) pyrene	33.6	5.00	"	33.3		101	41-132			
Chrysene	30.2	5.00	"	33.3		90.5	30-136			
Dibenz (a,h) anthracene	38.9	5.00	"	33.3		117	24-127			
Fluoranthene	32.7	5.00	"	33.3		98.0	50-139			
Fluorene	36.6	5.00	"	33.3		110	50-130			
Indeno (1,2,3-cd) pyrene	38.7	5.00	"	33.3		116	26-139			
Naphthalene	33.2	5.00	"	33.3		99.7	40-135			
Pyrene	32.9	5.00	"	33.3		98.6	39-141			
Surrogate: 2-Methylnaphthalene-d10	39.4		"	34.8		113	50-150			
Surrogate: Fluoranthene-d10	35.2		"	34.5		102	50-150			

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4600 West 60th Avenue
Arvada CO, 80003

Project: SHE - Beaver Durham 12-32
Project Number: 0343-12009
Project Manager: Rob Fishburn

Reported:
10/08/13 09:48

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 3100210 - EPA 5030 Soil MS

LCS Dup (3100210-BSD1)

Prepared: 10/02/13 Analyzed: 10/03/13

Acenaphthene	35.3	5.00	ug/kg	33.3	106	48-131	5.82	23	
Anthracene	33.8	5.00	"	33.3	102	48-135	9.97	28	
Benzo (a) anthracene	36.9	5.00	"	33.3	111	37-142	7.02	32	
Benzo (b) fluoranthene	36.7	5.00	"	33.3	110	35-139	5.71	30	
Benzo (k) fluoranthene	30.6	5.00	"	33.3	91.8	30-139	5.94	27	
Benzo (a) pyrene	36.6	5.00	"	33.3	110	41-132	8.55	25	
Chrysene	32.6	5.00	"	33.3	97.8	30-136	7.75	27	
Dibenz (a,h) anthracene	38.2	5.00	"	33.3	115	24-127	1.73	29	
Fluoranthene	35.5	5.00	"	33.3	107	50-139	8.37	26	
Fluorene	38.1	5.00	"	33.3	114	50-130	4.04	24	
Indeno (1,2,3-cd) pyrene	37.7	5.00	"	33.3	113	26-139	2.55	30	
Naphthalene	35.3	5.00	"	33.3	106	40-135	6.10	21	
Pyrene	27.6	5.00	"	33.3	82.9	39-141	17.3	26	
Surrogate: 2-Methylnaphthalene-d10	36.8		"	34.8	106	50-150			
Surrogate: Fluoranthene-d10	34.8		"	34.5	101	50-150			

Duplicate (3100210-DUP1)

Source: R310011-01

Prepared: 10/02/13 Analyzed: 10/04/13

Acenaphthene	ND	5.00	ug/kg	ND				200	
Anthracene	50.8	5.00	"	ND				200	
Benzo (a) anthracene	ND	5.00	"	ND				200	
Benzo (b) fluoranthene	ND	5.00	"	ND				200	
Benzo (k) fluoranthene	ND	5.00	"	ND				200	
Benzo (a) pyrene	ND	5.00	"	ND				200	
Chrysene	65.9	5.00	"	67.9			2.92	200	
Dibenz (a,h) anthracene	ND	5.00	"	ND				200	
Fluoranthene	15.7	5.00	"	20.7			27.1	200	
Fluorene	ND	5.00	"	ND				200	
Indeno (1,2,3-cd) pyrene	ND	5.00	"	ND				200	
Naphthalene	26.5	5.00	"	41.4			43.8	200	
Pyrene	152	5.00	"	141			7.02	200	
Surrogate: 2-Methylnaphthalene-d10	28.1		"	34.8	80.8	50-150			
Surrogate: Fluoranthene-d10	22.3		"	34.5	64.7	50-150			

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Arvada CO, 80003

Project: SHE - Beaver Durham 12-32
Project Number: 0343-12009
Project Manager: Rob Fishburn

