



**Voloshin Morton 1-8 (Location ID – 312916, API# 05-081-06189)**  
**Peakview Operating Company, LLC. (Operator – 10409)**  
**Remediation # 7716**  
**Form 4 (Report of Work Completed)**  
**Narrative Attachment**  
Document Date – 2/25/2014

Peakview Operating Company, LLC (Peakview) is submitting this Form 4 (Report of Work Completed) to document groundwater extraction and excavation activities at the Voloshin Morton 1-8 well pad (Location ID - 312916) in Peakview's Buck Peak area of operations (Site). This work was conducted in accordance with a Form 4 (Sundry Notice) submitted November 12, 2013 (Remediation #7716). A topographical Site Location Map is attached (Figure 1).

### **REPORT OF WORK COMPLETED**

On November 14, 2013, through December 2, 2013, LT Environmental, Inc. (LTE) provided oversight as Peakview conducted excavation activities at the Site. LTE personnel collected soil samples to delineate the extent and confirm the removal of hydrocarbon impacted soils. Soil samples were field screened with a photoionization device (PID) to monitor the soil headspace for the presence of volatile organic vapors.

Prior to excavation activities, groundwater extraction activities continued at the Site as described in a previous Form 4 (Sundry Notice) Source Release Summary & Remedial Action Plan (document #400466935). When excavation began, a total of 5,980 barrels of hydrocarbon impacted water were transported offsite for disposal.

Groundwater was observed approximately eight feet below ground surface during excavation activities. Hydrocarbon sheen and free product were observed in direct contact with the groundwater. A vacuum truck was used to dewater the excavation area during onsite activities. Water removed from the excavation was stored in two frac tanks located on the south end of the site. During excavation activities, a total of 6,925 barrels of hydrocarbon impacted water were transported offsite via water truck to RNI Trucking's Disposal Facility in Meeker, Colorado for disposal.

During excavation activities, an offline three-inch steel gas line was exposed. The line was capped above ground in the area of a pre-existing meter house and continued north. The line was excavated and abandoned to the extents of the Site to the north, cut, and capped above grade. Soil immediately surrounding the line was removed and stockpiled on site. Soil confirmation samples were collected at the base of the trench directly beneath the removed three-inch line.

Excavated soil deemed clean through field screening was stockpiled on polyethylene plastic sheeting in the northeast portion of the pad. Soil that was assumed to be impacted via field screening was temporarily stockpiled on polyethylene plastic sheeting and contained in an earthen berm on the western portion of the pad. As excavation activities continued, stockpiled impacted soil was removed from the site and transported offsite for disposal. Based on manifests provided, 230 loads of soil totaling 5,002 cubic yards were disposed of at Lapoint Recycle and Storage Inc. in Lapoint, Utah and 48 loads totaling 536.02 tons were disposed of at Twin Landfill Corporation in Steamboat Springs, Colorado. Upon completion of excavation and sampling activities, the excavated area was backfilled using the clean soil from the overburden and imported clean fill. All waste disposal documentation is kept on file at Peakview's Denver office and can be made available upon request. The excavation dimensions and sample locations are depicted in the attached Site Map (Figure 2).



Site investigation soil samples collected within the excavation indicated the presence of pH, sodium adsorption ratio (SAR) and arsenic above Colorado Oil & Gas Conservation Commission (COGCC) Table 910-1 allowable limits. Laboratory analytical results indicated pH exceedances ranging from 9.0 to 9.8, SAR exceedances ranging from 17 to 18, and arsenic exceedances ranging from 2.3 milligrams per kilogram (mg/kg) to 8.6 mg/kg. Arsenic background concentrations at the site have been observed from 7.1 mg/kg to 7.2 mg/kg. Consistent with Footnote 1 of Table 910-1, Peakview requests that the background arsenic values be considered as an alternative to the limit identified in Table 910-1. Consistent with reclamation objectives and approved handling of material with elevated levels of EC, SAR, and pH, more than three feet of clean fill was observed between the pad surface and impacted material. All other analytes were either within COGCC Table 910-1 allowable concentrations or were below laboratory detection limits. Soil laboratory analytical reports are attached and summarized in Table 1.

Peakview plans to return to the Site in spring 2014 to install groundwater monitoring wells for continued monitoring of potential residual subsurface impacts. These planned activities will be detailed in a subsequent Form 27 (Site Investigation and Remediation Workplan).

#### ATTACHMENTS

Figure 1 – Site Location Map

Figure 2 – Site Map

Table 1 – Soil Sample Analytical Results

Laboratory Analytical Reports







IMAGE COURTESY OF ESRI

## LEGEND

- SOIL SAMPLE
- TRENCH
- - - EXCAVATION EXTENT

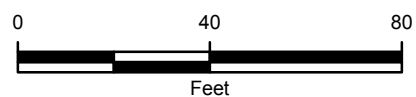


FIGURE 1  
SITE MAP  
VOLOSHIN MORTON 1-8  
MOFFAT COUNTY, COLORADO

PEAKVIEW OPERATING COMPANY



TABLE 1  
SOIL SAMPLE ANALYTICAL RESULTS  
VOLOSHIN MORTON 1-8  
PEAKVIEW OPPERATING COMPANY, LLC.

Sample ID	Date	Depth FT	TPH-GRO mg/kg	TPH-DRO mg/kg	TPH mg/kg	Benzene mg/kg	Toluene mg/kg	Ethylbenzene mg/kg	Total Xylenes mg/kg	EC mmhos/cm	pH SU	SAR unitless
ESW01	11/15/2013	8	<0.50	<4.0	<4.50	<0.0025	<0.025	<0.0025	<0.0075	0.39	8.6	2.8
EBOT	11/15/2013	10	<0.50	<4.0	<4.50	<0.0025	<0.025	<0.0025	<0.0075	0.42	8.7	3.4
NEBOT	11/15/2013	11	<0.50	<4.0	<4.50	0.0068	<0.025	<0.0025	<0.0075	0.48	<b>9.0</b>	4.9
NESW	11/15/2013	7	<0.50	<4.0	<4.50	<0.0025	<0.025	<0.0025	<0.0075	0.86	<b>9.5</b>	<b>17</b>
BOT	11/15/2013	12	<0.50	<4.0	<4.50	<0.0025	<0.025	<0.0025	<0.0075	0.35	8.9	4.4
NSW	11/15/2013	7	<0.50	<4.0	<4.50	<0.0025	<0.025	<0.0025	<0.0075	0.99	<b>9.7</b>	<b>18</b>
NSW02	11/15/2013	8	<0.50	<4.0	<4.50	<0.0025	<0.025	<0.0025	<0.0075	0.6	<b>9.2</b>	9.5
SSW01	11/16/2013	7	<0.50	<4.0	<4.50	<0.0025	<0.025	<0.0025	<0.0075	0.49	<b>9.0</b>	4.6
SBOT	11/16/2013	11	<0.50	<4.0	<4.50	<0.0025	<0.025	<0.0025	<0.0075	0.37	8.9	2.8
SBOT02	11/16/2013	12	<0.50	<4.0	<4.50	<0.0025	<0.025	<0.0025	<0.0075	0.28	8.9	5.8
SSW02	11/16/2013	8	<0.50	<4.0	<4.50	<0.0025	<0.025	<0.0025	<0.0075	0.42	<b>9.0</b>	3.8
NWBOT	11/19/2013	8.5	<0.50	<4.0	<4.50	<0.0025	<0.025	<0.0025	<0.0075	0.7	<b>9.8</b>	8.8
T-NORTH	11/20/2013	5	<0.50	<4.0	<4.50	<0.0025	<0.025	<0.0025	<0.0075	0.39	8.6	2.4
T-SOUTH	11/20/2013	5	<0.50	<4.0	<4.50	<0.0025	<0.025	<0.0025	<0.0075	0.42	<b>9.0</b>	3.4
NSW03	11/20/2013	6	<0.50	<4.0	<4.50	<0.0025	<0.025	<0.0025	<0.0075	0.29	8.6	3.0
SESW	11/21/2013	9	<0.50	<4.0	<4.50	<0.0025	<0.025	<0.0025	<0.0075	0.42	<b>9.5</b>	2.6
NSW04	11/21/2013	9	<0.50	<4.0	<4.50	<0.0025	<0.025	<0.0025	<0.0075	0.48	8.9	2.2
SBOT03	11/21/2013	12	<0.50	<4.0	<4.50	<0.0025	<0.025	<0.0025	<0.0075	0.4	<b>9.5</b>	2.7
ESW02	11/22/2013	9	<0.50	<4.0	<4.50	<0.0025	<0.025	<0.0025	<0.0075	0.35	9.0	2.7
WBOT	11/24/2013	12	<0.50	<4.0	<4.50	<0.0025	<0.025	<0.0025	<0.0075	0.43	<b>9.4</b>	4.5
WPH01	11/25/2013	11	<0.50	<4.0	<4.50	<0.0025	<0.025	<0.0025	<0.0075	0.4	8.7	2.6
WSW01	11/25/2013	10	<0.50	<4.0	<4.50	<0.0025	<0.025	<0.0025	<0.0075	0.49	8.8	2.7
SWSW01	12/2/2013	6	<0.50	<4.0	<4.50	<0.0025	<0.025	<0.0025	<0.0075	1.4	8.7	12
SWSW02	12/2/2013	6	<0.50	9.0	9.0	<0.0025	<0.025	<0.0025	<0.0075	0.63	8.3	4.2
WSW02	12/2/2013	6	<0.50	<4.0	<4.50	<0.0025	<0.025	<0.0025	<0.0075	0.73	<b>9.5</b>	7.3
SSW03	12/2/2013	6	0.56	11	11.56	<0.0025	<0.025	<0.0025	0.012	0.44	8.3	3.2
COGCC TABLE 910-1 CONCENTRATION LEVELS			--	--	500	0.17	85	100	175	4.0	6 - 9	12

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  
SAR - Sodium Adsorption Ratio  
mg/kg - milligrams per kilogram  
mmhos/cm - millimhos per centimeter  
NA - not analyzed  
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  
FT - feet

TABLE 1  
SOIL SAMPLE ANALYTICAL RESULTS  
VOLOSHIN MORTON 1-8  
PEAKVIEW OPPERRATING COMPANY, LLC.

Sample ID	Date	Depth FT	Arsenic mg/kg	Barium mg/kg	Cadmium mg/kg	Chromium (III) mg/kg	Chromium (VI) mg/kg	Copper mg/kg	Lead mg/kg	Mercury mg/kg	Nickel mg/kg	Selenium mg/kg	Silver mg/kg	Zinc mg/kg
ESW01	11/15/2013	8	4.2	100	<0.25	8.4	<2.0	8.7	7.8	0.022	7.6	<1.0	<0.50	35
EBOT	11/15/2013	10	2.7	48	<0.25	<20	<20	7.0	5.9	0.024	5.5	<1.0	<0.50	21
NEBOT	11/15/2013	11	4.4	81	<0.25	<10	<10	13	8.5	0.034	9.1	1.1	<0.50	36
NESW	11/15/2013	7	4.9	90	<0.25	7.5	<2.0	17	9.3	0.020	9.0	1.8	<0.50	34
BOT	11/15/2013	12	2.3	56	<0.25	13	<2.0	8.6	7.0	<0.020	7.0	1.2	<0.50	31
NSW	11/15/2013	7	6.4	76	<0.25	<10	<10	11	7.5	<0.020	7.4	<1.0	<0.50	34
NSW02	11/15/2013	8	5.2	48	<0.25	7.3	<2.0	10	7.2	0.022	6.9	<1.0	<0.50	32
SSW01	11/16/2013	7	5.1	95	<0.25	11	<2.0	11	9.5	0.027	11	<1.0	<0.50	40
SBOT	11/16/2013	11	4.8	55	<0.25	11	<2.0	9.0	7.7	<0.020	10	<1.0	<0.50	33
SBOT02	11/16/2013	12	3.8	63	<0.25	12	<2.0	7.8	7.6	<0.020	9.2	<1.0	<0.50	33
SSW02	11/16/2013	8	5.7	83	<0.25	8.3	<2.0	12	8.3	0.022	11	<1.0	<0.50	36
NWBOT	11/19/2013	8.5	5.3	120	<0.25	11	<2.0	11	10	<0.020	12	<1.0	<0.50	39
T-NORTH	11/20/2013	5	8.6	120	0.34	13	<2.0	13	9.4	0.022	9.4	<1.0	<0.50	53
T-SOUTH	11/20/2013	5	5	75	0.30	8.9	<2.0	9	7.8	<0.020	8.2	1.4	<0.50	37
NSW03	11/20/2013	6	5.8	54	<0.25	7.8	<2.0	11	8.5	<0.020	9.7	<1.0	<0.50	37
SESW	11/21/2013	9	3.1	130	<0.25	9.6	<2.0	8.1	7.9	<0.020	8.0	1.1	<0.50	37
NSW04	11/21/2013	9	4.3	99	<0.25	9.3	<4.0	12	11	<0.020	9.4	1.0	<0.50	39
SBOT03	11/21/2013	12	5.1	100	<0.25	8.7	<2.0	8.5	6.7	<0.020	9.8	2.0	<0.50	34
ESW02	11/22/2013	9	4.9	68	<0.25	6.8	<4.0	11	8.1	0.023	7.7	1.5	<0.50	32
WBOT	11/24/2013	12	8.5	95	<0.25	10	<2.0	13	8.7	<0.020	11	<1.0	<0.50	44
WPH01	11/25/2013	11	5.4	86	<0.25	9.2	<2.0	13	10	0.021	10	1.2	<0.50	45
WSW01	11/25/2013	10	4.7	98	0.39	12	<2.0	12	9.2	<0.020	10	1.0	<0.50	50
SWSW01	12/2/2013	6	4.1	93	<0.25	9.4	<2.0	7.7	8.8	<0.020	9.7	1.1	<0.50	41
SWSW02	12/2/2013	6	4.6	130	<0.25	13	<2.0	16	10	<0.020	10	<1.0	<0.50	53
WSW02	12/2/2013	6	4.1	83	<0.25	8.4	<2.0	6.4	7.0	<0.020	7.9	<1.0	<0.50	30
SSW03	12/2/2013	6	5.4	110	<0.25	12	<2.0	9.3	9.3	0.025	11	<1.0	<0.50	45
COGCC TABLE 910-1 CONCENTRATION LEVELS			0.39	15,000	70	120,000	23	3,100	400	23	1,600	390	390	23,000

NOTES:  
< - less than the stated reporting limit  
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EC- electrical conductivity  
SAR - Sodium Adsorption Ratio  
mg/kg - milligrams per kilogram  
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TPH-GRO - total petroleum hydrocarbons-gasoline range organic  
TPH-DRO - total petroleum hydrocarbons-diesel range organics  
TPH - combination of TPH-GRO and TPH-DRO  
FT - feet

TABLE 1  
SOIL SAMPLE ANALYTICAL RESULTS  
VOLOSHIN MORTON 1-8  
PEAKVIEW OPPERATING COMPANY, LLC.

Sample ID	Date	Depth FT	Acenaphthene mg/kg	Anthracene mg/kg	Benzo(A) anthracene mg/kg	Benzo(B) fluoranthene mg/kg	Benzo(K) fluoranthene mg/kg	Benzo(A)pyrene mg/kg	Chrysene mg/kg	Dibenzo(A,H) anthracene mg/kg	Fluoranthene mg/kg	Fluorene mg/kg	Indeno(1,2,3,C,D) pyrene mg/kg	Naphthalene mg/kg	Pyrene mg/kg
ESW01	11/15/2013	8	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.020	<0.0060
EBOT	11/15/2013	10	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.020	<0.0060
NEBOT	11/15/2013	11	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.020	<0.0060
NESW	11/15/2013	7	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.020	<0.0060
BOT	11/15/2013	12	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.020	<0.0060
NSW	11/15/2013	7	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.020	<0.0060
NSW02	11/15/2013	8	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.020	<0.0060
SSW01	11/16/2013	7	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.020	<0.0060
SBOT	11/16/2013	11	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.020	<0.0060
SBOT02	11/16/2013	12	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.020	<0.0060
SSW02	11/16/2013	8	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.020	<0.0060
NWBOT	11/19/2013	8.5	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.020	<0.0060
T-NORTH	11/20/2013	5	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.020	<0.0060
T-SOUTH	11/20/2013	5	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.020	<0.0060
NSW03	11/20/2013	6	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.020	<0.0060
SESW	11/21/2013	9	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.020	<0.0060
NSW04	11/21/2013	9	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.020	<0.0060
SBOT03	11/21/2013	12	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.020	<0.0060
ESW02	11/22/2013	9	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.020	<0.0060
WBOT	11/24/2013	12	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.020	<0.0060
WPH01	11/25/2013	11	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.020	<0.0060
WSW01	11/25/2013	10	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.020	<0.0060
SWSW01	12/2/2013	6	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.020	<0.0060
SWSW02	12/2/2013	6	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.020	<0.0060
WSW02	12/2/2013	6	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.020	<0.0060
SSW03	12/2/2013	6	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	0.032	<0.0060
COGCC TABLE 910-1 CONCENTRATION LEVELS			1000	1000	0.22	0.22	2.2	0.022	22	0.022	1000	1000	0.22	23	1000

NOTES:  
< - less than the stated reporting limit  
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SAR - Sodium Adsorption Ratio  
mg/kg - milligrams per kilogram  
mmhos/cm - millimhos per centimeter  
NA - not analyzed  
SU - standard unit  
TPH-GRO - total petroleum hydrocarbons-gasoline range organic  
TPH-DRO - total petroleum hydrocarbons-diesel range organics  
TPH - combination of TPH-GRO and TPH-DRO  
FT - feet



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Rob Fishburn  
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## Report Summary

Wednesday December 11, 2013

Report Number: L671907


Samples Received: 12/04/13

Client Project: 047813001

Description: Voloshin Mortin 1-8

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

  
Jared Willis , ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,  
FL - E87487, GA - 923, IN - C-IN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

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Est. 1970

# REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

December 11, 2013

Date Received : December 04, 2013  
Description : Voloshin Morton 1(-8)  
Sample ID : SWSW01 6FT  
Collected By : Steve Sivigliano  
Collection Date : 12/02/13 12:00

ESC Sample # : L671907-01

Site ID :

Project # : 047813001

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium, Hexavalent	BDL	2.0	mg/kg	3060A/7196A	12/11/13	1
Chromium, Trivalent	9.4	2.0	mg/kg	Calc.	12/11/13	1
ORP	110		mV	2580 B-2011	12/11/13	1
pH	8.7		su	9045D	12/06/13	1
Sodium Adsorption Ratio	12.			Calc.	12/08/13	1
Specific Conductance	1400		umhos/cm	9050AMod	12/11/13	1
Mercury	BDL	0.020	mg/kg	7471	12/06/13	1
Arsenic	4.1	1.0	mg/kg	6010B	12/08/13	1
Barium	93.	0.25	mg/kg	6010B	12/08/13	1
Cadmium	BDL	0.25	mg/kg	6010B	12/08/13	1
Chromium	9.4	0.50	mg/kg	6010B	12/08/13	1
Copper	7.7	1.0	mg/kg	6010B	12/11/13	1
Lead	8.8	0.25	mg/kg	6010B	12/08/13	1
Nickel	9.7	1.0	mg/kg	6010B	12/08/13	1
Selenium	1.1	1.0	mg/kg	6010B	12/08/13	1
Silver	BDL	0.50	mg/kg	6010B	12/08/13	1
Zinc	41.	1.5	mg/kg	6010B	12/08/13	1
Benzene	BDL	0.0025	mg/kg	8021/8015	12/04/13	5
Toluene	BDL	0.025	mg/kg	8021/8015	12/04/13	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	12/04/13	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	12/04/13	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	12/04/13	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	93.4		% Rec.	8021/8015	12/04/13	5
a,a,a-Trifluorotoluene(PID)	102.		% Rec.	8021/8015	12/04/13	5
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	3546/DRO	12/05/13	1
Surrogate recovery(%)						
o-Terphenyl	90.5		% Rec.	3546/DRO	12/05/13	1
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L671907-01 (PH) - 8.7@19.7c



12065 Lebanon Rd.  
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Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

December 11, 2013

Date Received : December 04, 2013  
Description : Voloshin Morton 1(-8)

ESC Sample # : L671907-01

Sample ID : SWSW01 6FT

Site ID :

Collected By : Steve Sivigliano  
Collection Date : 12/02/13 12:00

Project # : 047813001

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1
Fluorene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1
Naphthalene	BDL	0.020	mg/kg	8270C-SIM	12/06/13	1
Phenanthrene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1
1-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	12/06/13	1
2-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	12/06/13	1
2-Chloronaphthalene	BDL	0.020	mg/kg	8270C-SIM	12/06/13	1
Surrogate Recovery						
Nitrobenzene-d5	102.		% Rec.	8270C-SIM	12/06/13	1
2-Fluorobiphenyl	84.7		% Rec.	8270C-SIM	12/06/13	1
p-Terphenyl-d14	96.4		% Rec.	8270C-SIM	12/06/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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L671907-01 (PH) - 8.7@19.7c



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# REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

December 11, 2013

Date Received : December 04, 2013  
Description : Voloshin Morton 1(-8)

ESC Sample # : L671907-02

Sample ID : SWSW02 6FT

Site ID :

Collected By : Steve Sivigliano  
Collection Date : 12/02/13 12:30

Project # : 047813001

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium, Hexavalent	BDL	2.0	mg/kg	3060A/7196A	12/11/13	1
Chromium, Trivalent	13.	2.0	mg/kg	Calc.	12/11/13	1
ORP	110		mV	2580 B-2011	12/11/13	1
pH	8.3		su	9045D	12/06/13	1
Sodium Adsorption Ratio	4.2			Calc.	12/08/13	1
Specific Conductance	630		umhos/cm	9050AMod	12/11/13	1
Mercury	BDL	0.020	mg/kg	7471	12/06/13	1
Arsenic	4.6	1.0	mg/kg	6010B	12/08/13	1
Barium	130	0.25	mg/kg	6010B	12/08/13	1
Cadmium	BDL	0.25	mg/kg	6010B	12/08/13	1
Chromium	13.	0.50	mg/kg	6010B	12/08/13	1
Copper	16.	1.0	mg/kg	6010B	12/11/13	1
Lead	10.	0.25	mg/kg	6010B	12/08/13	1
Nickel	10.	1.0	mg/kg	6010B	12/08/13	1
Selenium	BDL	1.0	mg/kg	6010B	12/08/13	1
Silver	BDL	0.50	mg/kg	6010B	12/08/13	1
Zinc	53.	1.5	mg/kg	6010B	12/08/13	1
Benzene	BDL	0.0025	mg/kg	8021/8015	12/04/13	5
Toluene	BDL	0.025	mg/kg	8021/8015	12/04/13	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	12/04/13	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	12/04/13	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	12/04/13	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	93.5		% Rec.	8021/8015	12/04/13	5
a,a,a-Trifluorotoluene(PID)	102.		% Rec.	8021/8015	12/04/13	5
TPH (GC/FID) High Fraction	9.0	4.0	mg/kg	3546/DRO	12/05/13	1
Surrogate recovery(%)						
o-Terphenyl	94.1		% Rec.	3546/DRO	12/05/13	1
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L671907-02 (PH) - 8.3@19.7c



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# REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

December 11, 2013

Date Received : December 04, 2013  
Description : Voloshin Morton 1(-8)

ESC Sample # : L671907-02

Sample ID : SWSW02 6FT

Site ID :

Collected By : Steve Sivigliano  
Collection Date : 12/02/13 12:30

Project # : 047813001

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1
Fluorene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1
Naphthalene	BDL	0.020	mg/kg	8270C-SIM	12/06/13	1
Phenanthrene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1
1-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	12/06/13	1
2-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	12/06/13	1
2-Chloronaphthalene	BDL	0.020	mg/kg	8270C-SIM	12/06/13	1
Surrogate Recovery						
Nitrobenzene-d5	97.0		% Rec.	8270C-SIM	12/06/13	1
2-Fluorobiphenyl	83.7		% Rec.	8270C-SIM	12/06/13	1
p-Terphenyl-d14	98.5		% Rec.	8270C-SIM	12/06/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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L671907-02 (PH) - 8.3@19.7c



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Est. 1970

# REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

December 11, 2013

Date Received : December 04, 2013  
Description : Voloshin Morton 1(-8)

ESC Sample # : L671907-03

Sample ID : WSW02 6FT

Site ID :

Collected By : Steve Sivigliano  
Collection Date : 12/02/13 12:15

Project # : 047813001

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium, Hexavalent	BDL	2.0	mg/kg	3060A/7196A	12/11/13	1
Chromium, Trivalent	8.4	2.0	mg/kg	Calc.	12/11/13	1
ORP	65.		mV	2580 B-2011	12/11/13	1
pH	9.5		su	9045D	12/06/13	1
Sodium Adsorption Ratio	7.3			Calc.	12/08/13	1
Specific Conductance	730		umhos/cm	9050AMod	12/11/13	1
Mercury	BDL	0.020	mg/kg	7471	12/06/13	1
Arsenic	4.1	1.0	mg/kg	6010B	12/08/13	1
Barium	83.	0.25	mg/kg	6010B	12/08/13	1
Cadmium	BDL	0.25	mg/kg	6010B	12/08/13	1
Chromium	8.4	0.50	mg/kg	6010B	12/08/13	1
Copper	6.4	1.0	mg/kg	6010B	12/11/13	1
Lead	7.0	0.25	mg/kg	6010B	12/08/13	1
Nickel	7.9	1.0	mg/kg	6010B	12/08/13	1
Selenium	BDL	1.0	mg/kg	6010B	12/08/13	1
Silver	BDL	0.50	mg/kg	6010B	12/08/13	1
Zinc	30.	1.5	mg/kg	6010B	12/08/13	1
Benzene	BDL	0.0025	mg/kg	8021/8015	12/04/13	5
Toluene	BDL	0.025	mg/kg	8021/8015	12/04/13	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	12/04/13	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	12/04/13	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	12/04/13	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	93.5		% Rec.	8021/8015	12/04/13	5
a,a,a-Trifluorotoluene(PID)	102.		% Rec.	8021/8015	12/04/13	5
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	3546/DRO	12/05/13	1
Surrogate recovery(%)						
o-Terphenyl	76.7		% Rec.	3546/DRO	12/05/13	1
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L671907-03 (PH) - 9.5@19.5c



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# REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

December 11, 2013

Date Received : December 04, 2013  
Description : Voloshin Morton 1(-8)

ESC Sample # : L671907-03

Sample ID : WSW02 6FT

Site ID :

Collected By : Steve Sivigliano  
Collection Date : 12/02/13 12:15

Project # : 047813001

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1
Fluorene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1
Naphthalene	BDL	0.020	mg/kg	8270C-SIM	12/06/13	1
Phenanthrene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1
1-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	12/06/13	1
2-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	12/06/13	1
2-Chloronaphthalene	BDL	0.020	mg/kg	8270C-SIM	12/06/13	1
Surrogate Recovery						
Nitrobenzene-d5	84.4		% Rec.	8270C-SIM	12/06/13	1
2-Fluorobiphenyl	63.8		% Rec.	8270C-SIM	12/06/13	1
p-Terphenyl-d14	59.4		% Rec.	8270C-SIM	12/06/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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L671907-03 (PH) - 9.5@19.5c





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Est. 1970

# REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

December 11, 2013

Date Received : December 04, 2013  
Description : Voloshin Morton 1(-8)

ESC Sample # : L671907-04

Sample ID : SSW03 6FT

Site ID :

Collected By : Steve Sivigliano  
Collection Date : 12/02/13 12:45

Project # : 047813001

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium, Hexavalent	BDL	2.0	mg/kg	3060A/7196A	12/11/13	1
Chromium, Trivalent	12.	2.0	mg/kg	Calc.	12/11/13	1
ORP	110		mV	2580 B-2011	12/11/13	1
pH	8.3		su	9045D	12/06/13	1
Sodium Adsorption Ratio	3.2			Calc.	12/08/13	1
Specific Conductance	440		umhos/cm	9050AMod	12/11/13	1
Mercury	0.025	0.020	mg/kg	7471	12/06/13	1
Arsenic	5.4	1.0	mg/kg	6010B	12/08/13	1
Barium	110	0.25	mg/kg	6010B	12/08/13	1
Cadmium	BDL	0.25	mg/kg	6010B	12/08/13	1
Chromium	12.	0.50	mg/kg	6010B	12/08/13	1
Copper	9.3	1.0	mg/kg	6010B	12/11/13	1
Lead	9.3	0.25	mg/kg	6010B	12/08/13	1
Nickel	11.	1.0	mg/kg	6010B	12/08/13	1
Selenium	BDL	1.0	mg/kg	6010B	12/08/13	1
Silver	BDL	0.50	mg/kg	6010B	12/08/13	1
Zinc	45.	1.5	mg/kg	6010B	12/08/13	1
Benzene	BDL	0.0025	mg/kg	8021/8015	12/04/13	5
Toluene	BDL	0.025	mg/kg	8021/8015	12/04/13	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	12/04/13	5
Total Xylene	0.012	0.0075	mg/kg	8021/8015	12/04/13	5
TPH (GC/FID) Low Fraction	0.56	0.50	mg/kg	GRO	12/04/13	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	93.5		% Rec.	8021/8015	12/04/13	5
a,a,a-Trifluorotoluene(PID)	101.		% Rec.	8021/8015	12/04/13	5
TPH (GC/FID) High Fraction	11.	4.0	mg/kg	3546/DRO	12/05/13	1
Surrogate recovery(%)						
o-Terphenyl	88.4		% Rec.	3546/DRO	12/05/13	1
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L671907-04 (PH) - 8.3@19.4c



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Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

December 11, 2013

Date Received : December 04, 2013  
Description : Voloshin Morton 1(-8)

ESC Sample # : L671907-04

Sample ID : SSW03 6FT

Site ID :

Collected By : Steve Sivigliano  
Collection Date : 12/02/13 12:45

Project # : 047813001

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1
Fluorene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1
Naphthalene	0.032	0.020	mg/kg	8270C-SIM	12/06/13	1
Phenanthrene	0.0069	0.0060	mg/kg	8270C-SIM	12/06/13	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	12/06/13	1
1-Methylnaphthalene	0.045	0.020	mg/kg	8270C-SIM	12/06/13	1
2-Methylnaphthalene	0.050	0.020	mg/kg	8270C-SIM	12/06/13	1
2-Chloronaphthalene	BDL	0.020	mg/kg	8270C-SIM	12/06/13	1
Surrogate Recovery						
Nitrobenzene-d5	89.2		% Rec.	8270C-SIM	12/06/13	1
2-Fluorobiphenyl	83.9		% Rec.	8270C-SIM	12/06/13	1
p-Terphenyl-d14	92.7		% Rec.	8270C-SIM	12/06/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 12/11/13 17:51 Printed: 12/11/13 17:52  
L671907-04 (PH) - 8.3@19.4c

Summary of Remarks For Samples Printed  
12/11/13 at 17:52:04

TSR Signing Reports: 358  
R5 - Desired TAT

Sample: L671907-01 Account: LTENVRCO Received: 12/04/13 09:30 Due Date: 12/11/13 00:00 RPT Date: 12/11/13 17:51

Sample: L671907-02 Account: LTENVRCO Received: 12/04/13 09:30 Due Date: 12/11/13 00:00 RPT Date: 12/11/13 17:51

Sample: L671907-03 Account: LTENVRCO Received: 12/04/13 09:30 Due Date: 12/11/13 00:00 RPT Date: 12/11/13 17:51

Sample: L671907-04 Account: LTENVRCO Received: 12/04/13 09:30 Due Date: 12/11/13 00:00 RPT Date: 12/11/13 17:51



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Rob Fishburn  
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Quality Assurance Report  
Level II

L671907

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Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

December 11, 2013

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Benzene	< .0005	mg/kg			WG695386	12/04/13 15:57
Ethylbenzene	< .0005	mg/kg			WG695386	12/04/13 15:57
Toluene	< .005	mg/kg			WG695386	12/04/13 15:57
TPH (GC/FID) Low Fraction	< .1	mg/kg			WG695386	12/04/13 15:57
Total Xylene	< .0015	mg/kg			WG695386	12/04/13 15:57
a,a,a-Trifluorotoluene(FID)		% Rec.	93.60	59-128	WG695386	12/04/13 15:57
a,a,a-Trifluorotoluene(PID)		% Rec.	102.0	54-144	WG695386	12/04/13 15:57
TPH (GC/FID) High Fraction	< 4	mg/kg			WG695572	12/05/13 17:07
o-Terphenyl		% Rec.	88.90	50-150	WG695572	12/05/13 17:07
Mercury	< .02	mg/kg			WG695626	12/06/13 09:03
Mercury	< .02	mg/kg			WG695707	12/06/13 11:23
1-Methylnaphthalene	< .02	mg/kg			WG695574	12/06/13 05:03
2-Chloronaphthalene	< .02	mg/kg			WG695574	12/06/13 05:03
2-Methylnaphthalene	< .02	mg/kg			WG695574	12/06/13 05:03
Acenaphthene	< .006	mg/kg			WG695574	12/06/13 05:03
Acenaphthylene	< .006	mg/kg			WG695574	12/06/13 05:03
Anthracene	< .006	mg/kg			WG695574	12/06/13 05:03
Benzo(a)anthracene	< .006	mg/kg			WG695574	12/06/13 05:03
Benzo(a)pyrene	< .006	mg/kg			WG695574	12/06/13 05:03
Benzo(b)fluoranthene	< .006	mg/kg			WG695574	12/06/13 05:03
Benzo(g,h,i)perylene	< .006	mg/kg			WG695574	12/06/13 05:03
Benzo(k)fluoranthene	< .006	mg/kg			WG695574	12/06/13 05:03
Chrysene	< .006	mg/kg			WG695574	12/06/13 05:03
Dibenz(a,h)anthracene	< .006	mg/kg			WG695574	12/06/13 05:03
Fluoranthene	< .006	mg/kg			WG695574	12/06/13 05:03
Fluorene	< .006	mg/kg			WG695574	12/06/13 05:03
Indeno(1,2,3-cd)pyrene	< .006	mg/kg			WG695574	12/06/13 05:03
Naphthalene	< .02	mg/kg			WG695574	12/06/13 05:03
Phenanthrene	< .006	mg/kg			WG695574	12/06/13 05:03
Pyrene	< .006	mg/kg			WG695574	12/06/13 05:03
2-Fluorobiphenyl		% Rec.	83.70	51.1-131	WG695574	12/06/13 05:03
Nitrobenzene-d5		% Rec.	118.0	40.9-147	WG695574	12/06/13 05:03
p-Terphenyl-d14		% Rec.	99.50	45.3-138	WG695574	12/06/13 05:03
Arsenic	< 1	mg/kg			WG695624	12/08/13 13:43
Barium	< .25	mg/kg			WG695624	12/08/13 13:43
Cadmium	< .25	mg/kg			WG695624	12/08/13 13:43
Chromium	< .5	mg/kg			WG695624	12/08/13 13:43
Lead	< .25	mg/kg			WG695624	12/08/13 13:43
Nickel	< 1	mg/kg			WG695624	12/08/13 13:43
Selenium	< 1	mg/kg			WG695624	12/08/13 13:43
Silver	< .5	mg/kg			WG695624	12/08/13 13:43
Zinc	< 1.5	mg/kg			WG695624	12/08/13 13:43
Specific Conductance	1.20	umhos/cm			WG696321	12/11/13 08:16
Chromium,Hexavalent	< 2	mg/kg			WG696091	12/11/13 11:03

\* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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Est. 1970

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Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Copper	< 1	mg/kg			WG696342	12/11/13 12:49

Analyte	Units	Duplicate		RPD	Limit	Ref Samp	Batch
		Result	Duplicate				
Mercury	mg/kg	0.0230	0.0240	3.00	20	L671631-07	WG695626
Mercury	mg/kg	0.0	0.0190	1.00	20	L671907-02	WG695707
pH	su	7.10	7.10	0.422	1	L671898-01	WG695725
pH	su	8.20	8.20	0.487	1	L672032-13	WG695725
Arsenic	mg/kg	0.0	0.971	18.0	20	L671835-02	WG695624
Barium	mg/kg	44.0	44.5	2.00	20	L671835-02	WG695624
Cadmium	mg/kg	0.0	0.161	22.0*	20	L671835-02	WG695624
Chromium	mg/kg	4.60	4.59	1.00	20	L671835-02	WG695624
Lead	mg/kg	1.40	1.30	6.00	20	L671835-02	WG695624
Nickel	mg/kg	1.90	1.94	3.00	20	L671835-02	WG695624
Selenium	mg/kg	0.0	0.760	7.00	20	L671835-02	WG695624
Silver	mg/kg	0.0	0.276	42.0*	20	L671835-02	WG695624
Zinc	mg/kg	71.0	70.3	1.00	20	L671835-02	WG695624
Specific Conductance	umhos/cm	1400	1400	0.0	20	L671907-01	WG696321
Specific Conductance	umhos/cm	2000	2000	0.499	20	L672798-04	WG696321
Chromium, Hexavalent	mg/kg	0.0	0.0	0.0	20	L671907-02	WG696091
ORP	mV	160.	160.	0.623	20	L671735-03	WG696503
ORP	mV	300.	300.	1.68	20	L672539-03	WG696503
Copper	mg/kg	1500	1410	8.00	20	L672839-04	WG696342

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Benzene	mg/kg	.05	0.0419	83.8	70-130	WG695386
Ethylbenzene	mg/kg	.05	0.0439	87.8	70-130	WG695386
Toluene	mg/kg	.05	0.0427	85.4	70-130	WG695386
Total Xylene	mg/kg	.15	0.133	89.0	70-130	WG695386
a,a,a-Trifluorotoluene(PID)				101.0	54-144	WG695386
TPH (GC/FID) Low Fraction	mg/kg	5.5	3.99	72.5	63.5-137	WG695386
a,a,a-Trifluorotoluene(FID)				98.30	59-128	WG695386
TPH (GC/FID) High Fraction	mg/kg	60	48.3	80.5	50-150	WG695572
o-Terphenyl				89.10	50-150	WG695572
Mercury	mg/kg	12.4	9.94	80.0	71.6-128	WG695626

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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Mercury	mg/kg	12.4	10.4	84.0	71.6-128	WG695707
pH	su	5.93	6.00	101.	98.3-101.7	WG695725
1-Methylnaphthalene	mg/kg	.08	0.0745	93.1	62.5-121	WG695574
2-Chloronaphthalene	mg/kg	.08	0.0835	104.	62.1-120	WG695574
2-Methylnaphthalene	mg/kg	.08	0.0732	91.5	62.5-121	WG695574
Acenaphthene	mg/kg	.08	0.0807	101.	62.4-121	WG695574
Acenaphthylene	mg/kg	.08	0.0812	102.	62.9-123	WG695574
Anthracene	mg/kg	.08	0.0892	111.	64.9-129	WG695574
Benzo(a)anthracene	mg/kg	.08	0.0797	99.6	61.8-125	WG695574
Benzo(a)pyrene	mg/kg	.08	0.0790	98.8	63.4-119	WG695574
Benzo(b)fluoranthene	mg/kg	.08	0.0848	106.	62.7-119	WG695574
Benzo(g,h,i)perylene	mg/kg	.08	0.101	126.	68.2-129	WG695574
Benzo(k)fluoranthene	mg/kg	.08	0.0894	112.	64.5-128	WG695574
Chrysene	mg/kg	.08	0.0857	107.	64.4-128	WG695574
Dibenz(a,h)anthracene	mg/kg	.08	0.101	126.	65.3-128	WG695574
Fluoranthene	mg/kg	.08	0.0982	123.	61.8-129	WG695574
Fluorene	mg/kg	.08	0.0716	89.5	60.8-121	WG695574
Indeno(1,2,3-cd)pyrene	mg/kg	.08	0.103	129.	67.6-129	WG695574
Naphthalene	mg/kg	.08	0.0760	95.0	59.5-116	WG695574
Phenanthrene	mg/kg	.08	0.0815	102.	59.4-121	WG695574
Pyrene	mg/kg	.08	0.0847	106.	61.2-130	WG695574
2-Fluorobiphenyl				89.90	51.1-131	WG695574
Nitrobenzene-d5				93.50	40.9-147	WG695574
p-Terphenyl-d14				96.40	45.3-138	WG695574
Arsenic	mg/kg	237	253.	107.	83.1-117	WG695624
Barium	mg/kg	252	277.	110.	84.1-116	WG695624
Cadmium	mg/kg	191	219.	114.	83.2-117	WG695624
Chromium	mg/kg	128	145.	113.	81.3-118	WG695624
Lead	mg/kg	103	116.	113.	83.1-117	WG695624
Nickel	mg/kg	118	127.	108.	82-118	WG695624
Selenium	mg/kg	110	118.	107.	78.7-122	WG695624
Silver	mg/kg	47.3	51.2	108.	66.2-134	WG695624
Zinc	mg/kg	183	199.	109.	82-118	WG695624
Specific Conductance	umhos/cm	510	510.	100.	85-115	WG696321
Chromium, Hexavalent	mg/kg	146	150.	103.	80-120	WG696091
ORP	mV	100	100.	100.	90-110	WG696503
Copper	mg/kg	123	117.	95.0	83.7-116	WG696342

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Benzene	mg/kg	0.0414	0.0419	83.0	70-130	1.22	20	WG695386
Ethylbenzene	mg/kg	0.0434	0.0439	87.0	70-130	1.12	20	WG695386
Toluene	mg/kg	0.0419	0.0427	84.0	70-130	1.72	20	WG695386
Total Xylene	mg/kg	0.132	0.133	88.0	70-130	0.920	20	WG695386

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Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
a,a,a-Trifluorotoluene(PID)				101.0	54-144			
TPH (GC/FID) Low Fraction	mg/kg	3.91	3.99	71.0	63.5-137	1.97	20	WG695386
a,a,a-Trifluorotoluene(FID)				98.60	59-128			WG695386
TPH (GC/FID) High Fraction	mg/kg	50.0	48.3	83.0	50-150	3.46	20	WG695572
o-Terphenyl				93.90	50-150			WG695572
pH	su	5.90	6.00	99.0	98.3-101.7	1.68	20	WG695725
1-Methylnaphthalene	mg/kg	0.0651	0.0745	81.0	62.5-121	13.5	20	WG695574
2-Chloronaphthalene	mg/kg	0.0717	0.0835	90.0	62.1-120	15.2	20	WG695574
2-Methylnaphthalene	mg/kg	0.0635	0.0732	79.0	62.5-121	14.2	20	WG695574
Acenaphthene	mg/kg	0.0694	0.0807	87.0	62.4-121	15.1	20	WG695574
Acenaphthylene	mg/kg	0.0700	0.0812	88.0	62.9-123	14.8	20	WG695574
Anthracene	mg/kg	0.0833	0.0892	104.	64.9-129	6.84	20	WG695574
Benzo(a)anthracene	mg/kg	0.0733	0.0797	92.0	61.8-125	8.31	20	WG695574
Benzo(a)pyrene	mg/kg	0.0716	0.0790	89.0	63.4-119	9.95	20	WG695574
Benzo(b)fluoranthene	mg/kg	0.0737	0.0848	92.0	62.7-119	13.9	20	WG695574
Benzo(g,h,i)perylene	mg/kg	0.0909	0.101	114.	68.2-129	10.7	20	WG695574
Benzo(k)fluoranthene	mg/kg	0.0842	0.0894	105.	64.5-128	5.96	20	WG695574
Chrysene	mg/kg	0.0771	0.0857	96.0	64.4-128	10.5	20	WG695574
Dibenz(a,h)anthracene	mg/kg	0.0909	0.101	114.	65.3-128	10.4	20	WG695574
Fluoranthene	mg/kg	0.0900	0.0982	112.	61.8-129	8.69	20	WG695574
Fluorene	mg/kg	0.0608	0.0716	76.0	60.8-121	16.4	20	WG695574
Indeno(1,2,3-cd)pyrene	mg/kg	0.0926	0.103	116.	67.6-129	10.8	20	WG695574
Naphthalene	mg/kg	0.0664	0.0760	83.0	59.5-116	13.4	20	WG695574
Phenanthrene	mg/kg	0.0713	0.0815	89.0	59.4-121	13.4	20	WG695574
Pyrene	mg/kg	0.0771	0.0847	96.0	61.2-130	9.33	20	WG695574
2-Fluorobiphenyl				80.70	51.1-131			WG695574
Nitrobenzene-d5				86.40	40.9-147			WG695574
p-Terphenyl-d14				90.70	45.3-138			WG695574
Specific Conductance	umhos/	510.	510.	100.	85-115	0.0	20	WG696321
Chromium, Hexavalent	mg/kg	149.	150.	102.	80-120	0.669	20	WG696091
ORP	mV	99.0	100.	99.0	90-110	1.01	20	WG696503

Analyte	Units	Matrix Spike			% Rec	Limit	Ref Samp	Batch
		MS Res	Ref Res	TV				
Benzene	mg/kg	0.194	0.000362	.05	78.0	49.7-127	L671601-01	WG695386
Ethylbenzene	mg/kg	0.192	0.000300	.05	77.0	40.8-141	L671601-01	WG695386
Toluene	mg/kg	0.193	0.000843	.05	77.0	49.8-132	L671601-01	WG695386
Total Xylene	mg/kg	0.584	0.00148	.15	78.0	41.2-140	L671601-01	WG695386
a,a,a-Trifluorotoluene(PID)					100.0	54-144		WG695386
TPH (GC/FID) Low Fraction	mg/kg	16.6	0.0525	5.5	60.0	28.5-138	L671601-01	WG695386
a,a,a-Trifluorotoluene(FID)					97.60	59-128		WG695386
TPH (GC/FID) High Fraction	mg/kg	54.9	1.38	60	89.0	50-150	L671967-01	WG695572
o-Terphenyl					104.0	50-150		WG695572

\* Performance of this Analyte is outside of established criteria.

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Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
Mercury	mg/kg	0.287	0.0240	.25	100.	80-120	L671631-07	WG695626
Mercury	mg/kg	0.264	0.0190	.25	98.0	80-120	L671907-02	WG695707
1-Methylnaphthalene	mg/kg	0.0477	0.	.016	59.6	58.9-123	L671902-07	WG695574
2-Chloronaphthalene	mg/kg	0.0542	0.	.016	67.7	61.6-120	L671902-07	WG695574
2-Methylnaphthalene	mg/kg	0.0475	0.	.016	59.4	50.7-129	L671902-07	WG695574
Acenaphthene	mg/kg	0.0627	0.00833	.016	68.0	51.6-124	L671902-07	WG695574
Acenaphthylene	mg/kg	0.0584	0.00355	.016	68.5	58.3-126	L671902-07	WG695574
Anthracene	mg/kg	0.0718	0.0179	.016	67.4	47.9-137	L671902-07	WG695574
Benzo(a)anthracene	mg/kg	0.0982	0.0407	.016	71.8	34.2-138	L671902-07	WG695574
Benzo(a)pyrene	mg/kg	0.0958	0.0379	.016	72.5	34.6-133	L671902-07	WG695574
Benzo(b)fluoranthene	mg/kg	0.100	0.0530	.016	58.7	19.8-142	L671902-07	WG695574
Benzo(g,h,i)perylene	mg/kg	0.0949	0.0345	.016	75.6	20-149	L671902-07	WG695574
Benzo(k)fluoranthene	mg/kg	0.0834	0.0248	.016	73.2	32.1-137	L671902-07	WG695574
Chrysene	mg/kg	0.111	0.0489	.016	77.9	36.6-137	L671902-07	WG695574
Dibenz(a,h)anthracene	mg/kg	0.0763	0.00939	.016	83.6	27.1-145	L671902-07	WG695574
Fluoranthene	mg/kg	0.240	0.165	.016	94.2	39.8-141	L671902-07	WG695574
Fluorene	mg/kg	0.0521	0.00745	.016	55.8	42.5-130	L671902-07	WG695574
Indeno(1,2,3-cd)pyrene	mg/kg	0.0882	0.0286	.016	74.5	19-151	L671902-07	WG695574
Naphthalene	mg/kg	0.0742	0.0118	.016	78.1	40.6-135	L671902-07	WG695574
Phenanthrene	mg/kg	0.123	0.0731	.016	62.0	39.7-129	L671902-07	WG695574
Pyrene	mg/kg	0.168	0.105	.016	78.4	31.5-141	L671902-07	WG695574
2-Fluorobiphenyl					80.60	51.1-131		WG695574
Nitrobenzene-d5					88.90	40.9-147		WG695574
p-Terphenyl-d14					88.60	45.3-138		WG695574
Arsenic	mg/kg	47.6	0.971	50	93.0	75-125	L671835-02	WG695624
Barium	mg/kg	90.8	44.5	50	93.0	75-125	L671835-02	WG695624
Cadmium	mg/kg	47.7	0.161	50	95.0	75-125	L671835-02	WG695624
Chromium	mg/kg	51.1	4.59	50	93.0	75-125	L671835-02	WG695624
Lead	mg/kg	49.6	1.30	50	97.0	75-125	L671835-02	WG695624
Nickel	mg/kg	45.1	1.94	50	86.0	75-125	L671835-02	WG695624
Selenium	mg/kg	46.8	0.760	50	92.0	75-125	L671835-02	WG695624
Silver	mg/kg	45.8	0.276	50	91.0	75-125	L671835-02	WG695624
Zinc	mg/kg	118.	70.3	50	96.0	75-125	L671835-02	WG695624
Chromium,Hexavalent	mg/kg	18.6	0.0	20	93.0	75-125	L671907-04	WG696091
Copper	mg/kg	1650	1410	5	480.*	75-125	L672839-04	WG696342

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Benzene	mg/kg	0.202	0.194	80.7	49.7-127	3.94	23.5	L671601-01	WG695386
Ethylbenzene	mg/kg	0.200	0.192	79.9	40.8-141	3.99	23.8	L671601-01	WG695386
Toluene	mg/kg	0.198	0.193	79.0	49.8-132	2.60	23.5	L671601-01	WG695386
Total Xylene	mg/kg	0.606	0.584	80.6	41.2-140	3.79	23.7	L671601-01	WG695386
a,a,a-Trifluorotoluene(PID)				101.0	54-144				WG695386
TPH (GC/FID) Low Fraction	mg/kg	16.3	16.6	59.2	28.5-138	1.56	23.6	L671601-01	WG695386
a,a,a-Trifluorotoluene(FID)				97.30	59-128				WG695386