Reported:
10/08/13 09:48

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 3100210 - EPA 5030 Soil MS

Matrix Spike (3100210-MS1)	Source: R310012-01			Prepared: 10/02/13	Analyzed: 10/04/13			
Acenaphthene	32.5	5.00	ug/kg	33.3	ND	97.6	27-140	
Anthracene	27.2	5.00	"	33.3	4.37	68.3	23-144	
Benzo (a) anthracene	32.2	5.00	"	33.3	ND	96.6	12-168	
Benzo (b) fluoranthene	52.7	5.00	"	33.3	ND	158	10-170	
Benzo (k) fluoranthene	37.4	5.00	"	33.3	ND	112	11-150	
Benzo (a) pyrene	33.7	5.00	"	33.3	ND	101	11-162	
Chrysene	43.6	5.00	"	33.3	27.6	48.2	10-167	
Dibenz (a,h) anthracene	25.0	5.00	"	33.3	ND	75.0	10-128	
Fluoranthene	24.3	5.00	"	33.3	ND	72.8	18-157	
Fluorene	31.3	5.00	"	33.3	ND	94.0	37-133	
Indeno (1,2,3-cd) pyrene	24.0	5.00	"	33.3	ND	72.0	10-161	
Naphthalene	79.2	5.00	"	33.3	101	NR	10-157	QM-07
Pyrene	67.0	5.00	"	33.3	50.8	48.6	10-166	
Surrogate: 2-Methylnaphthalene-d10	31.4		"	34.8		90.1	50-150	
Surrogate: Fluoranthene-d10	21.9		"	34.5		63.5	50-150	

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: SHE - Beaver Durham 12-32
Project Number: 0343-12009
Project Manager: Rob Fishburn

Reported:
10/08/13 09:48

Total Metals by EPA 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 3100303 - EPA 3050B

Blank (3100303-BLK1)

Prepared: 10/03/13 Analyzed: 10/04/13

Arsenic	ND	0.100	mg/kg wet
Barium	ND	0.100	"
Cadmium	ND	0.100	"
Chromium	ND	0.500	"
Copper	ND	0.500	"
Lead	ND	0.100	"
Nickel	ND	0.100	"
Selenium	ND	0.0500	"
Silver	ND	0.100	"
Zinc	ND	10.0	"

LCS (3100303-BS1)

Prepared: 10/03/13 Analyzed: 10/04/13

Arsenic	2.70	0.100	mg/kg wet	2.51	108	80-120
Barium	222	0.100	"	226	98.2	80-120
Cadmium	1.04	0.100	"	1.01	103	80-120
Chromium	11.6	0.500	"	10.1	115	80-120
Copper	22.8	0.500	"	20.1	114	80-120
Lead	8.30	0.100	"	7.54	110	80-120
Nickel	17.0	0.100	"	15.1	112	80-120
Selenium	1.38	0.0500	"	1.26	109	80-120
Silver	0.268	0.100	"	0.251	107	80-120
Zinc	7.30	10.0	"	7.54	96.8	80-120

LCS Dup (3100303-BSD1)

Prepared: 10/03/13 Analyzed: 10/04/13

Arsenic	2.64	0.100	mg/kg wet	2.50	106	80-120	2.19	20
Barium	233	0.100	"	225	104	80-120	4.80	20
Cadmium	1.01	0.100	"	1.00	101	80-120	2.91	20
Chromium	10.9	0.500	"	10.0	109	80-120	6.21	20
Copper	23.6	0.500	"	20.0	118	80-120	3.48	20
Lead	8.01	0.100	"	7.50	107	80-120	3.47	20
Nickel	17.7	0.100	"	15.0	118	80-120	4.10	20
Selenium	1.35	0.0500	"	1.25	108	80-120	2.22	20
Silver	0.249	0.100	"	0.250	99.7	80-120	7.63	20
Zinc	6.34	10.0	"	7.50	84.5	80-120	14.1	20

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: SHE - Beaver Durham 12-32
Project Number: 0343-12009
Project Manager: Rob Fishburn