\* Performance of this Analyte is outside of established criteria.  
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
TPH (GC/FID) High Fraction	mg/kg	53.3	54.9	86.5	50-150	2.89	20	L671967-01	WG695572
o-Terphenyl				96.00	50-150				WG695572
Mercury	mg/kg	0.288	0.287	106.	80-120	0.0	20	L671631-07	WG695626
Mercury	mg/kg	0.244	0.264	89.9	80-120	8.00	20	L671907-02	WG695707
1-Methylnaphthalene	mg/kg	0.0517	0.0477	64.7	58.9-123	8.20	20	L671902-07	WG695574
2-Chloronaphthalene	mg/kg	0.0541	0.0542	67.6	61.6-120	0.150	20	L671902-07	WG695574
2-Methylnaphthalene	mg/kg	0.0505	0.0475	63.1	50.7-129	6.04	20	L671902-07	WG695574
Acenaphthene	mg/kg	0.0628	0.0627	68.1	51.6-124	0.130	20	L671902-07	WG695574
Acenaphthylene	mg/kg	0.0600	0.0584	70.5	58.3-126	2.67	20	L671902-07	WG695574
Anthracene	mg/kg	0.0817	0.0718	79.7	47.9-137	12.9	20	L671902-07	WG695574
Benzo(a)anthracene	mg/kg	0.116	0.0982	94.5	34.2-138	16.9	22.8	L671902-07	WG695574
Benzo(a)pyrene	mg/kg	0.116	0.0958	97.5	34.6-133	18.9	26.3	L671902-07	WG695574
Benzo(b)fluoranthene	mg/kg	0.134	0.100	101.	19.8-142	28.9	30.3	L671902-07	WG695574
Benzo(g,h,i)perylene	mg/kg	0.122	0.0949	109.	20-149	24.6	27.1	L671902-07	WG695574
Benzo(k)fluoranthene	mg/kg	0.0954	0.0834	88.2	32.1-137	13.4	24.6	L671902-07	WG695574
Chrysene	mg/kg	0.132	0.111	104.	36.6-137	17.4	22.7	L671902-07	WG695574
Dibenz(a,h)anthracene	mg/kg	0.0918	0.0763	103.	27.1-145	18.5	21.9	L671902-07	WG695574
Fluoranthene	mg/kg	0.292	0.240	159.*	39.8-141	19.5	22.2	L671902-07	WG695574
Fluorene	mg/kg	0.0549	0.0521	59.4	42.5-130	5.39	20	L671902-07	WG695574
Indeno(1,2,3-cd)pyrene	mg/kg	0.113	0.0882	105.	19-151	24.4	25	L671902-07	WG695574
Naphthalene	mg/kg	0.0727	0.0742	76.1	40.6-135	2.11	20	L671902-07	WG695574
Phenanthrene	mg/kg	0.145	0.123	89.9	39.7-129	16.7	20	L671902-07	WG695574
Pyrene	mg/kg	0.211	0.168	132.	31.5-141	22.7	23.5	L671902-07	WG695574
2-Fluorobiphenyl				79.30	51.1-131				WG695574
Nitrobenzene-d5				93.70	40.9-147				WG695574
p-Terphenyl-d14				89.60	45.3-138				WG695574
Arsenic	mg/kg	50.8	47.6	99.7	75-125	7.00	20	L671835-02	WG695624
Barium	mg/kg	93.5	90.8	98.0	75-125	3.00	20	L671835-02	WG695624
Cadmium	mg/kg	50.2	47.7	100.	75-125	5.00	20	L671835-02	WG695624
Chromium	mg/kg	54.1	51.1	99.0	75-125	6.00	20	L671835-02	WG695624
Lead	mg/kg	52.3	49.6	102.	75-125	5.00	20	L671835-02	WG695624
Nickel	mg/kg	47.3	45.1	90.7	75-125	5.00	20	L671835-02	WG695624
Selenium	mg/kg	50.3	46.8	99.1	75-125	7.00	20	L671835-02	WG695624
Silver	mg/kg	49.1	45.8	97.6	75-125	7.00	20	L671835-02	WG695624
Zinc	mg/kg	123.	118.	105.	75-125	4.00	20	L671835-02	WG695624
Chromium, Hexavalent	mg/kg	17.1	18.6	85.5	75-125	8.40	20	L671907-04	WG696091
Copper	mg/kg	1680	1650	534.*	75-125	1.00	20	L672839-04	WG696342

Post Spike

\* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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Post Spike

Serial Dilution

Batch number /Run number / Sample number cross reference

WG695386: R2863160: L671907-01 02 03 04  
WG695572: R2863421: L671907-01 02 03 04  
WG695626: R2863846: L671907-01  
WG695707: R2863847: L671907-02 03 04  
WG695725: R2863920: L671907-01 02 03 04  
WG695574: R2864002: L671907-01 02 03 04  
WG695623: R2864840: L671907-01 02 03 04  
WG695624: R2865091: L671907-01 02 03 04  
WG696321: R2866152: L671907-01 02 03 04  
WG696091: R2866212: L671907-01 02 03 04  
WG696503: R2866411: L671907-01 02 03 04  
WG696342: R2866432: L671907-01 02 03 04

\* \* Calculations are performed prior to rounding of reported values.

\* Performance of this Analyte is outside of established criteria.

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The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.



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Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

## Report Summary

Monday December 09, 2013

Report Number: L671251


Samples Received: 11/27/13

Client Project: 047813001

Description: Voloshin Mortin 1-8

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

  
Jarred Willis , ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,  
FL - E87487, GA - 923, IN - C-IN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,  
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MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
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# REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

December 09, 2013

Date Received : November 27, 2013  
Description : Voloshin Mortin 1-8

ESC Sample # : L671251-01

Sample ID : NSW03 6FT

Site ID :

Collected By : Chris McKisson  
Collection Date : 11/20/13 09:30

Project # : 047813001

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium, Hexavalent	BDL	2.0	mg/kg	3060A/7196A	12/05/13	1
Chromium, Trivalent	7.8	2.0	mg/kg	Calc.	12/09/13	1
ORP	180		mV	2580 B-2011	12/05/13	1
pH	8.6		su	9045D	12/03/13	1
Sodium Adsorption Ratio	3.0			Calc.	12/05/13	1
Specific Conductance	290		umhos/cm	9050AMod	12/03/13	1
Mercury	BDL	0.020	mg/kg	7471	12/02/13	1
Arsenic	5.8	1.0	mg/kg	6010B	12/02/13	1
Barium	54.	0.25	mg/kg	6010B	12/02/13	1
Cadmium	BDL	0.25	mg/kg	6010B	12/02/13	1
Chromium	7.8	0.50	mg/kg	6010B	12/02/13	1
Copper	11.	1.0	mg/kg	6010B	12/02/13	1
Lead	8.5	0.25	mg/kg	6010B	12/02/13	1
Nickel	9.7	1.0	mg/kg	6010B	12/02/13	1
Selenium	BDL	1.0	mg/kg	6010B	12/02/13	1
Silver	BDL	0.50	mg/kg	6010B	12/02/13	1
Zinc	37.	1.5	mg/kg	6010B	12/02/13	1
Benzene	BDL	0.0025	mg/kg	8021/8015	12/01/13	5
Toluene	BDL	0.025	mg/kg	8021/8015	12/01/13	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	12/01/13	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	12/01/13	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	12/01/13	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	89.9		% Rec.	8021/8015	12/01/13	5
a,a,a-Trifluorotoluene(PID)	98.3		% Rec.	8021/8015	12/01/13	5
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	3546/DRO	11/29/13	1
Surrogate recovery(%)						
o-Terphenyl	76.6		% Rec.	3546/DRO	11/29/13	1
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L671251-01 (PH) - 8.6@20.9c



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820 Megan Ave, Unit B  
Rifle, CO 81650

December 09, 2013

Date Received : November 27, 2013  
Description : Voloshin Mortin 1-8

ESC Sample # : L671251-01

Sample ID : NSW03 6FT

Site ID :

Collected By : Chris McKisson  
Collection Date : 11/20/13 09:30

Project # : 047813001

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Fluorene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Naphthalene	BDL	0.020	mg/kg	8270C-SIM	11/30/13	1
Phenanthrene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
1-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/30/13	1
2-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/30/13	1
2-Chloronaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/30/13	1
Surrogate Recovery						
Nitrobenzene-d5	114.		% Rec.	8270C-SIM	11/30/13	1
2-Fluorobiphenyl	108.		% Rec.	8270C-SIM	11/30/13	1
p-Terphenyl-d14	103.		% Rec.	8270C-SIM	11/30/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 12/09/13 14:24 Printed: 12/09/13 14:25  
L671251-01 (PH) - 8.6@20.9c



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# REPORT OF ANALYSIS

Rob Fishburn  
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820 Megan Ave, Unit B  
Rifle, CO 81650

December 09, 2013

Date Received : November 27, 2013  
Description : Voloshin Mortin 1-8  
Sample ID : SESW 9FT  
Collected By : Chris McKisson  
Collection Date : 11/21/13 10:30

ESC Sample # : L671251-02

Site ID :

Project # : 047813001

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium, Hexavalent	BDL	2.0	mg/kg	3060A/7196A	12/05/13	1
Chromium, Trivalent	9.6	2.0	mg/kg	Calc.	12/09/13	1
ORP	180		mV	2580 B-2011	12/05/13	1
pH	9.5		su	9045D	12/03/13	1
Sodium Adsorption Ratio	2.6			Calc.	12/04/13	1
Specific Conductance	420		umhos/cm	9050AMod	12/05/13	1
Mercury	BDL	0.020	mg/kg	7471	12/02/13	1
Arsenic	3.1	1.0	mg/kg	6010B	12/02/13	1
Barium	130	0.25	mg/kg	6010B	12/02/13	1
Cadmium	BDL	0.25	mg/kg	6010B	12/02/13	1
Chromium	9.6	0.50	mg/kg	6010B	12/02/13	1
Copper	8.1	1.0	mg/kg	6010B	12/02/13	1
Lead	7.9	1.2	mg/kg	6010B	12/02/13	5
Nickel	8.0	1.0	mg/kg	6010B	12/02/13	1
Selenium	1.1	1.0	mg/kg	6010B	12/02/13	1
Silver	BDL	0.50	mg/kg	6010B	12/02/13	1
Zinc	37.	1.5	mg/kg	6010B	12/02/13	1
Benzene	BDL	0.0025	mg/kg	8021/8015	12/01/13	5
Toluene	BDL	0.025	mg/kg	8021/8015	12/01/13	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	12/01/13	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	12/01/13	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	12/01/13	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	92.0		% Rec.	8021/8015	12/01/13	5
a,a,a-Trifluorotoluene(PID)	101.		% Rec.	8021/8015	12/01/13	5
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	3546/DRO	11/29/13	1
Surrogate recovery(%)						
o-Terphenyl	76.9		% Rec.	3546/DRO	11/29/13	1
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L671251-02 (PH) - 9.5@20.4c



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# REPORT OF ANALYSIS

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820 Megan Ave, Unit B  
Rifle, CO 81650

December 09, 2013

Date Received : November 27, 2013  
Description : Voloshin Mortin 1-8

ESC Sample # : L671251-02

Sample ID : SESW 9FT

Site ID :

Collected By : Chris McKisson  
Collection Date : 11/21/13 10:30

Project # : 047813001

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Fluorene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Naphthalene	BDL	0.020	mg/kg	8270C-SIM	11/30/13	1
Phenanthrene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
1-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/30/13	1
2-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/30/13	1
2-Chloronaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/30/13	1
Surrogate Recovery						
Nitrobenzene-d5	107.		% Rec.	8270C-SIM	11/30/13	1
2-Fluorobiphenyl	101.		% Rec.	8270C-SIM	11/30/13	1
p-Terphenyl-d14	97.4		% Rec.	8270C-SIM	11/30/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 12/09/13 14:24 Printed: 12/09/13 14:25  
L671251-02 (PH) - 9.5@20.4c



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Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

December 09, 2013

Date Received : November 27, 2013  
Description : Voloshin Mortin 1-8

ESC Sample # : L671251-03

Sample ID : NSW04 9FT

Site ID :

Collected By : Chris McKisson  
Collection Date : 11/21/13 13:50

Project # : 047813001

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium, Hexavalent	BDL	4.0	mg/kg	3060A/7196A	12/05/13	2
Chromium, Trivalent	9.3	4.0	mg/kg	Calc.	12/09/13	1
ORP	210		mV	2580 B-2011	12/05/13	1
pH	8.9		su	9045D	12/03/13	1
Sodium Adsorption Ratio	2.2			Calc.	12/04/13	1
Specific Conductance	480		umhos/cm	9050AMod	12/05/13	1
Mercury	BDL	0.020	mg/kg	7471	12/02/13	1
Arsenic	4.3	1.0	mg/kg	6010B	12/02/13	1
Barium	99.	0.25	mg/kg	6010B	12/02/13	1
Cadmium	BDL	0.25	mg/kg	6010B	12/02/13	1
Chromium	9.3	0.50	mg/kg	6010B	12/02/13	1
Copper	12.	1.0	mg/kg	6010B	12/02/13	1
Lead	11.	0.25	mg/kg	6010B	12/02/13	1
Nickel	9.4	1.0	mg/kg	6010B	12/02/13	1
Selenium	1.0	1.0	mg/kg	6010B	12/02/13	1
Silver	BDL	0.50	mg/kg	6010B	12/02/13	1
Zinc	39.	1.5	mg/kg	6010B	12/02/13	1
Benzene	BDL	0.0025	mg/kg	8021/8015	12/01/13	5
Toluene	BDL	0.025	mg/kg	8021/8015	12/01/13	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	12/01/13	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	12/01/13	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	12/01/13	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	92.8		% Rec.	8021/8015	12/01/13	5
a,a,a-Trifluorotoluene(PID)	100.		% Rec.	8021/8015	12/01/13	5
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	3546/DRO	11/29/13	1
Surrogate recovery(%)						
o-Terphenyl	76.8		% Rec.	3546/DRO	11/29/13	1
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L671251-03 (PH) - 8.9@20.1c



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# REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

December 09, 2013

Date Received : November 27, 2013  
Description : Voloshin Mortin 1-8

ESC Sample # : L671251-03

Sample ID : NSW04 9FT

Site ID :

Collected By : Chris McKisson  
Collection Date : 11/21/13 13:50

Project # : 047813001

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Fluorene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Naphthalene	BDL	0.020	mg/kg	8270C-SIM	11/30/13	1
Phenanthrene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
1-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/30/13	1
2-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/30/13	1
2-Chloronaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/30/13	1
Surrogate Recovery						
Nitrobenzene-d5	122.		% Rec.	8270C-SIM	11/30/13	1
2-Fluorobiphenyl	108.		% Rec.	8270C-SIM	11/30/13	1
p-Terphenyl-d14	98.9		% Rec.	8270C-SIM	11/30/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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# REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

December 09, 2013

Date Received : November 27, 2013  
Description : Voloshin Mortin 1-8

ESC Sample # : L671251-04

Sample ID : SBOT3 12FT

Site ID :

Collected By : Chris McKisson  
Collection Date : 11/21/13 14:00

Project # : 047813001

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium, Hexavalent	BDL	2.0	mg/kg	3060A/7196A	12/05/13	1
Chromium, Trivalent	8.7	2.0	mg/kg	Calc.	12/09/13	1
ORP	190		mV	2580 B-2011	12/05/13	1
pH	9.5		su	9045D	12/03/13	1
Sodium Adsorption Ratio	2.7			Calc.	12/04/13	1
Specific Conductance	400		umhos/cm	9050AMod	12/05/13	1
Mercury	BDL	0.020	mg/kg	7471	12/02/13	1
Arsenic	5.1	1.0	mg/kg	6010B	12/02/13	1
Barium	100	0.25	mg/kg	6010B	12/02/13	1
Cadmium	BDL	0.25	mg/kg	6010B	12/02/13	1
Chromium	8.7	0.50	mg/kg	6010B	12/02/13	1
Copper	8.5	1.0	mg/kg	6010B	12/02/13	1
Lead	6.7	0.25	mg/kg	6010B	12/02/13	1
Nickel	9.8	1.0	mg/kg	6010B	12/02/13	1
Selenium	2.0	1.0	mg/kg	6010B	12/02/13	1
Silver	BDL	0.50	mg/kg	6010B	12/02/13	1
Zinc	34.	1.5	mg/kg	6010B	12/02/13	1
Benzene	BDL	0.0025	mg/kg	8021/8015	12/01/13	5
Toluene	BDL	0.025	mg/kg	8021/8015	12/01/13	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	12/01/13	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	12/01/13	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	12/01/13	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	92.2		% Rec.	8021/8015	12/01/13	5
a,a,a-Trifluorotoluene(PID)	101.		% Rec.	8021/8015	12/01/13	5
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	3546/DRO	11/29/13	1
Surrogate recovery(%)						
o-Terphenyl	77.3		% Rec.	3546/DRO	11/29/13	1
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L671251-04 (PH) - 9.5@20.3c



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# REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

December 09, 2013

Date Received : November 27, 2013  
Description : Voloshin Mortin 1-8

ESC Sample # : L671251-04

Sample ID : SBOT3 12FT

Site ID :

Collected By : Chris McKisson  
Collection Date : 11/21/13 14:00

Project # : 047813001

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Fluorene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Naphthalene	BDL	0.020	mg/kg	8270C-SIM	11/30/13	1
Phenanthrene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
1-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/30/13	1
2-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/30/13	1
2-Chloronaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/30/13	1
Surrogate Recovery						
Nitrobenzene-d5	107.		% Rec.	8270C-SIM	11/30/13	1
2-Fluorobiphenyl	99.3		% Rec.	8270C-SIM	11/30/13	1
p-Terphenyl-d14	94.1		% Rec.	8270C-SIM	11/30/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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L671251-04 (PH) - 9.5@20.3c





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# REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

December 09, 2013

Date Received : November 27, 2013  
Description : Voloshin Mortin 1-8

ESC Sample # : L671251-05

Sample ID : ESW02 9FT

Site ID :

Collected By : Chris McKisson  
Collection Date : 11/22/13 10:30

Project # : 047813001

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium, Hexavalent	BDL	4.0	mg/kg	3060A/7196A	12/05/13	2
Chromium, Trivalent	6.8	4.0	mg/kg	Calc.	12/09/13	1
ORP	220		mV	2580 B-2011	12/05/13	1
pH	9.0		su	9045D	12/03/13	1
Sodium Adsorption Ratio	2.7			Calc.	12/04/13	1
Specific Conductance	350		umhos/cm	9050AMod	12/05/13	1
Mercury	0.023	0.020	mg/kg	7471	12/02/13	1
Arsenic	4.9	1.0	mg/kg	6010B	12/02/13	1
Barium	68.	0.25	mg/kg	6010B	12/02/13	1
Cadmium	BDL	0.25	mg/kg	6010B	12/02/13	1
Chromium	6.8	0.50	mg/kg	6010B	12/02/13	1
Copper	11.	1.0	mg/kg	6010B	12/02/13	1
Lead	8.1	0.25	mg/kg	6010B	12/02/13	1
Nickel	7.7	1.0	mg/kg	6010B	12/02/13	1
Selenium	1.5	1.0	mg/kg	6010B	12/02/13	1
Silver	BDL	0.50	mg/kg	6010B	12/02/13	1
Zinc	32.	1.5	mg/kg	6010B	12/02/13	1
Benzene	BDL	0.0025	mg/kg	8021/8015	12/01/13	5
Toluene	BDL	0.025	mg/kg	8021/8015	12/01/13	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	12/01/13	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	12/01/13	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	12/01/13	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	92.1		% Rec.	8021/8015	12/01/13	5
a,a,a-Trifluorotoluene(PID)	101.		% Rec.	8021/8015	12/01/13	5
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	3546/DRO	11/29/13	1
Surrogate recovery(%)						
o-Terphenyl	77.6		% Rec.	3546/DRO	11/29/13	1
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L671251-05 (PH) - 9.0@20.3c



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Est. 1970

# REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

December 09, 2013

Date Received : November 27, 2013  
Description : Voloshin Mortin 1-8

ESC Sample # : L671251-05

Sample ID : ESW02 9FT

Site ID :

Collected By : Chris McKisson  
Collection Date : 11/22/13 10:30

Project # : 047813001

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Fluorene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Naphthalene	BDL	0.020	mg/kg	8270C-SIM	11/30/13	1
Phenanthrene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
1-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/30/13	1
2-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/30/13	1
2-Chloronaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/30/13	1
Surrogate Recovery						
Nitrobenzene-d5	110.		% Rec.	8270C-SIM	11/30/13	1
2-Fluorobiphenyl	96.2		% Rec.	8270C-SIM	11/30/13	1
p-Terphenyl-d14	90.9		% Rec.	8270C-SIM	11/30/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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L671251-05 (PH) - 9.0@20.3c



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Est. 1970

# REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

December 09, 2013

Date Received : November 27, 2013  
Description : Voloshin Mortin 1-8

ESC Sample # : L671251-06

Sample ID : WBOT 12FT

Site ID :

Collected By : Chris McKisson  
Collection Date : 11/24/13 14:50

Project # : 047813001

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium, Hexavalent	BDL	2.0	mg/kg	3060A/7196A	12/05/13	1
Chromium, Trivalent	10.	2.0	mg/kg	Calc.	12/09/13	1
ORP	210		mV	2580 B-2011	12/05/13	1
pH	9.4		su	9045D	12/03/13	1
Sodium Adsorption Ratio	4.5			Calc.	12/04/13	1
Specific Conductance	430		umhos/cm	9050AMod	12/05/13	1
Mercury	BDL	0.020	mg/kg	7471	12/02/13	1
Arsenic	8.5	1.0	mg/kg	6010B	12/02/13	1
Barium	95.	0.25	mg/kg	6010B	12/02/13	1
Cadmium	BDL	0.25	mg/kg	6010B	12/02/13	1
Chromium	10.	0.50	mg/kg	6010B	12/02/13	1
Copper	13.	1.0	mg/kg	6010B	12/02/13	1
Lead	8.7	0.25	mg/kg	6010B	12/02/13	1
Nickel	11.	1.0	mg/kg	6010B	12/02/13	1
Selenium	BDL	1.0	mg/kg	6010B	12/02/13	1
Silver	BDL	0.50	mg/kg	6010B	12/02/13	1
Zinc	44.	1.5	mg/kg	6010B	12/02/13	1
Benzene	BDL	0.0025	mg/kg	8021/8015	12/01/13	5
Toluene	BDL	0.025	mg/kg	8021/8015	12/01/13	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	12/01/13	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	12/01/13	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	12/01/13	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	91.1		% Rec.	8021/8015	12/01/13	5
a,a,a-Trifluorotoluene(PID)	99.9		% Rec.	8021/8015	12/01/13	5
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	3546/DRO	11/29/13	1
Surrogate recovery(%)						
o-Terphenyl	78.9		% Rec.	3546/DRO	11/29/13	1
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L671251-06 (PH) - 9.4@20.3c



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Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

December 09, 2013

Date Received : November 27, 2013  
Description : Voloshin Mortin 1-8

Sample ID : WBOT 12FT

Collected By : Chris McKisson  
Collection Date : 11/24/13 14:50

ESC Sample # : L671251-06

Site ID :

Project # : 047813001

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Fluorene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Naphthalene	BDL	0.020	mg/kg	8270C-SIM	11/30/13	1
Phenanthrene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
1-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/30/13	1
2-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/30/13	1
2-Chloronaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/30/13	1
Surrogate Recovery						
Nitrobenzene-d5	110.		% Rec.	8270C-SIM	11/30/13	1
2-Fluorobiphenyl	96.4		% Rec.	8270C-SIM	11/30/13	1
p-Terphenyl-d14	89.3		% Rec.	8270C-SIM	11/30/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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L671251-06 (PH) - 9.4@20.3c



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Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

December 09, 2013

Date Received : November 27, 2013  
Description : Voloshin Mortin 1-8  
Sample ID : WPH01 11FT  
Collected By : Chris McKisson  
Collection Date : 11/25/13 10:00

ESC Sample # : L671251-07

Site ID :

Project # : 047813001

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium, Hexavalent	BDL	2.0	mg/kg	3060A/7196A	12/05/13	1
Chromium, Trivalent	9.2	2.0	mg/kg	Calc.	12/09/13	1
ORP	240		mV	2580 B-2011	12/05/13	1
pH	8.7		su	9045D	12/03/13	1
Sodium Adsorption Ratio	2.6			Calc.	12/04/13	1
Specific Conductance	400		umhos/cm	9050AMod	12/05/13	1
Mercury	0.021	0.020	mg/kg	7471	12/02/13	1
Arsenic	5.4	1.0	mg/kg	6010B	12/02/13	1
Barium	86.	0.25	mg/kg	6010B	12/02/13	1
Cadmium	BDL	0.25	mg/kg	6010B	12/02/13	1
Chromium	9.2	0.50	mg/kg	6010B	12/02/13	1
Copper	13.	1.0	mg/kg	6010B	12/02/13	1
Lead	10.	0.25	mg/kg	6010B	12/02/13	1
Nickel	10.	1.0	mg/kg	6010B	12/02/13	1
Selenium	1.2	1.0	mg/kg	6010B	12/02/13	1
Silver	BDL	0.50	mg/kg	6010B	12/02/13	1
Zinc	45.	1.5	mg/kg	6010B	12/02/13	1
Benzene	BDL	0.0025	mg/kg	8021/8015	12/01/13	5
Toluene	BDL	0.025	mg/kg	8021/8015	12/01/13	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	12/01/13	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	12/01/13	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	12/02/13	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	92.1		% Rec.	8021/8015	12/02/13	5
a,a,a-Trifluorotoluene(PID)	101.		% Rec.	8021/8015	12/01/13	5
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	3546/DRO	11/29/13	1
Surrogate recovery(%)						
o-Terphenyl	74.7		% Rec.	3546/DRO	11/29/13	1
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L671251-07 (PH) - 8.7@20.3c



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# REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

December 09, 2013

Date Received : November 27, 2013  
Description : Voloshin Mortin 1-8

ESC Sample # : L671251-07

Sample ID : WPH01 11FT

Site ID :

Collected By : Chris McKisson  
Collection Date : 11/25/13 10:00

Project # : 047813001

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Fluorene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Naphthalene	BDL	0.020	mg/kg	8270C-SIM	11/30/13	1
Phenanthrene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
1-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/30/13	1
2-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/30/13	1
2-Chloronaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/30/13	1
Surrogate Recovery						
Nitrobenzene-d5	106.		% Rec.	8270C-SIM	11/30/13	1
2-Fluorobiphenyl	97.6		% Rec.	8270C-SIM	11/30/13	1
p-Terphenyl-d14	87.3		% Rec.	8270C-SIM	11/30/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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# REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

December 09, 2013

Date Received : November 27, 2013  
Description : Voloshin Mortin 1-8  
Sample ID : WSW01 10FT  
Collected By : Chris McKisson  
Collection Date : 11/25/13 10:30

ESC Sample # : L671251-08

Site ID :

Project # : 047813001

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium, Hexavalent	BDL	2.0	mg/kg	3060A/7196A	12/05/13	1
Chromium, Trivalent	12.	2.0	mg/kg	Calc.	12/05/13	1
ORP	220		mV	2580 B-2011	12/05/13	1
pH	8.8		su	9045D	12/03/13	1
Sodium Adsorption Ratio	2.7			Calc.	12/04/13	1
Specific Conductance	490		umhos/cm	9050AMod	12/05/13	1
Mercury	BDL	0.020	mg/kg	7471	12/02/13	1
Arsenic	4.7	1.0	mg/kg	6010B	12/03/13	1
Barium	98.	0.25	mg/kg	6010B	12/03/13	1
Cadmium	0.39	0.25	mg/kg	6010B	12/03/13	1
Chromium	12.	0.50	mg/kg	6010B	12/03/13	1
Copper	12.	1.0	mg/kg	6010B	12/03/13	1
Lead	9.2	0.25	mg/kg	6010B	12/03/13	1
Nickel	10.	1.0	mg/kg	6010B	12/04/13	1
Selenium	1.0	1.0	mg/kg	6010B	12/03/13	1
Silver	BDL	0.50	mg/kg	6010B	12/03/13	1
Zinc	50.	1.5	mg/kg	6010B	12/03/13	1
Benzene	BDL	0.0025	mg/kg	8021/8015	12/01/13	5
Toluene	BDL	0.025	mg/kg	8021/8015	12/01/13	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	12/01/13	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	12/01/13	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	12/03/13	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	98.9		% Rec.	8021/8015	12/03/13	5
a,a,a-Trifluorotoluene(PID)	101.		% Rec.	8021/8015	12/01/13	5
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	3546/DRO	11/29/13	1
Surrogate recovery(%)						
o-Terphenyl	77.7		% Rec.	3546/DRO	11/29/13	1
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L671251-08 (PH) - 8.8@20.4c



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# REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

December 09, 2013

Date Received : November 27, 2013  
Description : Voloshin Mortin 1-8

ESC Sample # : L671251-08

Sample ID : WSW01 10FT

Site ID :

Collected By : Chris McKisson  
Collection Date : 11/25/13 10:30

Project # : 047813001

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Fluorene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Naphthalene	BDL	0.020	mg/kg	8270C-SIM	11/30/13	1
Phenanthrene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
1-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/30/13	1
2-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/30/13	1
2-Chloronaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/30/13	1
Surrogate Recovery						
Nitrobenzene-d5	105.		% Rec.	8270C-SIM	11/30/13	1
2-Fluorobiphenyl	93.5		% Rec.	8270C-SIM	11/30/13	1
p-Terphenyl-d14	85.4		% Rec.	8270C-SIM	11/30/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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# REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

December 09, 2013

Date Received : November 27, 2013  
Description : Voloshin Mortin 1-8

ESC Sample # : L671251-09

Sample ID : T-NORTH

Site ID :

Collected By : Chris McKisson  
Collection Date : 11/20/13 12:40

Project # : 047813001

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium,Hexavalent	BDL	2.0	mg/kg	3060A/7196A	12/05/13	1
Chromium,Trivalent	13.	2.0	mg/kg	Calc.	12/05/13	1
ORP	260		mV	2580 B-2011	12/05/13	1
pH	8.6		su	9045D	12/03/13	1
Sodium Adsorption Ratio	2.4			Calc.	12/04/13	1
Specific Conductance	390		umhos/cm	9050AMod	12/05/13	1
Mercury	0.022	0.020	mg/kg	7471	12/02/13	1
Arsenic	4.8	1.0	mg/kg	6010B	12/03/13	1
Barium	120	0.25	mg/kg	6010B	12/03/13	1
Cadmium	0.34	0.25	mg/kg	6010B	12/03/13	1
Chromium	13.	0.50	mg/kg	6010B	12/03/13	1
Copper	13.	1.0	mg/kg	6010B	12/03/13	1
Lead	9.4	0.25	mg/kg	6010B	12/03/13	1
Nickel	9.4	1.0	mg/kg	6010B	12/04/13	1
Selenium	BDL	1.0	mg/kg	6010B	12/03/13	1
Silver	BDL	0.50	mg/kg	6010B	12/03/13	1
Zinc	53.	1.5	mg/kg	6010B	12/03/13	1
Benzene	BDL	0.0025	mg/kg	8021/8015	12/01/13	5
Toluene	BDL	0.025	mg/kg	8021/8015	12/01/13	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	12/01/13	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	12/01/13	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	12/03/13	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	97.9		% Rec.	8021/8015	12/03/13	5
a,a,a-Trifluorotoluene(PID)	100.		% Rec.	8021/8015	12/01/13	5
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	3546/DRO	11/29/13	1
Surrogate recovery(%)						
o-Terphenyl	73.5		% Rec.	3546/DRO	11/29/13	1
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L671251-09 (PH) - 8.6@20.4c



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# REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

December 09, 2013

Date Received : November 27, 2013  
Description : Voloshin Mortin 1-8

ESC Sample # : L671251-09

Sample ID : T-NORTH

Site ID :

Collected By : Chris McKisson  
Collection Date : 11/20/13 12:40

Project # : 047813001

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Fluorene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Naphthalene	BDL	0.020	mg/kg	8270C-SIM	11/30/13	1
Phenanthrene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
1-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/30/13	1
2-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/30/13	1
2-Chloronaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/30/13	1
Surrogate Recovery						
Nitrobenzene-d5	94.5		% Rec.	8270C-SIM	11/30/13	1
2-Fluorobiphenyl	89.7		% Rec.	8270C-SIM	11/30/13	1
p-Terphenyl-d14	84.8		% Rec.	8270C-SIM	11/30/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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# REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

December 09, 2013

Date Received : November 27, 2013  
Description : Voloshin Mortin 1-8  
Sample ID : T-SOUTH  
Collected By : Chris McKisson  
Collection Date : 11/20/13 13:00

ESC Sample # : L671251-10

Site ID :

Project # : 047813001

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium, Hexavalent	BDL	2.0	mg/kg	3060A/7196A	12/05/13	1
Chromium, Trivalent	8.9	2.0	mg/kg	Calc.	12/05/13	1
ORP	230		mV	2580 B-2011	12/05/13	1
pH	9.0		su	9045D	12/03/13	1
Sodium Adsorption Ratio	3.4			Calc.	12/04/13	1
Specific Conductance	420		umhos/cm	9050AMod	12/05/13	1
Mercury	BDL	0.020	mg/kg	7471	12/02/13	1
Arsenic	5.0	1.0	mg/kg	6010B	12/03/13	1
Barium	75.	0.25	mg/kg	6010B	12/03/13	1
Cadmium	0.30	0.25	mg/kg	6010B	12/03/13	1
Chromium	8.9	0.50	mg/kg	6010B	12/03/13	1
Copper	9.0	1.0	mg/kg	6010B	12/03/13	1
Lead	7.8	0.25	mg/kg	6010B	12/03/13	1
Nickel	8.2	1.0	mg/kg	6010B	12/04/13	1
Selenium	1.4	1.0	mg/kg	6010B	12/03/13	1
Silver	BDL	0.50	mg/kg	6010B	12/03/13	1
Zinc	37.	1.5	mg/kg	6010B	12/03/13	1
Benzene	BDL	0.0025	mg/kg	8021/8015	12/01/13	5
Toluene	BDL	0.025	mg/kg	8021/8015	12/01/13	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	12/01/13	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	12/01/13	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	12/02/13	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	92.6		% Rec.	8021/8015	12/02/13	5
a,a,a-Trifluorotoluene(PID)	101.		% Rec.	8021/8015	12/01/13	5
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	3546/DRO	11/29/13	1
Surrogate recovery(%)						
o-Terphenyl	78.5		% Rec.	3546/DRO	11/29/13	1
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L671251-10 (PH) - 9.0@20.6c



12065 Lebanon Rd.  
Mt. Juliet, TN 37122  
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Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

December 09, 2013

Date Received : November 27, 2013  
Description : Voloshin Mortin 1-8  
Sample ID : T-SOUTH  
Collected By : Chris McKisson  
Collection Date : 11/20/13 13:00

ESC Sample # : L671251-10

Site ID :

Project # : 047813001

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Fluorene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Naphthalene	BDL	0.020	mg/kg	8270C-SIM	11/30/13	1
Phenanthrene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/30/13	1
1-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/30/13	1
2-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/30/13	1
2-Chloronaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/30/13	1
Surrogate Recovery						
Nitrobenzene-d5	101.		% Rec.	8270C-SIM	11/30/13	1
2-Fluorobiphenyl	91.9		% Rec.	8270C-SIM	11/30/13	1
p-Terphenyl-d14	87.2		% Rec.	8270C-SIM	11/30/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 12/09/13 14:24 Printed: 12/09/13 14:25  
L671251-10 (PH) - 9.0@20.6c

Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L671251-03	WG695290	SAMP	Chromium,Hexavalent	R2863123	0
L671251-05	WG695290	SAMP	Chromium,Hexavalent	R2863123	0

Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
0	(ESC) Sample diluted due to matrix interferences that impaired the ability to make an accurate analytical determination. The detection limit is elevated in order to reflect the necessary dilution.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Summary of Remarks For Samples Printed  
12/09/13 at 14:25:27

TSR Signing Reports: 358  
R5 - Desired TAT

Sample: L671251-01 Account: LTENVRCO Received: 11/27/13 09:30 Due Date: 12/05/13 00:00 RPT Date: 12/09/13 14:24  
Sample: L671251-02 Account: LTENVRCO Received: 11/27/13 09:30 Due Date: 12/05/13 00:00 RPT Date: 12/09/13 14:24  
Sample: L671251-03 Account: LTENVRCO Received: 11/27/13 09:30 Due Date: 12/05/13 00:00 RPT Date: 12/09/13 14:24  
Sample: L671251-04 Account: LTENVRCO Received: 11/27/13 09:30 Due Date: 12/05/13 00:00 RPT Date: 12/09/13 14:24  
Sample: L671251-05 Account: LTENVRCO Received: 11/27/13 09:30 Due Date: 12/05/13 00:00 RPT Date: 12/09/13 14:24  
Sample: L671251-06 Account: LTENVRCO Received: 11/27/13 09:30 Due Date: 12/05/13 00:00 RPT Date: 12/09/13 14:24  
Sample: L671251-07 Account: LTENVRCO Received: 11/27/13 09:30 Due Date: 12/05/13 00:00 RPT Date: 12/09/13 14:24  
Sample: L671251-08 Account: LTENVRCO Received: 11/27/13 09:30 Due Date: 12/05/13 00:00 RPT Date: 12/09/13 14:24  
Sample: L671251-09 Account: LTENVRCO Received: 11/27/13 09:30 Due Date: 12/05/13 00:00 RPT Date: 12/09/13 14:24  
Sample: L671251-10 Account: LTENVRCO Received: 11/27/13 09:30 Due Date: 12/05/13 00:00 RPT Date: 12/09/13 14:24



**YOUR LAB OF CHOICE**

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Rifle, CO 81650

Quality Assurance Report  
Level II

L671251

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Tax I.D. 62-0814289

Est. 1970

December 09, 2013

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
TPH (GC/FID) High Fraction	< 4	mg/kg			WG694870	11/29/13 17:16
o-Terphenyl		% Rec.	73.60	50-150	WG694870	11/29/13 17:16
1-Methylnaphthalene	< .02	mg/kg			WG694866	11/30/13 08:41
2-Chloronaphthalene	< .02	mg/kg			WG694866	11/30/13 08:41
2-Methylnaphthalene	< .02	mg/kg			WG694866	11/30/13 08:41
Acenaphthene	< .006	mg/kg			WG694866	11/30/13 08:41
Acenaphthylene	< .006	mg/kg			WG694866	11/30/13 08:41
Anthracene	< .006	mg/kg			WG694866	11/30/13 08:41
Benzo(a)anthracene	< .006	mg/kg			WG694866	11/30/13 08:41
Benzo(a)pyrene	< .006	mg/kg			WG694866	11/30/13 08:41
Benzo(b)fluoranthene	< .006	mg/kg			WG694866	11/30/13 08:41
Benzo(g,h,i)perylene	< .006	mg/kg			WG694866	11/30/13 08:41
Benzo(k)fluoranthene	< .006	mg/kg			WG694866	11/30/13 08:41
Chrysene	< .006	mg/kg			WG694866	11/30/13 08:41
Dibenz(a,h)anthracene	< .006	mg/kg			WG694866	11/30/13 08:41
Fluoranthene	< .006	mg/kg			WG694866	11/30/13 08:41
Fluorene	< .006	mg/kg			WG694866	11/30/13 08:41
Indeno(1,2,3-cd)pyrene	< .006	mg/kg			WG694866	11/30/13 08:41
Naphthalene	< .02	mg/kg			WG694866	11/30/13 08:41
Phenanthrene	< .006	mg/kg			WG694866	11/30/13 08:41
Pyrene	< .006	mg/kg			WG694866	11/30/13 08:41
2-Fluorobiphenyl		% Rec.	83.30	51.1-131	WG694866	11/30/13 08:41
Nitrobenzene-d5		% Rec.	90.60	40.9-147	WG694866	11/30/13 08:41
p-Terphenyl-d14		% Rec.	82.70	45.3-138	WG694866	11/30/13 08:41
Benzene	< .0005	mg/kg			WG694921	11/30/13 23:48
Ethylbenzene	< .0005	mg/kg			WG694921	11/30/13 23:48
Toluene	< .005	mg/kg			WG694921	11/30/13 23:48
TPH (GC/FID) Low Fraction	< .1	mg/kg			WG694921	11/30/13 23:48
Total Xylene	< .0015	mg/kg			WG694921	11/30/13 23:48
a,a,a-Trifluorotoluene(FID)		% Rec.	92.50	59-128	WG694921	11/30/13 23:48
a,a,a-Trifluorotoluene(PID)		% Rec.	101.0	54-144	WG694921	11/30/13 23:48
Mercury	< .02	mg/kg			WG694854	12/02/13 10:37
TPH (GC/FID) Low Fraction	< .1	mg/kg			WG695075	12/02/13 11:38
a,a,a-Trifluorotoluene(FID)		% Rec.	93.50	59-128	WG695075	12/02/13 11:38
a,a,a-Trifluorotoluene(PID)		% Rec.	102.0	54-144	WG695075	12/02/13 11:38
Arsenic	< 1	mg/kg			WG695039	12/02/13 12:22
Barium	< .25	mg/kg			WG695039	12/02/13 12:22
Cadmium	< .25	mg/kg			WG695039	12/02/13 12:22
Chromium	< .5	mg/kg			WG695039	12/02/13 12:22
Copper	< 1	mg/kg			WG695039	12/02/13 12:22
Lead	< .25	mg/kg			WG695039	12/02/13 12:22
Nickel	< 1	mg/kg			WG695039	12/02/13 12:22
Selenium	< 1	mg/kg			WG695039	12/02/13 12:22
Silver	< .5	mg/kg			WG695039	12/02/13 12:22
Zinc	< 1.5	mg/kg			WG695039	12/02/13 12:22
TPH (GC/FID) Low Fraction	< .1	mg/kg			WG695252	12/03/13 15:08
a,a,a-Trifluorotoluene(FID)		% Rec.	100.0	59-128	WG695252	12/03/13 15:08

\* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'





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Tax I.D. 62-0814289

Est. 1970

December 09, 2013

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
a,a,a-Trifluorotoluene(PID)		% Rec.	107.0	54-144		12/03/13 15:08
Arsenic	< 1	mg/kg			WG695078	12/03/13 08:56
Barium	< .25	mg/kg			WG695078	12/03/13 08:56
Cadmium	< .25	mg/kg			WG695078	12/03/13 08:56
Chromium	< .5	mg/kg			WG695078	12/03/13 08:56
Copper	< 1	mg/kg			WG695078	12/03/13 08:56
Lead	< .25	mg/kg			WG695078	12/03/13 08:56
Selenium	< 1	mg/kg			WG695078	12/03/13 08:56
Silver	< .5	mg/kg			WG695078	12/03/13 08:56
Zinc	< 1.5	mg/kg			WG695078	12/03/13 08:56
Specific Conductance	0.920	umhos/cm			WG695205	12/03/13 17:51
Nickel	< 1	mg/kg			WG695078	12/04/13 02:44
Chromium,Hexavalent	< 2	mg/kg			WG695290	12/05/13 11:17
Specific Conductance	1.00	umhos/cm			WG695563	12/05/13 19:40

Analyte	Units	Duplicate		RPD	Limit	Ref Samp	Batch
		Result	Duplicate				
Mercury	mg/kg	0.0380	0.0303	23.0*	20	L671209-02	WG694854
Arsenic	mg/kg	6.00	6.25	4.00	20	L671209-02	WG695039
Barium	mg/kg	120.	347.	94.0*	20	L671209-02	WG695039
Cadmium	mg/kg	0.0	0.178	16.0	20	L671209-02	WG695039
Chromium	mg/kg	25.0	27.6	9.00	20	L671209-02	WG695039
Copper	mg/kg	30.0	26.7	11.0	20	L671209-02	WG695039
Lead	mg/kg	50.0	40.6	20.0	20	L671209-02	WG695039
Nickel	mg/kg	14.0	15.5	10.0	20	L671209-02	WG695039
Selenium	mg/kg	0.0	1.02	10.0	20	L671209-02	WG695039
Silver	mg/kg	0.0	-0.636	16.0	20	L671209-02	WG695039
Zinc	mg/kg	65.0	71.6	9.00	20	L671209-02	WG695039
pH	su	8.60	8.60	0.466	1	L671251-09	WG695180
pH	su	9.00	9.00	0.443	1	L671251-10	WG695180
Arsenic	mg/kg	3.90	4.99	26.0*	20	L671402-01	WG695078
Barium	mg/kg	43.0	44.5	4.00	20	L671402-01	WG695078
Cadmium	mg/kg	0.0	0.274	12.0	20	L671402-01	WG695078
Chromium	mg/kg	7.40	8.91	19.0	20	L671402-01	WG695078
Copper	mg/kg	6.10	6.59	7.00	20	L671402-01	WG695078
Lead	mg/kg	1.90	3.13	51.0*	20	L671402-01	WG695078
Selenium	mg/kg	0.0	0.824	9.00	20	L671402-01	WG695078
Silver	mg/kg	0.0	-0.140	36.0*	20	L671402-01	WG695078
Zinc	mg/kg	11.0	12.8	17.0	20	L671402-01	WG695078
Specific Conductance	umhos/cm	710.	710.	0.281	20	L670785-01	WG695205
Specific Conductance	umhos/cm	30.0	30.0	0.0	20	L671090-13	WG695205

\* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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Est. 1970

December 09, 2013

Analyte	Units	Duplicate		RPD	Limit	Ref Samp	Batch
		Result	Duplicate				
Nickel	mg/kg	8.10	9.42	15.0	20	L671402-01	WG695078
Chromium,Hexavalent	mg/kg	0.0	0.0	0.0	20	L671251-01	WG695290
ORP	mV	180.	180.	0.0	20	L671251-02	WG695560
ORP	mV	190.	190.	0.0	20	L671735-02	WG695560
Specific Conductance	umhos/cm	420.	420.	0.0	20	L671251-02	WG695563

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
TPH (GC/FID) High Fraction	mg/kg	60	40.6	67.7	50-150	WG694870
o-Terphenyl				73.70	50-150	WG694870
1-Methylnaphthalene	mg/kg	.08	0.0763	95.3	62.5-121	WG694866
2-Chloronaphthalene	mg/kg	.08	0.0704	88.0	62.1-120	WG694866
2-Methylnaphthalene	mg/kg	.08	0.0771	96.4	62.5-121	WG694866
Acenaphthene	mg/kg	.08	0.0723	90.4	62.4-121	WG694866
Acenaphthylene	mg/kg	.08	0.0676	84.4	62.9-123	WG694866
Anthracene	mg/kg	.08	0.0660	82.6	64.9-129	WG694866
Benzo(a)anthracene	mg/kg	.08	0.0678	84.7	61.8-125	WG694866
Benzo(a)pyrene	mg/kg	.08	0.0587	73.4	63.4-119	WG694866
Benzo(b)fluoranthene	mg/kg	.08	0.0714	89.3	62.7-119	WG694866
Benzo(g,h,i)perylene	mg/kg	.08	0.0747	93.3	68.2-129	WG694866
Benzo(k)fluoranthene	mg/kg	.08	0.0802	100.	64.5-128	WG694866
Chrysene	mg/kg	.08	0.0730	91.3	64.4-128	WG694866
Dibenz(a,h)anthracene	mg/kg	.08	0.0791	98.9	65.3-128	WG694866
Fluoranthene	mg/kg	.08	0.0726	90.8	61.8-129	WG694866
Fluorene	mg/kg	.08	0.0736	92.0	60.8-121	WG694866
Indeno(1,2,3-cd)pyrene	mg/kg	.08	0.0796	99.6	67.6-129	WG694866
Naphthalene	mg/kg	.08	0.0690	86.2	59.5-116	WG694866
Phenanthrene	mg/kg	.08	0.0681	85.1	59.4-121	WG694866
Pyrene	mg/kg	.08	0.0661	82.6	61.2-130	WG694866
2-Fluorobiphenyl				86.90	51.1-131	WG694866
Nitrobenzene-d5				98.80	40.9-147	WG694866
p-Terphenyl-d14				82.90	45.3-138	WG694866
Benzene	mg/kg	.05	0.0454	90.8	70-130	WG694921
Ethylbenzene	mg/kg	.05	0.0466	93.1	70-130	WG694921
Toluene	mg/kg	.05	0.0457	91.4	70-130	WG694921
Total Xylene	mg/kg	.15	0.141	94.0	70-130	WG694921
a,a,a-Trifluorotoluene(PID)				100.0	54-144	WG694921
TPH (GC/FID) Low Fraction	mg/kg	5.5	4.60	83.7	63.5-137	WG694921
a,a,a-Trifluorotoluene(FID)				99.40	59-128	WG694921
Mercury	mg/kg	12.4	13.7	111.	71.6-128	WG694854
TPH (GC/FID) Low Fraction	mg/kg	5.5	4.33	78.7	63.5-137	WG695075
a,a,a-Trifluorotoluene(FID)				98.10	59-128	WG695075

\* Performance of this Analyte is outside of established criteria.