Reported:
10/08/13 09:48

Total Metals by EPA 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 3100303 - EPA 3050B

Matrix Spike (3100303-MS1)			Source: R310015-01		Prepared: 10/03/13		Analyzed: 10/04/13			
Arsenic	0.605	0.0890	mg/kg dry	2.22	0.446	7.15	75-125			QM-06
Barium	200	0.0890	"	200	62.6	68.4	75-125			QM-06
Cadmium	1.26	0.0890	"	0.892	0.339	104	75-125			
Chromium	6.25	0.445	"	8.92	3.77	27.8	75-125			QM-06
Copper	4.78	0.445	"	17.8	2.54	12.6	75-125			QM-06
Lead	24.4	0.0890	"	6.69	18.4	89.7	75-125			
Nickel	4.21	0.0890	"	13.4	2.68	11.5	75-125			QM-06
Selenium	0.115	0.0445	"	1.11	ND	10.4	75-125			QM-06
Silver	0.269	0.0890	"	0.222	0.0744	87.2	75-125			
Zinc	19.5	8.90	"	6.69	19.1	5.64	75-125			QM-06

Matrix Spike Dup (3100303-MSD1)			Source: R310015-01		Prepared: 10/03/13		Analyzed: 10/04/13			
Arsenic	0.602	0.0893	mg/kg dry	2.24	0.446	6.97	75-125	0.492	25	QM-06
Barium	238	0.0893	"	201	62.6	86.8	75-125	17.3	25	
Cadmium	1.18	0.0893	"	0.898	0.339	93.9	75-125	6.68	25	
Chromium	6.29	0.447	"	8.98	3.77	28.1	75-125	0.702	25	QM-06
Copper	4.44	0.447	"	17.9	2.54	10.6	75-125	7.31	25	QM-06
Lead	23.6	0.0893	"	6.73	18.4	78.4	75-125	3.02	25	
Nickel	4.02	0.0893	"	13.5	2.68	9.95	75-125	4.78	25	QM-06
Selenium	0.109	0.0447	"	1.12	ND	9.71	75-125	5.82	25	QM-06
Silver	0.266	0.0893	"	0.224	0.0744	85.4	75-125	1.06	25	
Zinc	19.2	8.93	"	6.73	19.1	0.438	75-125	1.80	25	QM-06

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: SHE - Beaver Durham 12-32

Project Number: 0343-12009
Project Manager: Rob Fishburn

Reported:
10/08/13 09:48

Total Mercury by EPA Method 7471/7470/245.1 - Quality Control
Summit Scientific

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

Batch 3100203 - EPA 7471A

Blank (3100203-BLK1)

Prepared & Analyzed: 10/02/13

Mercury ND 0.0500 mg/kg wet

LCS (3100203-BS1)

Prepared & Analyzed: 10/02/13

Mercury 0.354 0.0500 mg/kg wet 0.400 88.6 80-120

LCS Dup (3100203-BSD1)

Prepared & Analyzed: 10/02/13

Mercury 0.407 0.0500 mg/kg wet 0.400 102 80-120 13.9 20

Matrix Spike (3100203-MS1)

Source: R309261-01

Prepared & Analyzed: 10/02/13

Mercury 0.428 0.0494 mg/kg dry 0.395 0.126 76.2 80-120 QM-06

Matrix Spike Dup (3100203-MSD1)

Source: R309261-01

Prepared & Analyzed: 10/02/13

Mercury 0.518 0.0492 mg/kg dry 0.394 0.126 99.4 80-120 19.1 20

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Project: SHE - Beaver Durham 12-32

Project Number: 0343-12009
Project Manager: Rob Fishburn

Reported:
10/08/13 09:48

Hexavalent Chromium by EPA 7196 - Quality Control
Summit Scientific

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

Batch 3100206 - General Preparation

Blank (3100206-BLK1)

Prepared: 10/02/13 Analyzed: 10/03/13

Chromium, Hexavalent ND 1.00 mg/kg wet

LCS (3100206-BS1)