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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Arsenic	mg/kg	237	230.	97.0	83.1-117	WG695039
Barium	mg/kg	252	241.	96.0	84.1-116	WG695039
Cadmium	mg/kg	191	169.	88.0	83.2-117	WG695039
Chromium	mg/kg	128	117.	91.0	81.3-118	WG695039
Copper	mg/kg	123	116.	94.0	83.7-116	WG695039
Lead	mg/kg	103	95.9	93.0	83.1-117	WG695039
Nickel	mg/kg	118	99.6	84.0	82-118	WG695039
Selenium	mg/kg	110	105.	95.0	78.7-122	WG695039
Silver	mg/kg	47.3	44.1	93.0	66.2-134	WG695039
Zinc	mg/kg	183	169.	92.0	82-118	WG695039
pH	su	5.93	6.00	101.	98.3-101.7	WG695180
TPH (GC/FID) Low Fraction	mg/kg	5.5	4.85	88.2	63.5-137	WG695252
a,a,a-Trifluorotoluene(FID)				107.0	59-128	WG695252
Arsenic	mg/kg	237	219.	93.0	83.1-117	WG695078
Barium	mg/kg	252	236.	94.0	84.1-116	WG695078
Cadmium	mg/kg	191	176.	92.0	83.2-117	WG695078
Chromium	mg/kg	128	119.	93.0	81.3-118	WG695078
Copper	mg/kg	123	119.	97.0	83.7-116	WG695078
Lead	mg/kg	103	94.3	92.0	83.1-117	WG695078
Selenium	mg/kg	110	105.	96.0	78.7-122	WG695078
Silver	mg/kg	47.3	42.0	89.0	66.2-134	WG695078
Zinc	mg/kg	183	169.	92.0	82-118	WG695078
Specific Conductance	umhos/cm	510	510.	100.	85-115	WG695205
Nickel	mg/kg	118	113.	96.0	82-118	WG695078
Chromium, Hexavalent	mg/kg	146	140.	95.9	80-120	WG695290
ORP	mV	100	110.	110.	90-110	WG695560
Specific Conductance	umhos/cm	510	510.	100.	85-115	WG695563

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
TPH (GC/FID) High Fraction	mg/kg	43.3	40.6	72.0	50-150	6.48	20	WG694870
o-Terphenyl				79.60	50-150			WG694870
1-Methylnaphthalene	mg/kg	0.0683	0.0763	85.0	62.5-121	11.0	20	WG694866
2-Chloronaphthalene	mg/kg	0.0635	0.0704	79.0	62.1-120	10.4	20	WG694866
2-Methylnaphthalene	mg/kg	0.0694	0.0771	87.0	62.5-121	10.6	20	WG694866
Acenaphthene	mg/kg	0.0651	0.0723	81.0	62.4-121	10.5	20	WG694866
Acenaphthylene	mg/kg	0.0609	0.0676	76.0	62.9-123	10.3	20	WG694866
Anthracene	mg/kg	0.0616	0.0660	77.0	64.9-129	6.95	20	WG694866
Benzo(a)anthracene	mg/kg	0.0618	0.0678	77.0	61.8-125	9.23	20	WG694866

\* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



**YOUR LAB OF CHOICE**

LT Environmental- Rifle, CO  
Rob Fishburn  
820 Megan Ave, Unit B

Rifle, CO 81650

Quality Assurance Report  
Level II

L671251

12065 Lebanon Rd.  
Mt. Juliet, TN 37122  
(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

December 09, 2013

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Benzo(a)pyrene	mg/kg	0.0559	0.0587	70.0	63.4-119	4.85	20	WG694866
Benzo(b)fluoranthene	mg/kg	0.0646	0.0714	81.0	62.7-119	10.1	20	WG694866
Benzo(g,h,i)perylene	mg/kg	0.0688	0.0747	86.0	68.2-129	8.15	20	WG694866
Benzo(k)fluoranthene	mg/kg	0.0745	0.0802	93.0	64.5-128	7.41	20	WG694866
Chrysene	mg/kg	0.0662	0.0730	83.0	64.4-128	9.85	20	WG694866
Dibenz(a,h)anthracene	mg/kg	0.0715	0.0791	89.0	65.3-128	10.1	20	WG694866
Fluoranthene	mg/kg	0.0652	0.0726	81.0	61.8-129	10.8	20	WG694866
Fluorene	mg/kg	0.0660	0.0736	82.0	60.8-121	10.9	20	WG694866
Indeno(1,2,3-cd)pyrene	mg/kg	0.0727	0.0796	91.0	67.6-129	9.14	20	WG694866
Naphthalene	mg/kg	0.0621	0.0690	78.0	59.5-116	10.5	20	WG694866
Phenanthrene	mg/kg	0.0610	0.0681	76.0	59.4-121	10.9	20	WG694866
Pyrene	mg/kg	0.0603	0.0661	75.0	61.2-130	9.14	20	WG694866
2-Fluorobiphenyl				79.50	51.1-131			WG694866
Nitrobenzene-d5				88.20	40.9-147			WG694866
p-Terphenyl-d14				76.70	45.3-138			WG694866
Benzene	mg/kg	0.0473	0.0454	95.0	70-130	4.16	20	WG694921
Ethylbenzene	mg/kg	0.0487	0.0466	97.0	70-130	4.38	20	WG694921
Toluene	mg/kg	0.0475	0.0457	95.0	70-130	3.84	20	WG694921
Total Xylene	mg/kg	0.147	0.141	98.0	70-130	4.38	20	WG694921
a,a,a-Trifluorotoluene(PID)				101.0	54-144			WG694921
TPH (GC/FID) Low Fraction	mg/kg	4.68	4.60	85.0	63.5-137	1.71	20	WG694921
a,a,a-Trifluorotoluene(FID)				99.50	59-128			WG694921
TPH (GC/FID) Low Fraction	mg/kg	4.23	4.33	77.0	63.5-137	2.25	20	WG695075
a,a,a-Trifluorotoluene(FID)				98.80	59-128			WG695075
pH	su	6.00	6.00	101.	98.3-101.7	0.0	20	WG695180
TPH (GC/FID) Low Fraction	mg/kg	4.57	4.85	83.0	63.5-137	5.94	20	WG695252
a,a,a-Trifluorotoluene(FID)				106.0	59-128			WG695252
Specific Conductance	umhos/	510.	510.	100.	85-115	0.0	20	WG695205
Chromium, Hexavalent	mg/kg	138.	140.	94.0	80-120	1.44	20	WG695290
ORP	mV	110.	110.	110.	90-110	0.0	20	WG695560
Specific Conductance	umhos/	510.	510.	100.	85-115	0.0	20	WG695563

Analyte	Units	Matrix Spike			% Rec	Limit	Ref Samp	Batch
		MS Res	Ref Res	TV				
TPH (GC/FID) High Fraction	mg/kg	42.3	1.03	60	69.0	50-150	L671123-01	WG694870
o-Terphenyl					80.60	50-150		WG694870
1-Methylnaphthalene	mg/kg	0.0744	0.	.08	93.0	58.9-123	L671251-02	WG694866
2-Chloronaphthalene	mg/kg	0.0686	0.	.08	85.7	61.6-120	L671251-02	WG694866
2-Methylnaphthalene	mg/kg	0.0751	0.000676	.08	93.0	50.7-129	L671251-02	WG694866
Acenaphthene	mg/kg	0.0681	0.	.08	85.2	51.6-124	L671251-02	WG694866

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Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
Acenaphthylene	mg/kg	0.0685	0.	.08	85.7	58.3-126	L671251-02	WG694866
Anthracene	mg/kg	0.0676	0.	.08	84.5	47.9-137	L671251-02	WG694866
Benzo(a)anthracene	mg/kg	0.0618	0.00130	.08	75.7	34.2-138	L671251-02	WG694866
Benzo(a)pyrene	mg/kg	0.0675	0.00106	.08	83.1	34.6-133	L671251-02	WG694866
Benzo(b)fluoranthene	mg/kg	0.0554	0.00131	.08	67.6	19.8-142	L671251-02	WG694866
Benzo(g,h,i)perylene	mg/kg	0.0677	0.000679	.08	83.8	20-149	L671251-02	WG694866
Benzo(k)fluoranthene	mg/kg	0.0747	0.000506	.08	92.8	32.1-137	L671251-02	WG694866
Chrysene	mg/kg	0.0706	0.00105	.08	86.9	36.6-137	L671251-02	WG694866
Dibenz(a,h)anthracene	mg/kg	0.0755	0.	.08	94.4	27.1-145	L671251-02	WG694866
Fluoranthene	mg/kg	0.0568	0.00191	.08	68.6	39.8-141	L671251-02	WG694866
Fluorene	mg/kg	0.0658	0.	.08	82.2	42.5-130	L671251-02	WG694866
Indeno(1,2,3-cd)pyrene	mg/kg	0.0703	0.000624	.08	87.1	19-151	L671251-02	WG694866
Naphthalene	mg/kg	0.0719	0.00110	.08	88.5	40.6-135	L671251-02	WG694866
Phenanthrene	mg/kg	0.0581	0.00111	.08	71.2	39.7-129	L671251-02	WG694866
Pyrene	mg/kg	0.0511	0.00156	.08	62.0	31.5-141	L671251-02	WG694866
2-Fluorobiphenyl					94.70	51.1-131		WG694866
Nitrobenzene-d5					105.0	40.9-147		WG694866
p-Terphenyl-d14					89.30	45.3-138		WG694866
Benzene	mg/kg	0.220	0.000338	.05	88.0	49.7-127	L671251-01	WG694921
Ethylbenzene	mg/kg	0.214	0.000202	.05	85.0	40.8-141	L671251-01	WG694921
Toluene	mg/kg	0.215	0.000545	.05	86.0	49.8-132	L671251-01	WG694921
Total Xylene	mg/kg	0.644	0.000925	.15	86.0	41.2-140	L671251-01	WG694921
a,a,a-Trifluorotoluene(PID)					100.0	54-144		WG694921
TPH (GC/FID) Low Fraction	mg/kg	18.9	0.0410	5.5	69.0	28.5-138	L671251-01	WG694921
a,a,a-Trifluorotoluene(FID)					97.60	59-128		WG694921
Mercury	mg/kg	0.295	0.0303	.25	110.	80-120	L671209-02	WG694854
TPH (GC/FID) Low Fraction	mg/kg	114.	19.0	5.5	69.0	28.5-138	L670592-01	WG695075
a,a,a-Trifluorotoluene(FID)					95.40	59-128		WG695075
Arsenic	mg/kg	55.2	6.25	50	98.0	75-125	L671209-02	WG695039
Barium	mg/kg	163.	347.	50	0.0*	75-125	L671209-02	WG695039
Cadmium	mg/kg	46.0	0.178	50	92.0	75-125	L671209-02	WG695039
Chromium	mg/kg	72.3	27.6	50	89.0	75-125	L671209-02	WG695039
Copper	mg/kg	74.0	26.7	50	94.0	75-125	L671209-02	WG695039
Lead	mg/kg	79.0	40.6	50	77.0	75-125	L671209-02	WG695039
Nickel	mg/kg	58.9	15.5	50	87.0	75-125	L671209-02	WG695039
Selenium	mg/kg	49.1	1.02	50	96.0	75-125	L671209-02	WG695039
Silver	mg/kg	47.9	-0.636	50	96.0	75-125	L671209-02	WG695039
Zinc	mg/kg	109.	71.6	50	75.0	75-125	L671209-02	WG695039
TPH (GC/FID) Low Fraction	mg/kg	21.1	0.467	5.5	75.0	28.5-138	L671485-01	WG695252
a,a,a-Trifluorotoluene(FID)					104.0	59-128		WG695252
Arsenic	mg/kg	51.3	4.99	50	93.0	75-125	L671402-01	WG695078
Barium	mg/kg	99.0	44.5	50	110.	75-125	L671402-01	WG695078
Cadmium	mg/kg	47.3	0.274	50	94.0	75-125	L671402-01	WG695078
Chromium	mg/kg	53.5	8.91	50	89.0	75-125	L671402-01	WG695078
Copper	mg/kg	54.7	6.59	50	96.0	75-125	L671402-01	WG695078
Lead	mg/kg	49.8	3.13	50	93.0	75-125	L671402-01	WG695078
Selenium	mg/kg	47.7	0.824	50	94.0	75-125	L671402-01	WG695078

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Analyte	Units	Matrix Spike			% Rec	Limit	Ref Samp	Batch
		MS Res	Ref Res	TV				
Silver	mg/kg	45.4	-0.140	50	91.0	75-125	L671402-01	WG695078
Zinc	mg/kg	57.5	12.8	50	89.0	75-125	L671402-01	WG695078
Nickel	mg/kg	56.7	9.42	50	95.0	75-125	L671402-01	WG695078
Chromium, Hexavalent	mg/kg	18.7	0.0	20	94.0	75-125	L671251-04	WG695290

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
TPH (GC/FID) High Fraction	mg/kg	40.5	42.3	65.8	50-150	4.21	20	L671123-01	WG694870
o-Terphenyl				77.40	50-150				WG694870
1-Methylnaphthalene	mg/kg	0.0762	0.0744	95.3	58.9-123	2.45	20	L671251-02	WG694866
2-Chloronaphthalene	mg/kg	0.0736	0.0686	92.0	61.6-120	7.12	20	L671251-02	WG694866
2-Methylnaphthalene	mg/kg	0.0771	0.0751	95.6	50.7-129	2.70	20	L671251-02	WG694866
Acenaphthene	mg/kg	0.0735	0.0681	91.9	51.6-124	7.57	20	L671251-02	WG694866
Acenaphthylene	mg/kg	0.0731	0.0685	91.4	58.3-126	6.47	20	L671251-02	WG694866
Anthracene	mg/kg	0.0724	0.0676	90.5	47.9-137	6.78	20	L671251-02	WG694866
Benzo(a)anthracene	mg/kg	0.0665	0.0618	81.4	34.2-138	7.21	22.8	L671251-02	WG694866
Benzo(a)pyrene	mg/kg	0.0727	0.0675	89.6	34.6-133	7.43	26.3	L671251-02	WG694866
Benzo(b)fluoranthene	mg/kg	0.0588	0.0554	71.9	19.8-142	6.06	30.3	L671251-02	WG694866
Benzo(g,h,i)perylene	mg/kg	0.0722	0.0677	89.4	20-149	6.36	27.1	L671251-02	WG694866
Benzo(k)fluoranthene	mg/kg	0.0818	0.0747	102.	32.1-137	9.02	24.6	L671251-02	WG694866
Chrysene	mg/kg	0.0755	0.0706	93.0	36.6-137	6.66	22.7	L671251-02	WG694866
Dibenz(a,h)anthracene	mg/kg	0.0800	0.0755	100.	27.1-145	5.81	21.9	L671251-02	WG694866
Fluoranthene	mg/kg	0.0636	0.0568	77.1	39.8-141	11.3	22.2	L671251-02	WG694866
Fluorene	mg/kg	0.0718	0.0658	89.7	42.5-130	8.69	20	L671251-02	WG694866
Indeno(1,2,3-cd)pyrene	mg/kg	0.0752	0.0703	93.3	19-151	6.75	25	L671251-02	WG694866
Naphthalene	mg/kg	0.0725	0.0719	89.3	40.6-135	0.830	20	L671251-02	WG694866
Phenanthrene	mg/kg	0.0637	0.0581	78.2	39.7-129	9.21	20	L671251-02	WG694866
Pyrene	mg/kg	0.0581	0.0511	70.7	31.5-141	12.8	23.5	L671251-02	WG694866
2-Fluorobiphenyl				98.60	51.1-131				WG694866
Nitrobenzene-d5				106.0	40.9-147				WG694866
p-Terphenyl-d14				90.70	45.3-138				WG694866
TPH (GC/FID) Low Fraction	mg/kg	18.4	18.9	66.6	28.5-138	3.12	23.6	L671251-01	WG694921
a,a,a-Trifluorotoluene(FID)				97.00	59-128				WG694921
Benzene	mg/kg	0.175	0.220	70.0	49.7-127	22.7	23.5	L671251-01	WG694921
Ethylbenzene	mg/kg	0.204	0.214	81.7	40.8-141	4.42	23.8	L671251-01	WG694921
Toluene	mg/kg	0.177	0.215	70.4	49.8-132	19.8	23.5	L671251-01	WG694921
Total Xylene	mg/kg	0.596	0.644	79.3	41.2-140	7.80	23.7	L671251-01	WG694921
a,a,a-Trifluorotoluene(PID)				101.0	54-144				WG694921
Mercury	mg/kg	0.284	0.295	102.	80-120	4.00	20	L671209-02	WG694854
TPH (GC/FID) Low Fraction	mg/kg	107.	114.	63.8	28.5-138	6.40	23.6	L670592-01	WG695075
a,a,a-Trifluorotoluene(FID)				93.10	59-128				WG695075
Arsenic	mg/kg	55.8	55.2	99.0	75-125	1.00	20	L671209-02	WG695039
Barium	mg/kg	177.	163.	0*	75-125	9.00	20	L671209-02	WG695039
Cadmium	mg/kg	47.2	46.0	94.0	75-125	3.00	20	L671209-02	WG695039
Chromium	mg/kg	71.2	72.3	87.1	75-125	2.00	20	L671209-02	WG695039
Copper	mg/kg	73.6	74.0	93.6	75-125	1.00	20	L671209-02	WG695039

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Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Lead	mg/kg	77.0	79.0	72.7*	75-125	3.00	20	L671209-02	WG695039
Nickel	mg/kg	58.0	58.9	85.1	75-125	1.00	20	L671209-02	WG695039
Selenium	mg/kg	49.5	49.1	97.0	75-125	1.00	20	L671209-02	WG695039
Silver	mg/kg	48.4	47.9	98.1	75-125	1.00	20	L671209-02	WG695039
Zinc	mg/kg	111.	109.	78.5	75-125	1.00	20	L671209-02	WG695039
TPH (GC/FID) Low Fraction	mg/kg	18.0	21.1	63.8	28.5-138	16.0	23.6	L671485-01	WG695252
a,a,a-Trifluorotoluene(FID)				104.0	59-128				WG695252
Arsenic	mg/kg	55.3	51.3	101.	75-125	8.00	20	L671402-01	WG695078
Barium	mg/kg	98.8	99.0	109.	75-125	0.0	20	L671402-01	WG695078
Cadmium	mg/kg	51.3	47.3	102.	75-125	8.00	20	L671402-01	WG695078
Chromium	mg/kg	57.2	53.5	96.6	75-125	7.00	20	L671402-01	WG695078
Copper	mg/kg	58.3	54.7	103.	75-125	6.00	20	L671402-01	WG695078
Lead	mg/kg	53.4	49.8	100.	75-125	7.00	20	L671402-01	WG695078
Selenium	mg/kg	50.8	47.7	100.	75-125	6.00	20	L671402-01	WG695078
Silver	mg/kg	49.0	45.4	98.3	75-125	8.00	20	L671402-01	WG695078
Zinc	mg/kg	61.6	57.5	97.6	75-125	7.00	20	L671402-01	WG695078
Nickel	mg/kg	58.6	56.7	98.4	75-125	3.00	20	L671402-01	WG695078
Chromium,Hexavalent	mg/kg	18.6	18.7	93.0	75-125	0.536	20	L671251-04	WG695290

Post Spike

Serial Dilution

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Serial Dilution

Batch number /Run number / Sample number cross reference

WG694870: R2861121: L671251-01 02 03 04 05 06 07 08 09 10  
WG694866: R2861303: L671251-01 02 03 04 05 06 07 08 09 10  
WG694921: R2861341: L671251-01 02 03 04 05 06 07 08 09 10  
WG694854: R2861676: L671251-01 02 03 04 05 06 07 08 09 10  
WG695075: R2861743: L671251-07 10  
WG695039: R2861921: L671251-01 02 03 04 05 06 07  
WG695180: R2862040: L671251-01 02 03 04 05 06 07 08 09 10  
WG695252: R2862283: L671251-08 09  
WG695078: R2862324 R2862720: L671251-08 09 10  
WG695205: R2862438: L671251-01  
WG695074: R2862714 R2862993: L671251-01 02 03 04 05 06 07 08 09 10  
WG695290: R2863123: L671251-01 02 03 04 05 06 07 08 09 10  
WG695560: R2863682: L671251-01 02 03 04 05 06 07 08 09 10  
WG695563: R2863684: L671251-02 03 04 05 06 07 08 09 10

\* \* Calculations are performed prior to rounding of reported values.  
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The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.



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Est. 1970

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

## Report Summary

Thursday December 05, 2013

Report Number: L670136


Samples Received: 11/21/13

Client Project: 047813001

Description: Voloshin Mortin 1-8

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

  
Jared Willis , ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,  
FL - E87487, GA - 923, IN - C-IN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

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# REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

December 05, 2013

Date Received : November 21, 2013  
Description : Voloshin Morton 1(8)  
Sample ID : NWBOT 8.5FT  
Collected By : Rob Fishburn  
Collection Date : 11/19/13 09:22

ESC Sample # : L670136-01  
Site ID : VOLOSHIN 1-8  
Project # : 047813001

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium, Hexavalent	BDL	2.0	mg/kg	3060A/7196A	11/26/13	1
Chromium, Trivalent	11.	2.0	mg/kg	Calc.	12/05/13	1
ORP	92.		mV	2580 B-2011	11/27/13	1
pH	9.8		su	9045D	11/25/13	1
Sodium Adsorption Ratio	8.8			Calc.	11/29/13	1
Specific Conductance	700		umhos/cm	9050AMod	11/26/13	1
Mercury	BDL	0.020	mg/kg	7471	11/26/13	1
Arsenic	5.3	1.0	mg/kg	6010B	11/25/13	1
Barium	120	0.25	mg/kg	6010B	11/25/13	1
Cadmium	BDL	0.25	mg/kg	6010B	11/25/13	1
Chromium	11.	0.50	mg/kg	6010B	11/25/13	1
Copper	11.	1.0	mg/kg	6010B	11/25/13	1
Lead	10.	0.25	mg/kg	6010B	11/25/13	1
Nickel	12.	1.0	mg/kg	6010B	11/25/13	1
Selenium	BDL	1.0	mg/kg	6010B	11/25/13	1
Silver	BDL	0.50	mg/kg	6010B	11/25/13	1
Zinc	39.	1.5	mg/kg	6010B	11/25/13	1
Benzene	BDL	0.0025	mg/kg	8021/8015	11/23/13	5
Toluene	BDL	0.025	mg/kg	8021/8015	11/23/13	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	11/23/13	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	11/23/13	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	11/23/13	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	89.9		% Rec.	8021/8015	11/23/13	5
a,a,a-Trifluorotoluene(PID)	98.1		% Rec.	8021/8015	11/23/13	5
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	3546/DRO	11/25/13	1
Surrogate recovery(%)						
o-Terphenyl	51.2		% Rec.	3546/DRO	11/25/13	1
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/23/13	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	11/23/13	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	11/23/13	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/23/13	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/23/13	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L670136-01 (PH) - 9.8@18.7c



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# REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

December 05, 2013

Date Received : November 21, 2013  
Description : Voloshin Morton 1(8)

ESC Sample # : L670136-01

Sample ID : NWBOT 8.5FT

Site ID : VOLOSHIN 1-8

Collected By : Rob Fishburn  
Collection Date : 11/19/13 09:22

Project # : 047813001

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/23/13	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	11/23/13	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/23/13	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	11/23/13	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/23/13	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/23/13	1
Fluorene	BDL	0.0060	mg/kg	8270C-SIM	11/23/13	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/23/13	1
Naphthalene	BDL	0.020	mg/kg	8270C-SIM	11/23/13	1
Phenanthrene	BDL	0.0060	mg/kg	8270C-SIM	11/23/13	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/23/13	1
1-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/23/13	1
2-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/23/13	1
2-Chloronaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/23/13	1
Surrogate Recovery						
Nitrobenzene-d5	85.4		% Rec.	8270C-SIM	11/23/13	1
2-Fluorobiphenyl	63.6		% Rec.	8270C-SIM	11/23/13	1
p-Terphenyl-d14	52.7		% Rec.	8270C-SIM	11/23/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 12/05/13 11:18 Printed: 12/05/13 12:24  
L670136-01 (PH) - 9.8@18.7c

Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L670136-01	WG694172	SAMP	Barium	R2859791	01J6
	WG694172	SAMP	Nickel	R2859791	01
	WG694172	SAMP	Zinc	R2859791	01

Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low
O1	(ESC) The analyte failed the method required serial dilution test and/or subsequent post-spike criteria. These failures indicate matrix interference.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.



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December 05, 2013

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
1-Methylnaphthalene	< .02	mg/kg			WG693745	11/23/13 02:25
2-Chloronaphthalene	< .02	mg/kg			WG693745	11/23/13 02:25
2-Methylnaphthalene	< .02	mg/kg			WG693745	11/23/13 02:25
Acenaphthene	< .006	mg/kg			WG693745	11/23/13 02:25
Acenaphthylene	< .006	mg/kg			WG693745	11/23/13 02:25
Anthracene	< .006	mg/kg			WG693745	11/23/13 02:25
Benzo(a)anthracene	< .006	mg/kg			WG693745	11/23/13 02:25
Benzo(a)pyrene	< .006	mg/kg			WG693745	11/23/13 02:25
Benzo(b)fluoranthene	< .006	mg/kg			WG693745	11/23/13 02:25
Benzo(g,h,i)perylene	< .006	mg/kg			WG693745	11/23/13 02:25
Benzo(k)fluoranthene	< .006	mg/kg			WG693745	11/23/13 02:25
Chrysene	< .006	mg/kg			WG693745	11/23/13 02:25
Dibenz(a,h)anthracene	< .006	mg/kg			WG693745	11/23/13 02:25
Fluoranthene	< .006	mg/kg			WG693745	11/23/13 02:25
Fluorene	< .006	mg/kg			WG693745	11/23/13 02:25
Indeno(1,2,3-cd)pyrene	< .006	mg/kg			WG693745	11/23/13 02:25
Naphthalene	< .02	mg/kg			WG693745	11/23/13 02:25
Phenanthrene	< .006	mg/kg			WG693745	11/23/13 02:25
Pyrene	< .006	mg/kg			WG693745	11/23/13 02:25
2-Fluorobiphenyl	% Rec.		86.40	51.1-131	WG693745	11/23/13 02:25
Nitrobenzene-d5	% Rec.		118.0	40.9-147	WG693745	11/23/13 02:25
p-Terphenyl-d14	% Rec.		105.0	45.3-138	WG693745	11/23/13 02:25
Benzene	< .0005	mg/kg			WG693902	11/23/13 14:39
Ethylbenzene	< .0005	mg/kg			WG693902	11/23/13 14:39
Toluene	< .005	mg/kg			WG693902	11/23/13 14:39
TPH (GC/FID) Low Fraction	< .1	mg/kg			WG693902	11/23/13 14:39
Total Xylene	< .0015	mg/kg			WG693902	11/23/13 14:39
a,a,a-Trifluorotoluene(FID)	% Rec.		90.60	59-128	WG693902	11/23/13 14:39
a,a,a-Trifluorotoluene(PID)	% Rec.		98.70	54-144	WG693902	11/23/13 14:39
Arsenic	< 1	mg/kg			WG694172	11/25/13 21:55
Barium	< .25	mg/kg			WG694172	11/25/13 21:55
Cadmium	< .25	mg/kg			WG694172	11/25/13 21:55
Chromium	< .5	mg/kg			WG694172	11/25/13 21:55
Copper	< 1	mg/kg			WG694172	11/25/13 21:55
Lead	< .25	mg/kg			WG694172	11/25/13 21:55
Nickel	< 1	mg/kg			WG694172	11/25/13 21:55
Selenium	< 1	mg/kg			WG694172	11/25/13 21:55
Silver	< .5	mg/kg			WG694172	11/25/13 21:55
Zinc	< 1.5	mg/kg			WG694172	11/25/13 21:55
TPH (GC/FID) High Fraction	< 4	mg/kg			WG694055	11/25/13 14:34
o-Terphenyl	% Rec.		71.90	50-150	WG694055	11/25/13 14:34
Chromium, Hexavalent	< 2	mg/kg			WG694110	11/26/13 15:45
Mercury	< .02	mg/kg			WG694250	11/26/13 10:39
Specific Conductance	0.900	umhos/cm			WG694381	11/26/13 18:46

\* Performance of this Analyte is outside of established criteria.  
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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Analyte	Units	Result	Duplicate		RPD	Limit	Ref Samp	Batch
			Duplicate					
pH	su	7.50	7.50		0.0	1	L669472-01	WG694116
pH	su	11.0	11.0		1.80*	1	L670540-01	WG694116
Arsenic	mg/kg	5.70	5.32		7.00	20	L670136-01	WG694172
Barium	mg/kg	130.	125.		1.00	20	L670136-01	WG694172
Cadmium	mg/kg	0.0	0.132		5.00	20	L670136-01	WG694172
Chromium	mg/kg	12.0	11.0		6.00	20	L670136-01	WG694172
Copper	mg/kg	10.0	10.6		1.00	20	L670136-01	WG694172
Lead	mg/kg	9.30	10.4		11.0	20	L670136-01	WG694172
Nickel	mg/kg	10.0	12.4		20.0	20	L670136-01	WG694172
Selenium	mg/kg	0.0	-0.442		4660*	20	L670136-01	WG694172
Silver	mg/kg	0.0	-0.142		12.0	20	L670136-01	WG694172
Zinc	mg/kg	39.0	38.7		1.00	20	L670136-01	WG694172
Chromium, Hexavalent	mg/kg	0.0	0.0		0.0	20	L670273-01	WG694110
Mercury	mg/kg	0.0	0.00318		8.00	20	L670085-14	WG694250
Specific Conductance	umhos/cm	390.	390.		0.0	20	L669550-01	WG694381
Specific Conductance	umhos/cm	2700	2700		0.222	20	L670284-02	WG694381
ORP	mV	160.	160.		0.0	20	L669820-02	WG694546
ORP	mV	180.	180.		1.12	20	L670720-07	WG694546

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
1-Methylnaphthalene	mg/kg	.08	0.0752	94.0	62.5-121	WG693745
2-Chloronaphthalene	mg/kg	.08	0.0870	109.	62.1-120	WG693745
2-Methylnaphthalene	mg/kg	.08	0.0737	92.1	62.5-121	WG693745
Acenaphthene	mg/kg	.08	0.0800	100.	62.4-121	WG693745
Acenaphthylene	mg/kg	.08	0.0802	100.	62.9-123	WG693745
Anthracene	mg/kg	.08	0.0871	109.	64.9-129	WG693745
Benzo(a)anthracene	mg/kg	.08	0.0799	99.9	61.8-125	WG693745
Benzo(a)pyrene	mg/kg	.08	0.0870	109.	63.4-119	WG693745
Benzo(b)fluoranthene	mg/kg	.08	0.0819	102.	62.7-119	WG693745
Benzo(g,h,i)perylene	mg/kg	.08	0.0929	116.	68.2-129	WG693745
Benzo(k)fluoranthene	mg/kg	.08	0.0809	101.	64.5-128	WG693745
Chrysene	mg/kg	.08	0.0818	102.	64.4-128	WG693745
Dibenz(a,h)anthracene	mg/kg	.08	0.0957	120.	65.3-128	WG693745
Fluoranthene	mg/kg	.08	0.0846	106.	61.8-129	WG693745
Fluorene	mg/kg	.08	0.0716	89.4	60.8-121	WG693745
Indeno(1,2,3-cd)pyrene	mg/kg	.08	0.0955	119.	67.6-129	WG693745
Naphthalene	mg/kg	.08	0.0818	102.	59.5-116	WG693745
Phenanthrene	mg/kg	.08	0.0788	98.5	59.4-121	WG693745
Pyrene	mg/kg	.08	0.0768	96.0	61.2-130	WG693745
2-Fluorobiphenyl				95.60	51.1-131	WG693745
Nitrobenzene-d5				103.0	40.9-147	WG693745
p-Terphenyl-d14				96.50	45.3-138	WG693745
Benzene	mg/kg	.05	0.0388	77.6	70-130	WG693902
Ethylbenzene	mg/kg	.05	0.0409	81.8	70-130	WG693902
Toluene	mg/kg	.05	0.0393	78.7	70-130	WG693902
Total Xylene	mg/kg	.15	0.124	82.9	70-130	WG693902

\* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'





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December 05, 2013

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
a,a,a-Trifluorotoluene(PID)				98.10	54-144	
TPH (GC/FID) Low Fraction	mg/kg	5.5	4.75	86.4	63.5-137	WG693902
a,a,a-Trifluorotoluene(FID)				97.00	59-128	WG693902
pH	su	5.93	5.90	99.5	98.3-101.7	WG694116
Arsenic	mg/kg	237	229.	97.0	83.1-117	WG694172
Barium	mg/kg	252	254.	101.	84.1-116	WG694172
Cadmium	mg/kg	191	175.	91.0	83.2-117	WG694172
Chromium	mg/kg	128	124.	97.0	81.3-118	WG694172
Copper	mg/kg	123	122.	99.0	83.7-116	WG694172
Lead	mg/kg	103	97.8	95.0	83.1-117	WG694172
Nickel	mg/kg	118	106.	90.0	82-118	WG694172
Selenium	mg/kg	110	105.	96.0	78.7-122	WG694172
Silver	mg/kg	47.3	46.1	98.0	66.2-134	WG694172
Zinc	mg/kg	183	175.	95.0	82-118	WG694172
TPH (GC/FID) High Fraction	mg/kg	60	44.5	74.2	50-150	WG694055
o-Terphenyl				85.60	50-150	WG694055
Chromium,Hexavalent	mg/kg	146	120.	82.2	80-120	WG694110
Mercury	mg/kg	12.4	12.9	104.	71.6-128	WG694250
Specific Conductance	umhos/cm	510	510.	100.	85-115	WG694381
ORP	mV	100	100.	100.	90-110	WG694546

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
1-Methylnaphthalene	mg/kg	0.0755	0.0752	94.0	62.5-121	0.310	20	WG693745
2-Chloronaphthalene	mg/kg	0.0867	0.0870	108.	62.1-120	0.370	20	WG693745
2-Methylnaphthalene	mg/kg	0.0742	0.0737	93.0	62.5-121	0.670	20	WG693745
Acenaphthene	mg/kg	0.0800	0.0800	100.	62.4-121	0.0500	20	WG693745
Acenaphthylene	mg/kg	0.0800	0.0802	100.	62.9-123	0.280	20	WG693745
Anthracene	mg/kg	0.0879	0.0871	110.	64.9-129	0.960	20	WG693745
Benzo(a)anthracene	mg/kg	0.0793	0.0799	99.0	61.8-125	0.710	20	WG693745
Benzo(a)pyrene	mg/kg	0.0847	0.0870	106.	63.4-119	2.64	20	WG693745
Benzo(b)fluoranthene	mg/kg	0.0904	0.0819	113.	62.7-119	9.90	20	WG693745
Benzo(g,h,i)perylene	mg/kg	0.0991	0.0929	124.	68.2-129	6.46	20	WG693745
Benzo(k)fluoranthene	mg/kg	0.0868	0.0809	108.	64.5-128	7.02	20	WG693745
Chrysene	mg/kg	0.0859	0.0818	107.	64.4-128	4.80	20	WG693745
Dibenz(a,h)anthracene	mg/kg	0.0998	0.0957	125.	65.3-128	4.19	20	WG693745
Fluoranthene	mg/kg	0.0840	0.0846	105.	61.8-129	0.720	20	WG693745
Fluorene	mg/kg	0.0713	0.0716	89.0	60.8-121	0.380	20	WG693745
Indeno(1,2,3-cd)pyrene	mg/kg	0.100	0.0955	125.	67.6-129	4.71	20	WG693745
Naphthalene	mg/kg	0.0812	0.0818	102.	59.5-116	0.730	20	WG693745
Phenanthrene	mg/kg	0.0772	0.0788	96.0	59.4-121	2.07	20	WG693745
Pyrene	mg/kg	0.0836	0.0768	104.	61.2-130	8.45	20	WG693745
2-Fluorobiphenyl				94.30	51.1-131			WG693745
Nitrobenzene-d5				101.0	40.9-147			WG693745

\* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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Rifle, CO 81650

Quality Assurance Report  
Level II

L670136

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1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

December 05, 2013

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
p-Terphenyl-d14				105.0	45.3-138			
Benzene	mg/kg	0.0381	0.0388	76.0	70-130	1.74	20	WG693902
Ethylbenzene	mg/kg	0.0403	0.0409	80.0	70-130	1.52	20	WG693902
Toluene	mg/kg	0.0384	0.0393	77.0	70-130	2.35	20	WG693902
Total Xylene	mg/kg	0.122	0.124	82.0	70-130	1.66	20	WG693902
a,a,a-Trifluorotoluene(PID)				98.40	54-144			WG693902
TPH (GC/FID) Low Fraction	mg/kg	4.68	4.75	85.0	63.5-137	1.54	20	WG693902
a,a,a-Trifluorotoluene(FID)				97.00	59-128			WG693902
pH	su	5.90	5.90	99.0	98.3-101.7	0.0	20	WG694116
TPH (GC/FID) High Fraction	mg/kg	39.7	44.5	66.0	50-150	11.4	20	WG694055
o-Terphenyl				75.70	50-150			WG694055
Chromium, Hexavalent	mg/kg	117.	120.	80.0	80-120	2.53	20	WG694110
Specific Conductance	umhos/	510.	510.	100.	85-115	0.0	20	WG694381
ORP	mV	100.	100.	100.	90-110	0.0	20	WG694546

Analyte	Units	Matrix Spike			% Rec	Limit	Ref Samp	Batch
		MS Res	Ref Res	TV				
1-Methylnaphthalene	mg/kg	0.0653	0.000948	.08	80.4	58.9-123	L670136-01	WG693745
2-Chloronaphthalene	mg/kg	0.0703	0.	.08	87.9	61.6-120	L670136-01	WG693745
2-Methylnaphthalene	mg/kg	0.0637	0.00107	.08	78.3	50.7-129	L670136-01	WG693745
Acenaphthene	mg/kg	0.0670	0.	.08	83.8	51.6-124	L670136-01	WG693745
Acenaphthylene	mg/kg	0.0651	0.	.08	81.4	58.3-126	L670136-01	WG693745
Anthracene	mg/kg	0.0660	0.000811	.08	81.5	47.9-137	L670136-01	WG693745
Benzo(a)anthracene	mg/kg	0.0564	0.000754	.08	69.5	34.2-138	L670136-01	WG693745
Benzo(a)pyrene	mg/kg	0.0606	0.	.08	75.7	34.6-133	L670136-01	WG693745
Benzo(b)fluoranthene	mg/kg	0.0578	0.	.08	72.2	19.8-142	L670136-01	WG693745
Benzo(g,h,i)perylene	mg/kg	0.0620	0.	.08	77.5	20-149	L670136-01	WG693745
Benzo(k)fluoranthene	mg/kg	0.0597	0.	.08	74.6	32.1-137	L670136-01	WG693745
Chrysene	mg/kg	0.0591	0.000769	.08	72.9	36.6-137	L670136-01	WG693745
Dibenz(a,h)anthracene	mg/kg	0.0648	0.000844	.08	80.0	27.1-145	L670136-01	WG693745
Fluoranthene	mg/kg	0.0643	0.00200	.08	77.8	39.8-141	L670136-01	WG693745
Fluorene	mg/kg	0.0584	0.	.08	72.9	42.5-130	L670136-01	WG693745
Indeno(1,2,3-cd)pyrene	mg/kg	0.0645	0.	.08	80.6	19-151	L670136-01	WG693745
Naphthalene	mg/kg	0.0726	0.00418	.08	85.5	40.6-135	L670136-01	WG693745
Phenanthrene	mg/kg	0.0624	0.00350	.08	73.6	39.7-129	L670136-01	WG693745
Pyrene	mg/kg	0.0607	0.00205	.08	73.3	31.5-141	L670136-01	WG693745
2-Fluorobiphenyl					76.10	51.1-131		WG693745
Nitrobenzene-d5					88.20	40.9-147		WG693745
p-Terphenyl-d14					67.80	45.3-138		WG693745
Benzene	mg/kg	0.191	0.000307	.05	76.0	49.7-127	L670136-01	WG693902
Ethylbenzene	mg/kg	0.198	0.000227	.05	79.0	40.8-141	L670136-01	WG693902
Toluene	mg/kg	0.191	0.000553	.05	76.0	49.8-132	L670136-01	WG693902
Total Xylene	mg/kg	0.604	0.000963	.15	80.0	41.2-140	L670136-01	WG693902
a,a,a-Trifluorotoluene(PID)					97.40	54-144		WG693902
TPH (GC/FID) Low Fraction	mg/kg	21.7	0.0506	5.5	79.0	28.5-138	L670136-01	WG693902
a,a,a-Trifluorotoluene(FID)					96.20	59-128		WG693902

\* Performance of this Analyte is outside of established criteria.

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Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
Arsenic	mg/kg	51.2	5.32	50	92.0	75-125	L670136-01	WG694172
Barium	mg/kg	160.	125.	50	70.0*	75-125	L670136-01	WG694172
Cadmium	mg/kg	44.4	0.132	50	89.0	75-125	L670136-01	WG694172
Chromium	mg/kg	56.7	11.0	50	91.0	75-125	L670136-01	WG694172
Copper	mg/kg	60.0	10.6	50	99.0	75-125	L670136-01	WG694172
Lead	mg/kg	53.6	10.4	50	86.0	75-125	L670136-01	WG694172
Nickel	mg/kg	53.3	12.4	50	82.0	75-125	L670136-01	WG694172
Selenium	mg/kg	44.8	-0.442	50	90.0	75-125	L670136-01	WG694172
Silver	mg/kg	47.3	-0.142	50	95.0	75-125	L670136-01	WG694172
Zinc	mg/kg	83.6	38.7	50	90.0	75-125	L670136-01	WG694172
TPH (GC/FID) High Fraction	mg/kg	42.1	0.130	60	70.0	50-150	L669928-02	WG694055
o-Terphenyl					77.80	50-150		WG694055
Chromium, Hexavalent	mg/kg	16.3	0.0	20	82.0	75-125	L670626-01	WG694110
Mercury	mg/kg	0.266	0.00318	.25	100.	80-120	L670085-14	WG694250

Analyte	Units	MSD	Matrix Spike		%Rec	Limit	RPD	Limit	Ref Samp	Batch
			Ref	Duplicate						
1-Methylnaphthalene	mg/kg	0.0608	0.0653	74.8	58.9-123	7.17	20		L670136-01	WG693745
2-Chloronaphthalene	mg/kg	0.0675	0.0703	84.4	61.6-120	4.07	20		L670136-01	WG693745
2-Methylnaphthalene	mg/kg	0.0607	0.0637	74.5	50.7-129	4.87	20		L670136-01	WG693745
Acenaphthene	mg/kg	0.0640	0.0670	80.0	51.6-124	4.69	20		L670136-01	WG693745
Acenaphthylene	mg/kg	0.0628	0.0651	78.5	58.3-126	3.63	20		L670136-01	WG693745
Anthracene	mg/kg	0.0610	0.0660	75.3	47.9-137	7.81	20		L670136-01	WG693745
Benzo(a)anthracene	mg/kg	0.0466	0.0564	57.3	34.2-138	18.9	22.8		L670136-01	WG693745
Benzo(a)pyrene	mg/kg	0.0502	0.0606	62.8	34.6-133	18.8	26.3		L670136-01	WG693745
Benzo(b)fluoranthene	mg/kg	0.0481	0.0578	60.1	19.8-142	18.3	30.3		L670136-01	WG693745
Benzo(g,h,i)perylene	mg/kg	0.0492	0.0620	61.5	20-149	23.0	27.1		L670136-01	WG693745
Benzo(k)fluoranthene	mg/kg	0.0482	0.0597	60.2	32.1-137	21.4	24.6		L670136-01	WG693745
Chrysene	mg/kg	0.0507	0.0591	62.4	36.6-137	15.3	22.7		L670136-01	WG693745
Dibenz(a,h)anthracene	mg/kg	0.0539	0.0648	66.4	27.1-145	18.3	21.9		L670136-01	WG693745
Fluoranthene	mg/kg	0.0563	0.0643	67.8	39.8-141	13.3	22.2		L670136-01	WG693745
Fluorene	mg/kg	0.0549	0.0584	68.6	42.5-130	6.19	20		L670136-01	WG693745
Indeno(1,2,3-cd)pyrene	mg/kg	0.0517	0.0645	64.6	19-151	22.0	25		L670136-01	WG693745
Naphthalene	mg/kg	0.0686	0.0726	80.5	40.6-135	5.67	20		L670136-01	WG693745
Phenanthrene	mg/kg	0.0539	0.0624	63.0	39.7-129	14.6	20		L670136-01	WG693745
Pyrene	mg/kg	0.0521	0.0607	62.6	31.5-141	15.2	23.5		L670136-01	WG693745
2-Fluorobiphenyl				71.70	51.1-131					WG693745
Nitrobenzene-d5				86.40	40.9-147					WG693745
p-Terphenyl-d14				56.70	45.3-138					WG693745
Benzene	mg/kg	0.189	0.191	75.7	49.7-127	1.04	23.5		L670136-01	WG693902
Ethylbenzene	mg/kg	0.197	0.198	78.9	40.8-141	0.280	23.8		L670136-01	WG693902
Toluene	mg/kg	0.190	0.191	76.0	49.8-132	0.460	23.5		L670136-01	WG693902
Total Xylene	mg/kg	0.598	0.604	79.6	41.2-140	0.970	23.7		L670136-01	WG693902
a,a,a-Trifluorotoluene(PID)				97.70	54-144					WG693902
TPH (GC/FID) Low Fraction	mg/kg	22.2	21.7	80.6	28.5-138	2.18	23.6		L670136-01	WG693902
a,a,a-Trifluorotoluene(FID)				96.50	59-128					WG693902
Arsenic	mg/kg	54.7	51.2	98.7	75-125	7.00	20		L670136-01	WG694172
Barium	mg/kg	173.	160.	95.2	75-125	8.00	20		L670136-01	WG694172

\* Performance of this Analyte is outside of established criteria.

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Level II

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Est. 1970

December 05, 2013

Analyte	Units	MSD	Matrix Spike	Duplicate	Limit	RPD	Limit	Ref	Samp	Batch
			Ref	%Rec						
Cadmium	mg/kg	47.2	44.4	94.0	75-125	6.00	20	L670136-01		WG694172
Chromium	mg/kg	60.1	56.7	98.2	75-125	6.00	20	L670136-01		WG694172
Copper	mg/kg	63.3	60.0	105.	75-125	5.00	20	L670136-01		WG694172
Lead	mg/kg	57.1	53.6	93.3	75-125	6.00	20	L670136-01		WG694172
Nickel	mg/kg	55.5	53.3	86.3	75-125	4.00	20	L670136-01		WG694172
Selenium	mg/kg	48.0	44.8	96.9	75-125	7.00	20	L670136-01		WG694172
Silver	mg/kg	50.1	47.3	100.	75-125	6.00	20	L670136-01		WG694172
Zinc	mg/kg	86.9	83.6	96.2	75-125	4.00	20	L670136-01		WG694172
TPH (GC/FID) High Fraction o-Terphenyl	mg/kg	60.6	42.1	101. 119.0	50-150 50-150	36.1*	20	L669928-02		WG694055 WG694055
Chromium,Hexavalent	mg/kg	17.8	16.3	89.0	75-125	8.80	20	L670626-01		WG694110
Mercury	mg/kg	0.260	0.266	103.	80-120	2.00	20	L670085-14		WG694250

Post Spike

Serial Dilution

Batch number /Run number / Sample number cross reference

WG693745: R2858964 R2859565: L670136- 01  
WG693902: R2859082: L670136-  
WG694116: R2859605: L670136-  
WG694172: R2859791 R2860205: L670136- 01  
WG694055: R2859844: L670136-  
WG694110: R2860025: L670136-

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WG694250: R2860038: L670136-  
WG694381: R2860228: L670136-  
WG694546: R2860862: L670136-  
WG694338: R2860962: L670136-

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\* \* Calculations are performed prior to rounding of reported values.  
\* Performance of this Analyte is outside of established criteria.  
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The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.



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Rifle, CO 81650

## Report Summary

Wednesday November 27, 2013

Report Number: L669561


Samples Received: 11/19/13

Client Project: 047813001

Description: Voloshin Mortin 1-8

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

  
Jared Willis , ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,  
FL - E87487, GA - 923, IN - C-IN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

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# REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

November 27, 2013

Date Received : November 19, 2013  
Description : Voloshin Mortin 1-8

ESC Sample # : L669561-01

Sample ID : SSW01 7FT

Site ID :

Collected By : Chris McKisson  
Collection Date : 11/16/13 09:15

Project # : 047813001

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium, Hexavalent	BDL	2.0	mg/kg	3060A/7196A	11/24/13	1
Chromium, Trivalent	11.	2.0	mg/kg	Calc.	11/26/13	1
ORP	78.		mV	2580 B-2011	11/22/13	1
pH	9.0		su	9045D	11/25/13	1
Sodium Adsorption Ratio	4.6			Calc.	11/22/13	1
Specific Conductance	490		umhos/cm	9050AMod	11/26/13	1
Mercury	0.027	0.020	mg/kg	7471	11/25/13	1
Arsenic	5.1	1.0	mg/kg	6010B	11/26/13	1
Barium	95.	0.25	mg/kg	6010B	11/26/13	1
Cadmium	BDL	0.25	mg/kg	6010B	11/26/13	1
Chromium	11.	0.50	mg/kg	6010B	11/26/13	1
Copper	11.	1.0	mg/kg	6010B	11/26/13	1
Lead	9.5	1.2	mg/kg	6010B	11/26/13	5
Nickel	11.	1.0	mg/kg	6010B	11/26/13	1
Selenium	BDL	1.0	mg/kg	6010B	11/26/13	1
Silver	BDL	0.50	mg/kg	6010B	11/26/13	1
Zinc	40.	1.5	mg/kg	6010B	11/26/13	1
Benzene	BDL	0.0025	mg/kg	8021/8015	11/21/13	5
Toluene	BDL	0.025	mg/kg	8021/8015	11/21/13	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	11/21/13	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	11/21/13	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	11/21/13	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	94.8		% Rec.	8021/8015	11/21/13	5
a,a,a-Trifluorotoluene(PID)	100.		% Rec.	8021/8015	11/21/13	5
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	3546/DRO	11/22/13	1
Surrogate recovery(%)						
o-Terphenyl	80.3		% Rec.	3546/DRO	11/22/13	1
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L669561-01 (PH) - 9.0@19.1c





12065 Lebanon Rd.  
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Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

November 27, 2013

Date Received : November 19, 2013  
Description : Voloshin Mortin 1-8

Sample ID : SSW01 7FT

Collected By : Chris McKisson  
Collection Date : 11/16/13 09:15

ESC Sample # : L669561-01

Site ID :

Project # : 047813001

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Fluorene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Naphthalene	BDL	0.020	mg/kg	8270C-SIM	11/22/13	1
Phenanthrene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
1-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/22/13	1
2-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/22/13	1
2-Chloronaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/22/13	1
Surrogate Recovery						
Nitrobenzene-d5	109.		% Rec.	8270C-SIM	11/22/13	1
2-Fluorobiphenyl	74.2		% Rec.	8270C-SIM	11/22/13	1
p-Terphenyl-d14	91.8		% Rec.	8270C-SIM	11/22/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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L669561-01 (PH) - 9.0@19.1c



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Est. 1970

# REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

November 27, 2013

Date Received : November 19, 2013  
Description : Voloshin Mortin 1-8  
Sample ID : SBOT 11FT  
Collected By : Chris McKisson  
Collection Date : 11/16/13 10:35

ESC Sample # : L669561-02

Site ID :

Project # : 047813001

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium, Hexavalent	BDL	2.0	mg/kg	3060A/7196A	11/24/13	1
Chromium, Trivalent	11.	2.0	mg/kg	Calc.	11/26/13	1
ORP	80.		mV	2580 B-2011	11/22/13	1
pH	8.9		su	9045D	11/25/13	1
Sodium Adsorption Ratio	2.8			Calc.	11/22/13	1
Specific Conductance	370		umhos/cm	9050AMod	11/26/13	1
Mercury	BDL	0.020	mg/kg	7471	11/25/13	1
Arsenic	4.8	1.0	mg/kg	6010B	11/26/13	1
Barium	55.	0.25	mg/kg	6010B	11/26/13	1
Cadmium	BDL	0.25	mg/kg	6010B	11/26/13	1
Chromium	11.	0.50	mg/kg	6010B	11/26/13	1
Copper	9.0	1.0	mg/kg	6010B	11/26/13	1
Lead	7.7	0.25	mg/kg	6010B	11/26/13	1
Nickel	10.	1.0	mg/kg	6010B	11/26/13	1
Selenium	BDL	1.0	mg/kg	6010B	11/26/13	1
Silver	BDL	0.50	mg/kg	6010B	11/26/13	1
Zinc	33.	1.5	mg/kg	6010B	11/26/13	1
Benzene	BDL	0.0025	mg/kg	8021/8015	11/21/13	5
Toluene	BDL	0.025	mg/kg	8021/8015	11/21/13	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	11/21/13	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	11/21/13	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	11/21/13	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	95.3		% Rec.	8021/8015	11/21/13	5
a,a,a-Trifluorotoluene(PID)	100.		% Rec.	8021/8015	11/21/13	5
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	3546/DRO	11/24/13	1
Surrogate recovery(%)						
o-Terphenyl	77.7		% Rec.	3546/DRO	11/24/13	1
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L669561-02 (PH) - 8.9@18.6c



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Est. 1970

# REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

November 27, 2013

Date Received : November 19, 2013  
Description : Voloshin Mortin 1-8

ESC Sample # : L669561-02

Sample ID : SBOT 11FT

Site ID :

Collected By : Chris McKisson  
Collection Date : 11/16/13 10:35

Project # : 047813001

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Fluorene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Naphthalene	BDL	0.020	mg/kg	8270C-SIM	11/22/13	1
Phenanthrene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
1-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/22/13	1
2-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/22/13	1
2-Chloronaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/22/13	1
Surrogate Recovery						
Nitrobenzene-d5	111.		% Rec.	8270C-SIM	11/22/13	1
2-Fluorobiphenyl	75.6		% Rec.	8270C-SIM	11/22/13	1
p-Terphenyl-d14	85.0		% Rec.	8270C-SIM	11/22/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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# REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