Prepared: 10/02/13 Analyzed: 10/03/13

Chromium, Hexavalent 115 1.25 mg/kg wet 117 98.6 85-115

Duplicate (3100206-DUP1)

Source: R310015-01

Prepared: 10/02/13 Analyzed: 10/03/13

Chromium, Hexavalent ND 1.17 mg/kg dry ND 20

Matrix Spike (3100206-MS1)

Source: R310015-01

Prepared: 10/02/13 Analyzed: 10/03/13

Chromium, Hexavalent 41.5 1.17 mg/kg dry 46.0 ND 90.1 85-115

Summit Scientific

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Project: SHE - Beaver Durham 12-32
Project Number: 0343-12009
Project Manager: Rob Fishburn

Reported:
10/08/13 09:48

Soluble Nutrients by EPA 6020/Mod. 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 3100306 - General Preparation

Blank (3100306-BLK1)

Prepared & Analyzed: 10/03/13

Calcium	ND	10.0	mg/kg wet
Magnesium	ND	5.00	"
Sodium	ND	5.00	"

LCS (3100306-BS1)

Prepared & Analyzed: 10/03/13

Calcium	339	10.0	mg/kg wet	395	85.8	80-120
Magnesium	182	5.00	"	198	91.6	80-120
Sodium	457	5.00	"	494	92.5	80-120

LCS Dup (3100306-BSD1)

Prepared & Analyzed: 10/03/13

Calcium	429	10.0	mg/kg wet	399	108	80-120	23.6	20
Magnesium	213	5.00	"	200	107	80-120	16.2	20
Sodium	543	5.00	"	499	109	80-120	17.2	20

Matrix Spike (3100306-MS1)

Source: R310001-01

Prepared & Analyzed: 10/03/13

Calcium	1830	11.8	mg/kg dry	472	1300	111	75-125
Magnesium	303	5.89	"	236	107	82.8	75-125
Sodium	1860	5.89	"	590	1290	97.1	75-125

Matrix Spike Dup (3100306-MSD1)

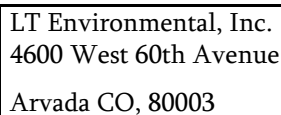
Source: R310001-01

Prepared & Analyzed: 10/03/13

Calcium	1890	11.7	mg/kg dry	471	1300	126	75-125	3.64	25	QM-07
Magnesium	293	5.87	"	236	107	78.7	75-125	3.42	25	
Sodium	1750	5.87	"	589	1290	78.6	75-125	6.11	25	

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Project Number: 0343-12009
Project Manager: Rob Fishburn

Reported:
10/08/13 09:48

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

Duplicate (3100407-DUP1)	Source: R310001-01	Prepared & Analyzed: 10/04/13		
% Solids	66.2	%	69.0	4.14 20

Blank (3100409-BLK1)		Prepared & Analyzed: 10/04/13
Specific Conductance (EC)	ND	0.0100 mmhos/cm

Duplicate (3100409-DUP1)		Source: R310001-01		Prepared & Analyzed: 10/04/13	
Specific Conductance (EC)	3.33	0.0100	mmhos/cm	3.75	12.0 20

LCS (3100410-BS1)			Prepared & Analyzed: 10/04/13		
pH	8.04	0.100	pH Units	8.00	100
					0-200

Duplicate (3100410-DUP1)		Source: R309264-01		Prepared & Analyzed: 10/04/13		
pH	7.65	0.100	pH Units	7.69	0.522	20

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Regel IV



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: SHE - Beaver Durham 12-32

Project Number: 0343-12009
Project Manager: Rob Fishburn

Reported:
10/08/13 09:48

Notes and Definitions

- S-02 The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.
- 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.
- QM-06 Due to noted non-homogeneity of the QC sample matrix, the MS/MSD did not provide reliable results for accuracy and precision. Sample results for the QC batch were accepted based on LCS/LCSD percent recoveries and RPD values.
- 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