November 27, 2013

Date Received : November 19, 2013  
Description : Voloshin Mortin 1-8  
Sample ID : SBOT02 12FT  
Collected By : Chris McKisson  
Collection Date : 11/16/13 13:50

ESC Sample # : L669561-03

Site ID :

Project # : 047813001

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium, Hexavalent	BDL	2.0	mg/kg	3060A/7196A	11/24/13	1
Chromium, Trivalent	12.	2.0	mg/kg	Calc.	11/26/13	1
ORP	81.		mV	2580 B-2011	11/22/13	1
pH	8.9		su	9045D	11/25/13	1
Sodium Adsorption Ratio	5.8			Calc.	11/22/13	1
Specific Conductance	280		umhos/cm	9050AMod	11/26/13	1
Mercury	BDL	0.020	mg/kg	7471	11/25/13	1
Arsenic	3.8	1.0	mg/kg	6010B	11/26/13	1
Barium	63.	0.25	mg/kg	6010B	11/26/13	1
Cadmium	BDL	0.25	mg/kg	6010B	11/26/13	1
Chromium	12.	0.50	mg/kg	6010B	11/26/13	1
Copper	7.8	1.0	mg/kg	6010B	11/26/13	1
Lead	7.6	0.25	mg/kg	6010B	11/26/13	1
Nickel	9.2	1.0	mg/kg	6010B	11/26/13	1
Selenium	BDL	1.0	mg/kg	6010B	11/26/13	1
Silver	BDL	0.50	mg/kg	6010B	11/26/13	1
Zinc	33.	1.5	mg/kg	6010B	11/26/13	1
Benzene	BDL	0.0025	mg/kg	8021/8015	11/21/13	5
Toluene	BDL	0.025	mg/kg	8021/8015	11/21/13	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	11/21/13	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	11/21/13	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	11/21/13	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	95.0		% Rec.	8021/8015	11/21/13	5
a,a,a-Trifluorotoluene(PID)	100.		% Rec.	8021/8015	11/21/13	5
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	3546/DRO	11/22/13	1
Surrogate recovery(%)						
o-Terphenyl	82.1		% Rec.	3546/DRO	11/22/13	1
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/23/13	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	11/23/13	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	11/23/13	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/23/13	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/23/13	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L669561-03 (PH) - 8.9@18.5c



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# REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

November 27, 2013

Date Received : November 19, 2013  
Description : Voloshin Mortin 1-8

ESC Sample # : L669561-03

Sample ID : SBOT02 12FT

Site ID :

Collected By : Chris McKisson  
Collection Date : 11/16/13 13:50

Project # : 047813001

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/23/13	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	11/23/13	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/23/13	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	11/23/13	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/23/13	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/23/13	1
Fluorene	BDL	0.0060	mg/kg	8270C-SIM	11/23/13	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/23/13	1
Naphthalene	BDL	0.020	mg/kg	8270C-SIM	11/23/13	1
Phenanthrene	BDL	0.0060	mg/kg	8270C-SIM	11/23/13	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/23/13	1
1-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/23/13	1
2-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/23/13	1
2-Chloronaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/23/13	1
Surrogate Recovery						
Nitrobenzene-d5	100.		% Rec.	8270C-SIM	11/23/13	1
2-Fluorobiphenyl	101.		% Rec.	8270C-SIM	11/23/13	1
p-Terphenyl-d14	94.6		% Rec.	8270C-SIM	11/23/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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L669561-03 (PH) - 8.9@18.5c



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# REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

November 27, 2013

Date Received : November 19, 2013  
Description : Voloshin Mortin 1-8  
Sample ID : SSW02 8FT  
Collected By : Chris McKisson  
Collection Date : 11/16/13 14:00

ESC Sample # : L669561-04

Site ID :

Project # : 047813001

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium, Hexavalent	BDL	2.0	mg/kg	3060A/7196A	11/24/13	1
Chromium, Trivalent	8.3	2.0	mg/kg	Calc.	11/26/13	1
ORP	83.		mV	2580 B-2011	11/22/13	1
pH	9.0		su	9045D	11/25/13	1
Sodium Adsorption Ratio	3.8			Calc.	11/22/13	1
Specific Conductance	420		umhos/cm	9050AMod	11/26/13	1
Mercury	0.022	0.020	mg/kg	7471	11/25/13	1
Arsenic	5.7	1.0	mg/kg	6010B	11/26/13	1
Barium	83.	0.25	mg/kg	6010B	11/26/13	1
Cadmium	BDL	0.25	mg/kg	6010B	11/26/13	1
Chromium	8.3	0.50	mg/kg	6010B	11/26/13	1
Copper	12.	1.0	mg/kg	6010B	11/26/13	1
Lead	8.3	0.25	mg/kg	6010B	11/26/13	1
Nickel	11.	1.0	mg/kg	6010B	11/26/13	1
Selenium	BDL	1.0	mg/kg	6010B	11/26/13	1
Silver	BDL	0.50	mg/kg	6010B	11/26/13	1
Zinc	36.	1.5	mg/kg	6010B	11/26/13	1
Benzene	BDL	0.0025	mg/kg	8021/8015	11/21/13	5
Toluene	BDL	0.025	mg/kg	8021/8015	11/21/13	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	11/21/13	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	11/21/13	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	11/21/13	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	95.1		% Rec.	8021/8015	11/21/13	5
a,a,a-Trifluorotoluene(PID)	100.		% Rec.	8021/8015	11/21/13	5
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	3546/DRO	11/22/13	1
Surrogate recovery(%)						
o-Terphenyl	77.4		% Rec.	3546/DRO	11/22/13	1
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/23/13	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	11/23/13	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	11/23/13	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/23/13	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/23/13	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L669561-04 (PH) - 9.0@18.7c



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# REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

November 27, 2013

Date Received : November 19, 2013  
Description : Voloshin Mortin 1-8

Sample ID : SSW02 8FT

Collected By : Chris McKisson  
Collection Date : 11/16/13 14:00

ESC Sample # : L669561-04

Site ID :

Project # : 047813001

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/23/13	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	11/23/13	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/23/13	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	11/23/13	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/23/13	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/23/13	1
Fluorene	BDL	0.0060	mg/kg	8270C-SIM	11/23/13	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/23/13	1
Naphthalene	BDL	0.020	mg/kg	8270C-SIM	11/23/13	1
Phenanthrene	BDL	0.0060	mg/kg	8270C-SIM	11/23/13	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/23/13	1
1-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/23/13	1
2-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/23/13	1
2-Chloronaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/23/13	1
Surrogate Recovery						
Nitrobenzene-d5	99.5		% Rec.	8270C-SIM	11/23/13	1
2-Fluorobiphenyl	93.9		% Rec.	8270C-SIM	11/23/13	1
p-Terphenyl-d14	93.8		% Rec.	8270C-SIM	11/23/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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L669561-04 (PH) - 9.0@18.7c

Summary of Remarks For Samples Printed  
11/27/13 at 10:38:29

TSR Signing Reports: 358  
R5 - Desired TAT

Sample: L669561-01 Account: LTENVRCO Received: 11/19/13 09:30 Due Date: 11/26/13 00:00 RPT Date: 11/27/13 10:37

Sample: L669561-02 Account: LTENVRCO Received: 11/19/13 09:30 Due Date: 11/26/13 00:00 RPT Date: 11/27/13 10:37

Sample: L669561-03 Account: LTENVRCO Received: 11/19/13 09:30 Due Date: 11/26/13 00:00 RPT Date: 11/27/13 10:37

Sample: L669561-04 Account: LTENVRCO Received: 11/19/13 09:30 Due Date: 11/26/13 00:00 RPT Date: 11/27/13 10:37





YOUR LAB OF CHOICE

LT Environmental- Rifle, CO  
Rob Fishburn  
820 Megan Ave, Unit B

Rifle, CO 81650

Quality Assurance Report  
Level II

L669561

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Tax I.D. 62-0814289

Est. 1970

November 27, 2013

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Benzene	< .0005	mg/kg			WG693254	11/20/13 22:37
Ethylbenzene	< .0005	mg/kg			WG693254	11/20/13 22:37
Toluene	< .005	mg/kg			WG693254	11/20/13 22:37
TPH (GC/FID) Low Fraction	< .1	mg/kg			WG693254	11/20/13 22:37
Total Xylene	< .0015	mg/kg			WG693254	11/20/13 22:37
a,a,a-Trifluorotoluene(FID)		% Rec.	95.80	59-128	WG693254	11/20/13 22:37
a,a,a-Trifluorotoluene(PID)		% Rec.	101.0	54-144	WG693254	11/20/13 22:37
Arsenic	< 1	mg/kg			WG693269	11/21/13 19:46
Barium	< .25	mg/kg			WG693269	11/21/13 19:46
Cadmium	< .25	mg/kg			WG693269	11/21/13 19:46
Chromium	< .5	mg/kg			WG693269	11/21/13 19:46
Copper	< 1	mg/kg			WG693269	11/21/13 19:46
Lead	< .25	mg/kg			WG693269	11/21/13 19:46
Nickel	< 1	mg/kg			WG693269	11/21/13 19:46
Selenium	< 1	mg/kg			WG693269	11/21/13 19:46
Silver	< .5	mg/kg			WG693269	11/21/13 19:46
Zinc	< 1.5	mg/kg			WG693269	11/21/13 19:46
TPH (GC/FID) High Fraction	< 4	mg/kg			WG693416	11/22/13 05:12
o-Terphenyl		% Rec.	81.70	50-150	WG693416	11/22/13 05:12
1-Methylnaphthalene	< .02	mg/kg			WG693579	11/22/13 06:53
2-Chloronaphthalene	< .02	mg/kg			WG693579	11/22/13 06:53
2-Methylnaphthalene	< .02	mg/kg			WG693579	11/22/13 06:53
Acenaphthene	< .006	mg/kg			WG693579	11/22/13 06:53
Acenaphthylene	< .006	mg/kg			WG693579	11/22/13 06:53
Anthracene	< .006	mg/kg			WG693579	11/22/13 06:53
Benzo(a)anthracene	< .006	mg/kg			WG693579	11/22/13 06:53
Benzo(a)pyrene	< .006	mg/kg			WG693579	11/22/13 06:53
Benzo(b)fluoranthene	< .006	mg/kg			WG693579	11/22/13 06:53
Benzo(g,h,i)perylene	< .006	mg/kg			WG693579	11/22/13 06:53
Benzo(k)fluoranthene	< .006	mg/kg			WG693579	11/22/13 06:53
Chrysene	< .006	mg/kg			WG693579	11/22/13 06:53
Dibenz(a,h)anthracene	< .006	mg/kg			WG693579	11/22/13 06:53
Fluoranthene	< .006	mg/kg			WG693579	11/22/13 06:53
Fluorene	< .006	mg/kg			WG693579	11/22/13 06:53
Indeno(1,2,3-cd)pyrene	< .006	mg/kg			WG693579	11/22/13 06:53
Naphthalene	< .02	mg/kg			WG693579	11/22/13 06:53
Phenanthrene	< .006	mg/kg			WG693579	11/22/13 06:53
Pyrene	< .006	mg/kg			WG693579	11/22/13 06:53
2-Fluorobiphenyl		% Rec.	81.00	51.1-131	WG693579	11/22/13 06:53
Nitrobenzene-d5		% Rec.	108.0	40.9-147	WG693579	11/22/13 06:53
p-Terphenyl-d14		% Rec.	88.20	45.3-138	WG693579	11/22/13 06:53
1-Methylnaphthalene	< .02	mg/kg			WG693584	11/23/13 02:17
2-Chloronaphthalene	< .02	mg/kg			WG693584	11/23/13 02:17
2-Methylnaphthalene	< .02	mg/kg			WG693584	11/23/13 02:17
Acenaphthene	< .006	mg/kg			WG693584	11/23/13 02:17
Acenaphthylene	< .006	mg/kg			WG693584	11/23/13 02:17
Anthracene	< .006	mg/kg			WG693584	11/23/13 02:17
Benzo(a)anthracene	< .006	mg/kg			WG693584	11/23/13 02:17
Benzo(a)pyrene	< .006	mg/kg			WG693584	11/23/13 02:17
Benzo(b)fluoranthene	< .006	mg/kg			WG693584	11/23/13 02:17
Benzo(g,h,i)perylene	< .006	mg/kg			WG693584	11/23/13 02:17

\* Performance of this Analyte is outside of established criteria.

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**YOUR LAB OF CHOICE**

LT Environmental- Rifle, CO  
Rob Fishburn  
820 Megan Ave, Unit B

Rifle, CO 81650

Quality Assurance Report  
Level II

L669561

12065 Lebanon Rd.  
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(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

November 27, 2013

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Benzo(k)fluoranthene	< .006	mg/kg			WG693584	11/23/13 02:17
Chrysene	< .006	mg/kg			WG693584	11/23/13 02:17
Dibenz(a,h)anthracene	< .006	mg/kg			WG693584	11/23/13 02:17
Fluoranthene	< .006	mg/kg			WG693584	11/23/13 02:17
Fluorene	< .006	mg/kg			WG693584	11/23/13 02:17
Indeno(1,2,3-cd)pyrene	< .006	mg/kg			WG693584	11/23/13 02:17
Naphthalene	< .02	mg/kg			WG693584	11/23/13 02:17
Phenanthrene	< .006	mg/kg			WG693584	11/23/13 02:17
Pyrene	< .006	mg/kg			WG693584	11/23/13 02:17
2-Fluorobiphenyl		% Rec.	103.0	51.1-131	WG693584	11/23/13 02:17
Nitrobenzene-d5		% Rec.	99.70	40.9-147	WG693584	11/23/13 02:17
p-Terphenyl-d14		% Rec.	98.60	45.3-138	WG693584	11/23/13 02:17
Chromium,Hexavalent	< 2	mg/kg			WG693442	11/24/13 06:20
TPH (GC/FID) High Fraction	< 4	mg/kg			WG693960	11/24/13 17:24
o-Terphenyl		% Rec.	94.70	50-150	WG693960	11/24/13 17:24
Mercury	< .02	mg/kg			WG693839	11/25/13 11:34
Specific Conductance	0.900	umhos/cm			WG694381	11/26/13 18:46

Analyte	Units	Result	Duplicate		RPD	Limit	Ref Samp	Batch
			Duplicate					
Arsenic	mg/kg	7.60	8.13	6.00	20		L669568-01	WG693269
Barium	mg/kg	120.	123.	4.00	20		L669568-01	WG693269
Cadmium	mg/kg	0.0	0.110	41.0*	20		L669568-01	WG693269
Chromium	mg/kg	30.0	36.7	19.0	20		L669568-01	WG693269
Copper	mg/kg	14.0	13.8	2.00	20		L669568-01	WG693269
Lead	mg/kg	32.0	29.1	9.00	20		L669568-01	WG693269
Nickel	mg/kg	11.0	11.9	9.00	20		L669568-01	WG693269
Selenium	mg/kg	0.0	0.552	461.*	20		L669568-01	WG693269
Silver	mg/kg	0.740	0.843	13.0	20		L669568-01	WG693269
Zinc	mg/kg	40.0	41.1	3.00	20		L669568-01	WG693269
ORP	mV	110.	110.	0.905	20		L668993-01	WG693468
ORP	mV	99.0	99.0	0.0	20		L669820-01	WG693468
Chromium,Hexavalent	mg/kg	0.0	0.0	0.0	20		L669550-01	WG693442
Chromium,Hexavalent	mg/kg	0.0	0.0	0.0	20		L669550-07	WG693442
pH	su	7.50	7.50	0.399	1		L669244-01	WG694114
pH	su	9.00	9.00	0.333	1		L669561-04	WG694114
Mercury	mg/kg	0.0	0.00742	2.00	20		L669589-01	WG693839
Specific Conductance	umhos/cm	390.	390.	0.0	20		L669550-01	WG694381
Specific Conductance	umhos/cm	2700	2700	0.222	20		L670284-02	WG694381

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Rob Fishburn  
820 Megan Ave, Unit B

Rifle, CO 81650

Quality Assurance Report  
Level II

L669561

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Tax I.D. 62-0814289

Est. 1970

November 27, 2013

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Benzene	mg/kg	.05	0.0477	95.5	70-130	WG693254
Ethylbenzene	mg/kg	.05	0.0489	97.8	70-130	WG693254
Toluene	mg/kg	.05	0.0497	99.3	70-130	WG693254
Total Xylene	mg/kg	.15	0.142	94.7	70-130	WG693254
a,a,a-Trifluorotoluene(PID)				101.0	54-144	WG693254
TPH (GC/FID) Low Fraction	mg/kg	5.5	4.45	80.9	63.5-137	WG693254
a,a,a-Trifluorotoluene(FID)				97.70	59-128	WG693254
Arsenic	mg/kg	237	224.	94.0	83.1-117	WG693269
Barium	mg/kg	252	241.	96.0	84.1-116	WG693269
Cadmium	mg/kg	191	177.	93.0	83.2-117	WG693269
Chromium	mg/kg	128	124.	97.0	81.3-118	WG693269
Copper	mg/kg	123	123.	100.	83.7-116	WG693269
Lead	mg/kg	103	95.5	93.0	83.1-117	WG693269
Nickel	mg/kg	118	105.	89.0	82-118	WG693269
Selenium	mg/kg	110	103.	94.0	78.7-122	WG693269
Silver	mg/kg	47.3	44.7	94.0	66.2-134	WG693269
Zinc	mg/kg	183	171.	94.0	82-118	WG693269
ORP	mV	100	100.	100.	90-110	WG693468
TPH (GC/FID) High Fraction	mg/kg	60	45.1	75.2	50-150	WG693416
o-Terphenyl				84.80	50-150	WG693416
1-Methylnaphthalene	mg/kg	.08	0.0617	77.1	62.5-121	WG693579
2-Chloronaphthalene	mg/kg	.08	0.0711	88.9	62.1-120	WG693579
2-Methylnaphthalene	mg/kg	.08	0.0598	74.8	62.5-121	WG693579
Acenaphthene	mg/kg	.08	0.0677	84.6	62.4-121	WG693579
Acenaphthylene	mg/kg	.08	0.0686	85.7	62.9-123	WG693579
Anthracene	mg/kg	.08	0.0741	92.7	64.9-129	WG693579
Benzo(a)anthracene	mg/kg	.08	0.0647	80.9	61.8-125	WG693579
Benzo(a)pyrene	mg/kg	.08	0.0682	85.3	63.4-119	WG693579
Benzo(b)fluoranthene	mg/kg	.08	0.0731	91.4	62.7-119	WG693579
Benzo(g,h,i)perylene	mg/kg	.08	0.0822	103.	68.2-129	WG693579
Benzo(k)fluoranthene	mg/kg	.08	0.0789	98.6	64.5-128	WG693579
Chrysene	mg/kg	.08	0.0751	93.9	64.4-128	WG693579
Dibenz(a,h)anthracene	mg/kg	.08	0.0827	103.	65.3-128	WG693579
Fluoranthene	mg/kg	.08	0.0705	88.1	61.8-129	WG693579
Fluorene	mg/kg	.08	0.0615	76.8	60.8-121	WG693579
Indeno(1,2,3-cd)pyrene	mg/kg	.08	0.0833	104.	67.6-129	WG693579
Naphthalene	mg/kg	.08	0.0668	83.5	59.5-116	WG693579
Phenanthrene	mg/kg	.08	0.0654	81.8	59.4-121	WG693579
Pyrene	mg/kg	.08	0.0712	89.0	61.2-130	WG693579
2-Fluorobiphenyl				93.30	51.1-131	WG693579
Nitrobenzene-d5				105.0	40.9-147	WG693579
p-Terphenyl-d14				106.0	45.3-138	WG693579
1-Methylnaphthalene	mg/kg	.08	0.0828	103.	62.5-121	WG693584
2-Chloronaphthalene	mg/kg	.08	0.0750	93.7	62.1-120	WG693584
2-Methylnaphthalene	mg/kg	.08	0.0826	103.	62.5-121	WG693584
Acenaphthene	mg/kg	.08	0.0752	94.0	62.4-121	WG693584
Acenaphthylene	mg/kg	.08	0.0764	95.5	62.9-123	WG693584
Anthracene	mg/kg	.08	0.0715	89.3	64.9-129	WG693584
Benzo(a)anthracene	mg/kg	.08	0.0835	104.	61.8-125	WG693584
Benzo(a)pyrene	mg/kg	.08	0.0740	92.4	63.4-119	WG693584

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Quality Assurance Report  
Level II

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Tax I.D. 62-0814289

Est. 1970

November 27, 2013

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Benzo(b)fluoranthene	mg/kg	.08	0.0801	100.	62.7-119	WG693584
Benzo(g,h,i)perylene	mg/kg	.08	0.0842	105.	68.2-129	WG693584
Benzo(k)fluoranthene	mg/kg	.08	0.0854	107.	64.5-128	WG693584
Chrysene	mg/kg	.08	0.0858	107.	64.4-128	WG693584
Dibenz(a,h)anthracene	mg/kg	.08	0.0835	104.	65.3-128	WG693584
Fluoranthene	mg/kg	.08	0.0851	106.	61.8-129	WG693584
Fluorene	mg/kg	.08	0.0796	99.4	60.8-121	WG693584
Indeno(1,2,3-cd)pyrene	mg/kg	.08	0.0840	105.	67.6-129	WG693584
Naphthalene	mg/kg	.08	0.0757	94.6	59.5-116	WG693584
Phenanthrene	mg/kg	.08	0.0783	97.8	59.4-121	WG693584
Pyrene	mg/kg	.08	0.0776	97.0	61.2-130	WG693584
2-Fluorobiphenyl				104.0	51.1-131	WG693584
Nitrobenzene-d5				101.0	40.9-147	WG693584
p-Terphenyl-d14				102.0	45.3-138	WG693584
Chromium,Hexavalent	mg/kg	146	150.	103.	80-120	WG693442
TPH (GC/FID) High Fraction	mg/kg	60	43.3	72.2	50-150	WG693960
o-Terphenyl				83.60	50-150	WG693960
pH	su	5.93	5.80	97.8*	98.3-101.7	WG694114
Mercury	mg/kg	12.4	13.0	105.	71.6-128	WG693839
Specific Conductance	umhos/cm	510	510.	100.	85-115	WG694381

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Benzene	mg/kg	0.0475	0.0477	95.0	70-130	0.510	20	WG693254
Ethylbenzene	mg/kg	0.0487	0.0489	97.0	70-130	0.410	20	WG693254
Toluene	mg/kg	0.0493	0.0497	99.0	70-130	0.660	20	WG693254
Total Xylene	mg/kg	0.142	0.142	94.0	70-130	0.280	20	WG693254
a,a,a-Trifluorotoluene(PID)				101.0	54-144			WG693254
TPH (GC/FID) Low Fraction	mg/kg	4.86	4.45	88.0	63.5-137	8.87	20	WG693254
a,a,a-Trifluorotoluene(FID)				98.00	59-128			WG693254
ORP	mV	100.	100.	100.	90-110	0.0	20	WG693468
TPH (GC/FID) High Fraction	mg/kg	41.8	45.1	70.0	50-150	7.63	20	WG693416
o-Terphenyl				77.60	50-150			WG693416
1-Methylnaphthalene	mg/kg	0.0702	0.0617	88.0	62.5-121	12.9	20	WG693579
2-Chloronaphthalene	mg/kg	0.0792	0.0711	99.0	62.1-120	10.7	20	WG693579
2-Methylnaphthalene	mg/kg	0.0693	0.0598	87.0	62.5-121	14.6	20	WG693579
Acenaphthene	mg/kg	0.0749	0.0677	94.0	62.4-121	10.2	20	WG693579
Acenaphthylene	mg/kg	0.0765	0.0686	96.0	62.9-123	10.9	20	WG693579
Anthracene	mg/kg	0.0823	0.0741	103.	64.9-129	10.5	20	WG693579
Benzo(a)anthracene	mg/kg	0.0776	0.0647	97.0	61.8-125	18.1	20	WG693579
Benzo(a)pyrene	mg/kg	0.0755	0.0682	94.0	63.4-119	10.1	20	WG693579
Benzo(b)fluoranthene	mg/kg	0.0764	0.0731	95.0	62.7-119	4.41	20	WG693579

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Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Benzo(g,h,i)perylene	mg/kg	0.0914	0.0822	114.	68.2-129	10.6	20	WG693579
Benzo(k)fluoranthene	mg/kg	0.0838	0.0789	105.	64.5-128	6.07	20	WG693579
Chrysene	mg/kg	0.0800	0.0751	100.	64.4-128	6.23	20	WG693579
Dibenz(a,h)anthracene	mg/kg	0.0917	0.0827	115.	65.3-128	10.3	20	WG693579
Fluoranthene	mg/kg	0.0784	0.0705	98.0	61.8-129	10.6	20	WG693579
Fluorene	mg/kg	0.0681	0.0615	85.0	60.8-121	10.3	20	WG693579
Indeno(1,2,3-cd)pyrene	mg/kg	0.0919	0.0833	115.	67.6-129	9.84	20	WG693579
Naphthalene	mg/kg	0.0768	0.0668	96.0	59.5-116	13.9	20	WG693579
Phenanthrene	mg/kg	0.0733	0.0654	92.0	59.4-121	11.3	20	WG693579
Pyrene	mg/kg	0.0807	0.0712	101.	61.2-130	12.5	20	WG693579
2-Fluorobiphenyl				87.60	51.1-131			WG693579
Nitrobenzene-d5				96.90	40.9-147			WG693579
p-Terphenyl-d14				101.0	45.3-138			WG693579
1-Methylnaphthalene	mg/kg	0.0812	0.0828	101.	62.5-121	1.96	20	WG693584
2-Chloronaphthalene	mg/kg	0.0750	0.0750	94.0	62.1-120	0.110	20	WG693584
2-Methylnaphthalene	mg/kg	0.0817	0.0826	102.	62.5-121	1.11	20	WG693584
Acenaphthene	mg/kg	0.0746	0.0752	93.0	62.4-121	0.740	20	WG693584
Acenaphthylene	mg/kg	0.0756	0.0764	94.0	62.9-123	0.990	20	WG693584
Anthracene	mg/kg	0.0708	0.0715	88.0	64.9-129	0.920	20	WG693584
Benzo(a)anthracene	mg/kg	0.0825	0.0835	103.	61.8-125	1.23	20	WG693584
Benzo(a)pyrene	mg/kg	0.0735	0.0740	92.0	63.4-119	0.620	20	WG693584
Benzo(b)fluoranthene	mg/kg	0.0794	0.0801	99.0	62.7-119	0.870	20	WG693584
Benzo(g,h,i)perylene	mg/kg	0.0834	0.0842	104.	68.2-129	0.990	20	WG693584
Benzo(k)fluoranthene	mg/kg	0.0832	0.0854	104.	64.5-128	2.58	20	WG693584
Chrysene	mg/kg	0.0827	0.0858	103.	64.4-128	3.69	20	WG693584
Dibenz(a,h)anthracene	mg/kg	0.0824	0.0835	103.	65.3-128	1.35	20	WG693584
Fluoranthene	mg/kg	0.0838	0.0851	105.	61.8-129	1.59	20	WG693584
Fluorene	mg/kg	0.0794	0.0796	99.0	60.8-121	0.150	20	WG693584
Indeno(1,2,3-cd)pyrene	mg/kg	0.0825	0.0840	103.	67.6-129	1.89	20	WG693584
Naphthalene	mg/kg	0.0751	0.0757	94.0	59.5-116	0.830	20	WG693584
Phenanthrene	mg/kg	0.0777	0.0783	97.0	59.4-121	0.750	20	WG693584
Pyrene	mg/kg	0.0770	0.0776	96.0	61.2-130	0.690	20	WG693584
2-Fluorobiphenyl				102.0	51.1-131			WG693584
Nitrobenzene-d5				101.0	40.9-147			WG693584
p-Terphenyl-d14				99.00	45.3-138			WG693584
Chromium,Hexavalent	mg/kg	144.	150.	99.0	80-120	4.08	20	WG693442
TPH (GC/FID) High Fraction	mg/kg	42.2	43.3	70.0	50-150	2.54	20	WG693960
o-Terphenyl				80.90	50-150			WG693960
pH	su	5.80	5.80	98*	98.3-101.7	0.0	20	WG694114
Specific Conductance	umhos/	510.	510.	100.	85-115	0.0	20	WG694381

Analyte	Units	Matrix Spike			% Rec	Limit	Ref Samp	Batch
		MS Res	Ref Res	TV				
TPH (GC/FID) Low Fraction	mg/kg	12.9	0.0883	5.5	47.0	28.5-138	L669524-01	WG693254
a,a,a-Trifluorotoluene(FID)					93.70	59-128		WG693254
Arsenic	mg/kg	54.6	8.13	50	93.0	75-125	L669568-01	WG693269

\* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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Rob Fishburn  
820 Megan Ave, Unit B

Rifle, CO 81650

Quality Assurance Report  
Level II

L669561

12065 Lebanon Rd.  
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Tax I.D. 62-0814289

Est. 1970

November 27, 2013

Analyte	Units	MS Res	Matrix Spike			% Rec	Limit	Ref Samp	Batch
			Ref Res	TV					
Barium	mg/kg	158.	123.	50		70.0*	75-125	L669568-01	WG693269
Cadmium	mg/kg	46.8	0.110	50		93.0	75-125	L669568-01	WG693269
Chromium	mg/kg	87.6	36.7	50		100.	75-125	L669568-01	WG693269
Copper	mg/kg	65.2	13.8	50		100.	75-125	L669568-01	WG693269
Lead	mg/kg	75.8	29.1	50		94.0	75-125	L669568-01	WG693269
Nickel	mg/kg	58.2	11.9	50		93.0	75-125	L669568-01	WG693269
Selenium	mg/kg	44.9	0.552	50		89.0	75-125	L669568-01	WG693269
Silver	mg/kg	48.5	0.843	50		95.0	75-125	L669568-01	WG693269
Zinc	mg/kg	91.1	41.1	50		100.	75-125	L669568-01	WG693269
Benzene	mg/kg	0.190	0.0	.05		76.0	49.7-127	L669524-01	WG693254
Ethylbenzene	mg/kg	0.195	0.0	.05		78.0	40.8-141	L669524-01	WG693254
Toluene	mg/kg	0.186	0.000328	.05		74.0	49.8-132	L669524-01	WG693254
Total Xylene	mg/kg	0.594	0.000605	.15		79.0	41.2-140	L669524-01	WG693254
a,a,a-Trifluorotoluene(PID)						101.0	54-144		WG693254
TPH (GC/FID) High Fraction	mg/kg	48.1	0.0	60		80.0	50-150	L669561-04	WG693416
o-Terphenyl						89.60	50-150		WG693416
1-Methylnaphthalene	mg/kg	0.0585	0.	.016		73.1	58.9-123	L669476-01	WG693579
2-Chloronaphthalene	mg/kg	0.0567	0.	.016		70.9	61.6-120	L669476-01	WG693579
2-Methylnaphthalene	mg/kg	0.0607	0.	.016		75.9	50.7-129	L669476-01	WG693579
Acenaphthene	mg/kg	0.0602	0.	.016		75.3	51.6-124	L669476-01	WG693579
Acenaphthylene	mg/kg	0.0605	0.	.016		75.6	58.3-126	L669476-01	WG693579
Anthracene	mg/kg	0.0648	0.00487	.016		74.9	47.9-137	L669476-01	WG693579
Benzo(a)anthracene	mg/kg	0.0578	0.00698	.016		63.5	34.2-138	L669476-01	WG693579
Benzo(a)pyrene	mg/kg	0.0603	0.00618	.016		67.6	34.6-133	L669476-01	WG693579
Benzo(b)fluoranthene	mg/kg	0.0578	0.00746	.016		62.9	19.8-142	L669476-01	WG693579
Benzo(g,h,i)perylene	mg/kg	0.0626	0.0102	.016		65.5	20-149	L669476-01	WG693579
Benzo(k)fluoranthene	mg/kg	0.0588	0.00631	.016		65.6	32.1-137	L669476-01	WG693579
Chrysene	mg/kg	0.0584	0.00711	.016		64.1	36.6-137	L669476-01	WG693579
Dibenz(a,h)anthracene	mg/kg	0.0617	0.00651	.016		69.0	27.1-145	L669476-01	WG693579
Fluoranthene	mg/kg	0.0642	0.00768	.016		70.6	39.8-141	L669476-01	WG693579
Fluorene	mg/kg	0.0521	0.	.016		65.2	42.5-130	L669476-01	WG693579
Indeno(1,2,3-cd)pyrene	mg/kg	0.0617	0.00735	.016		68.0	19-151	L669476-01	WG693579
Naphthalene	mg/kg	0.0680	0.00388	.016		80.1	40.6-135	L669476-01	WG693579
Phenanthrene	mg/kg	0.0574	0.00518	.016		65.3	39.7-129	L669476-01	WG693579
Pyrene	mg/kg	0.0585	0.00765	.016		63.6	31.5-141	L669476-01	WG693579
2-Fluorobiphenyl						66.80	51.1-131		WG693579
Nitrobenzene-d5						83.80	40.9-147		WG693579
p-Terphenyl-d14						76.00	45.3-138		WG693579
1-Methylnaphthalene	mg/kg	0.0780	0.000610	.08		96.8	58.9-123	L669854-02	WG693584
2-Chloronaphthalene	mg/kg	0.0704	0.	.08		88.0	61.6-120	L669854-02	WG693584
2-Methylnaphthalene	mg/kg	0.0790	0.000987	.08		97.6	50.7-129	L669854-02	WG693584
Acenaphthene	mg/kg	0.0688	0.	.08		86.1	51.6-124	L669854-02	WG693584
Acenaphthylene	mg/kg	0.0716	0.	.08		89.6	58.3-126	L669854-02	WG693584
Anthracene	mg/kg	0.0645	0.	.08		80.6	47.9-137	L669854-02	WG693584
Benzo(a)anthracene	mg/kg	0.0687	0.000922	.08		84.8	34.2-138	L669854-02	WG693584
Benzo(a)pyrene	mg/kg	0.0644	0.	.08		80.5	34.6-133	L669854-02	WG693584
Benzo(b)fluoranthene	mg/kg	0.0629	0.	.08		78.6	19.8-142	L669854-02	WG693584
Benzo(g,h,i)perylene	mg/kg	0.0650	0.000828	.08		80.3	20-149	L669854-02	WG693584
Benzo(k)fluoranthene	mg/kg	0.0631	0.	.08		78.8	32.1-137	L669854-02	WG693584
Chrysene	mg/kg	0.0673	0.000935	.08		83.0	36.6-137	L669854-02	WG693584
Dibenz(a,h)anthracene	mg/kg	0.0611	0.	.08		76.3	27.1-145	L669854-02	WG693584

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Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
Fluoranthene	mg/kg	0.0823	0.00331	.08	98.7	39.8-141	L669854-02	WG693584
Fluorene	mg/kg	0.0706	0.	.08	88.3	42.5-130	L669854-02	WG693584
Indeno(1,2,3-cd)pyrene	mg/kg	0.0626	0.	.08	78.3	19-151	L669854-02	WG693584
Naphthalene	mg/kg	0.0746	0.00153	.08	91.4	40.6-135	L669854-02	WG693584
Phenanthrene	mg/kg	0.0689	0.000564	.08	85.5	39.7-129	L669854-02	WG693584
Pyrene	mg/kg	0.0693	0.00288	.08	83.1	31.5-141	L669854-02	WG693584
2-Fluorobiphenyl					101.0	51.1-131		WG693584
Nitrobenzene-d5					98.80	40.9-147		WG693584
p-Terphenyl-d14					105.0	45.3-138		WG693584
Chromium, Hexavalent	mg/kg	19.5	0.0	20	98.0	75-125	L669561-01	WG693442
TPH (GC/FID) High Fraction	mg/kg	52.6	1.19	60	86.0	50-150	L670298-02	WG693960
o-Terphenyl					83.80	50-150		WG693960
Mercury	mg/kg	0.256	0.00742	.25	100.	80-120	L669589-01	WG693839

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
TPH (GC/FID) Low Fraction	mg/kg	14.6	12.9	52.8	28.5-138	12.2	23.6	L669524-01	WG693254
a,a,a-Trifluorotoluene(FID)				93.40	59-128				WG693254
Arsenic	mg/kg	51.5	54.6	86.8	75-125	6.00	20	L669568-01	WG693269
Barium	mg/kg	145.	158.	42.7*	75-125	9.00	20	L669568-01	WG693269
Cadmium	mg/kg	44.9	46.8	89.6	75-125	4.00	20	L669568-01	WG693269
Chromium	mg/kg	82.2	87.6	91.0	75-125	6.00	20	L669568-01	WG693269
Copper	mg/kg	62.0	65.2	96.3	75-125	5.00	20	L669568-01	WG693269
Lead	mg/kg	68.8	75.8	79.4	75-125	10.0	20	L669568-01	WG693269
Nickel	mg/kg	55.1	58.2	86.4	75-125	5.00	20	L669568-01	WG693269
Selenium	mg/kg	42.8	44.9	84.6	75-125	5.00	20	L669568-01	WG693269
Silver	mg/kg	46.4	48.5	91.1	75-125	5.00	20	L669568-01	WG693269
Zinc	mg/kg	86.6	91.1	91.0	75-125	5.00	20	L669568-01	WG693269
Benzene	mg/kg	0.182	0.190	73.0	49.7-127	4.11	23.5	L669524-01	WG693254
Ethylbenzene	mg/kg	0.184	0.195	73.7	40.8-141	5.67	23.8	L669524-01	WG693254
Toluene	mg/kg	0.177	0.186	70.5	49.8-132	5.14	23.5	L669524-01	WG693254
Total Xylene	mg/kg	0.562	0.594	74.9	41.2-140	5.52	23.7	L669524-01	WG693254
a,a,a-Trifluorotoluene(PID)				100.0	54-144				WG693254
TPH (GC/FID) High Fraction	mg/kg	43.4	48.1	72.4	50-150	10.1	20	L669561-04	WG693416
o-Terphenyl				83.10	50-150				WG693416
1-Methylnaphthalene	mg/kg	0.0684	0.0585	85.5	58.9-123	15.7	20	L669476-01	WG693579
2-Chloronaphthalene	mg/kg	0.0594	0.0567	74.3	61.6-120	4.67	20	L669476-01	WG693579
2-Methylnaphthalene	mg/kg	0.0662	0.0607	82.7	50.7-129	8.57	20	L669476-01	WG693579
Acenaphthene	mg/kg	0.0626	0.0602	78.3	51.6-124	3.92	20	L669476-01	WG693579
Acenaphthylene	mg/kg	0.0626	0.0605	78.3	58.3-126	3.55	20	L669476-01	WG693579
Anthracene	mg/kg	0.0645	0.0648	74.5	47.9-137	0.550	20	L669476-01	WG693579
Benzo(a)anthracene	mg/kg	0.0604	0.0578	66.8	34.2-138	4.44	22.8	L669476-01	WG693579
Benzo(a)pyrene	mg/kg	0.0572	0.0603	63.8	34.6-133	5.22	26.3	L669476-01	WG693579
Benzo(b)fluoranthene	mg/kg	0.0582	0.0578	63.5	19.8-142	0.790	30.3	L669476-01	WG693579

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Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref	Samp	Batch
			Ref	%Rec						
Benzo(g,h,i)perylene	mg/kg	0.0644	0.0626	67.8	20-149	2.86	27.1	L669476-01	WG693579	
Benzo(k)fluoranthene	mg/kg	0.0575	0.0588	64.0	32.1-137	2.16	24.6	L669476-01	WG693579	
Chrysene	mg/kg	0.0584	0.0584	64.1	36.6-137	0.100	22.7	L669476-01	WG693579	
Dibenz(a,h)anthracene	mg/kg	0.0646	0.0617	72.6	27.1-145	4.59	21.9	L669476-01	WG693579	
Fluoranthene	mg/kg	0.0642	0.0642	70.7	39.8-141	0.0500	22.2	L669476-01	WG693579	
Fluorene	mg/kg	0.0543	0.0521	67.9	42.5-130	4.11	20	L669476-01	WG693579	
Indeno(1,2,3-cd)pyrene	mg/kg	0.0620	0.0617	68.3	19-151	0.420	25	L669476-01	WG693579	
Naphthalene	mg/kg	0.0811	0.0680	96.6	40.6-135	17.6	20	L669476-01	WG693579	
Phenanthrene	mg/kg	0.0601	0.0574	68.6	39.7-129	4.58	20	L669476-01	WG693579	
Pyrene	mg/kg	0.0613	0.0585	67.1	31.5-141	4.65	23.5	L669476-01	WG693579	
2-Fluorobiphenyl				70.30	51.1-131				WG693579	
Nitrobenzene-d5				96.90	40.9-147				WG693579	
p-Terphenyl-d14				80.70	45.3-138				WG693579	
1-Methylnaphthalene	mg/kg	0.0817	0.0780	101.	58.9-123	4.63	20	L669854-02	WG693584	
2-Chloronaphthalene	mg/kg	0.0742	0.0704	92.8	61.6-120	5.21	20	L669854-02	WG693584	
2-Methylnaphthalene	mg/kg	0.0843	0.0790	104.	50.7-129	6.40	20	L669854-02	WG693584	
Acenaphthene	mg/kg	0.0738	0.0688	92.2	51.6-124	6.96	20	L669854-02	WG693584	
Acenaphthylene	mg/kg	0.0738	0.0716	92.2	58.3-126	2.96	20	L669854-02	WG693584	
Anthracene	mg/kg	0.0685	0.0645	85.6	47.9-137	6.03	20	L669854-02	WG693584	
Benzo(a)anthracene	mg/kg	0.0811	0.0687	100.	34.2-138	16.5	22.8	L669854-02	WG693584	
Benzo(a)pyrene	mg/kg	0.0780	0.0644	97.5	34.6-133	19.2	26.3	L669854-02	WG693584	
Benzo(b)fluoranthene	mg/kg	0.0788	0.0629	98.5	19.8-142	22.5	30.3	L669854-02	WG693584	
Benzo(g,h,i)perylene	mg/kg	0.0789	0.0650	97.6	20-149	19.3	27.1	L669854-02	WG693584	
Benzo(k)fluoranthene	mg/kg	0.0736	0.0631	92.0	32.1-137	15.5	24.6	L669854-02	WG693584	
Chrysene	mg/kg	0.0754	0.0673	93.1	36.6-137	11.3	22.7	L669854-02	WG693584	
Dibenz(a,h)anthracene	mg/kg	0.0738	0.0611	92.3	27.1-145	18.9	21.9	L669854-02	WG693584	
Fluoranthene	mg/kg	0.0887	0.0823	107.	39.8-141	7.45	22.2	L669854-02	WG693584	
Fluorene	mg/kg	0.0759	0.0706	94.9	42.5-130	7.26	20	L669854-02	WG693584	
Indeno(1,2,3-cd)pyrene	mg/kg	0.0763	0.0626	95.4	19-151	19.7	25	L669854-02	WG693584	
Naphthalene	mg/kg	0.0778	0.0746	95.3	40.6-135	4.12	20	L669854-02	WG693584	
Phenanthrene	mg/kg	0.0718	0.0689	89.1	39.7-129	4.15	20	L669854-02	WG693584	
Pyrene	mg/kg	0.0790	0.0693	95.2	31.5-141	13.1	23.5	L669854-02	WG693584	
2-Fluorobiphenyl				93.50	51.1-131				WG693584	
Nitrobenzene-d5				87.20	40.9-147				WG693584	
p-Terphenyl-d14				105.0	45.3-138				WG693584	
Chromium,Hexavalent	mg/kg	20.1	19.5	100.	75-125	3.03	20	L669561-01	WG693442	
TPH (GC/FID) High Fraction	mg/kg	45.1	52.6	73.2	50-150	15.3	20	L670298-02	WG693960	
o-Terphenyl				85.00	50-150				WG693960	
Mercury	mg/kg	0.265	0.256	103.	80-120	3.00	20	L669589-01	WG693839	

Post Spike

\* Performance of this Analyte is outside of established criteria.

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Post Spike

Serial Dilution

Batch number /Run number / Sample number cross reference

WG693254: R2858424 R2858705: L669561-01 02 03 04  
WG693269: R2858440 R2860004: L669561-01 02 03 04  
WG693468: R2858589: L669561-01 02 03 04  
WG693294: R2858719: L669561-01 02 03 04  
WG693416: R2858754: L669561-01 03 04  
WG693579: R2858801 R2858962: L669561-01 02  
WG693584: R2858881 R2858963 R2859365: L669561-03 04  
WG693442: R2859081: L669561-01 02 03 04  
WG693960: R2859352 R2859843: L669561-02  
WG694114: R2859479: L669561-01 02 03 04  
WG693839: R2859600: L669561-01 02 03 04  
WG694381: R2860228: L669561-01 02 03 04

\* \* Calculations are performed prior to rounding of reported values.

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The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.



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## Report Summary

Monday December 02, 2013

Report Number: L669550


Samples Received: 11/19/13

Client Project: 047813001

Description: Voloshin Mortin 1-8

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

  
Jared Willis , ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,  
FL - E87487, GA - 923, IN - C-IN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

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Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

December 02, 2013

Date Received : November 19, 2013  
Description : Voloshin Mortin 1-8

ESC Sample # : L669550-01

Sample ID : ESW01 8FT

Site ID :

Collected By : Chris McKisson  
Collection Date : 11/15/13 08:25

Project # : 047813001

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium, Hexavalent	BDL	2.0	mg/kg	3060A/7196A	11/24/13	1
Chromium, Trivalent	8.4	2.0	mg/kg	Calc.	11/27/13	1
ORP	100		mV	2580 B-2011	11/22/13	1
pH	8.6		su	9045D	11/25/13	1
Sodium Adsorption Ratio	2.8			Calc.	11/22/13	1
Specific Conductance	390		umhos/cm	9050AMod	11/26/13	1
Mercury	0.022	0.020	mg/kg	7471	11/25/13	1
Arsenic	4.2	1.0	mg/kg	6010B	11/27/13	1
Barium	100	0.25	mg/kg	6010B	11/27/13	1
Cadmium	BDL	0.25	mg/kg	6010B	11/27/13	1
Chromium	8.4	0.50	mg/kg	6010B	11/27/13	1
Copper	8.7	1.0	mg/kg	6010B	11/27/13	1
Lead	7.8	0.25	mg/kg	6010B	11/27/13	1
Nickel	7.6	1.0	mg/kg	6010B	11/27/13	1
Selenium	BDL	1.0	mg/kg	6010B	11/27/13	1
Silver	BDL	0.50	mg/kg	6010B	11/27/13	1
Zinc	35.	1.5	mg/kg	6010B	11/27/13	1
Benzene	BDL	0.0025	mg/kg	8021/8015	11/21/13	5
Toluene	BDL	0.025	mg/kg	8021/8015	11/21/13	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	11/21/13	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	11/21/13	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	11/21/13	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	94.8		% Rec.	8021/8015	11/21/13	5
a,a,a-Trifluorotoluene(PID)	100.		% Rec.	8021/8015	11/21/13	5
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	3546/DRO	11/22/13	1
Surrogate recovery(%)						
o-Terphenyl	78.5		% Rec.	3546/DRO	11/22/13	1
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L669550-01 (PH) - 8.6@19.1c



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# REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

December 02, 2013

Date Received : November 19, 2013  
Description : Voloshin Mortin 1-8

ESC Sample # : L669550-01

Sample ID : ESW01 8FT

Site ID :

Collected By : Chris McKisson  
Collection Date : 11/15/13 08:25

Project # : 047813001

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Fluorene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Naphthalene	BDL	0.020	mg/kg	8270C-SIM	11/22/13	1
Phenanthrene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
1-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/22/13	1
2-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/22/13	1
2-Chloronaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/22/13	1
Surrogate Recovery						
Nitrobenzene-d5	101.		% Rec.	8270C-SIM	11/22/13	1
2-Fluorobiphenyl	75.1		% Rec.	8270C-SIM	11/22/13	1
p-Terphenyl-d14	81.0		% Rec.	8270C-SIM	11/22/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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L669550-01 (PH) - 8.6@19.1c



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# REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

December 02, 2013

Date Received : November 19, 2013  
Description : Voloshin Mortin 1-8

ESC Sample # : L669550-02

Sample ID : EBOT 10FT

Site ID :

Collected By : Chris McKisson  
Collection Date : 11/15/13 09:00

Project # : 047813001

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium, Hexavalent	BDL	20.	mg/kg	3060A/7196A	11/24/13	10
Chromium, Trivalent	BDL	20.	mg/kg	Calc.	11/27/13	1
ORP	98.		mV	2580 B-2011	11/22/13	1
pH	8.7		su	9045D	11/25/13	1
Sodium Adsorption Ratio	3.4			Calc.	11/22/13	1
Specific Conductance	420		umhos/cm	9050AMod	11/26/13	1
Mercury	0.024	0.020	mg/kg	7471	11/25/13	1
Arsenic	2.7	1.0	mg/kg	6010B	11/27/13	1
Barium	48.	0.25	mg/kg	6010B	11/27/13	1
Cadmium	BDL	0.25	mg/kg	6010B	11/27/13	1
Chromium	5.5	0.50	mg/kg	6010B	11/27/13	1
Copper	7.0	1.0	mg/kg	6010B	11/27/13	1
Lead	5.9	0.25	mg/kg	6010B	11/27/13	1
Nickel	5.5	1.0	mg/kg	6010B	11/27/13	1
Selenium	BDL	1.0	mg/kg	6010B	11/27/13	1
Silver	BDL	0.50	mg/kg	6010B	11/27/13	1
Zinc	21.	1.5	mg/kg	6010B	11/27/13	1
Benzene	BDL	0.0025	mg/kg	8021/8015	11/21/13	5
Toluene	BDL	0.025	mg/kg	8021/8015	11/21/13	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	11/21/13	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	11/21/13	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	11/21/13	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	94.9		% Rec.	8021/8015	11/21/13	5
a,a,a-Trifluorotoluene(PID)	100.		% Rec.	8021/8015	11/21/13	5
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	3546/DRO	11/22/13	1
Surrogate recovery(%)						
o-Terphenyl	78.6		% Rec.	3546/DRO	11/22/13	1
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L669550-02 (PH) - 8.7@19.5c  
L669550-02 (CR6) - Diluted due to sample color interference.



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# REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

December 02, 2013

Date Received : November 19, 2013  
Description : Voloshin Mortin 1-8

ESC Sample # : L669550-02

Sample ID : EBOT 10FT

Site ID :

Collected By : Chris McKisson  
Collection Date : 11/15/13 09:00

Project # : 047813001

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Fluorene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Naphthalene	BDL	0.020	mg/kg	8270C-SIM	11/22/13	1
Phenanthrene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
1-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/22/13	1
2-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/22/13	1
2-Chloronaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/22/13	1
Surrogate Recovery						
Nitrobenzene-d5	90.9		% Rec.	8270C-SIM	11/22/13	1
2-Fluorobiphenyl	77.3		% Rec.	8270C-SIM	11/22/13	1
p-Terphenyl-d14	99.1		% Rec.	8270C-SIM	11/22/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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L669550-02 (PH) - 8.7@19.5c

L669550-02 (CR6) - Diluted due to sample color interference.



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# REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

December 02, 2013

Date Received : November 19, 2013  
Description : Voloshin Mortin 1-8

ESC Sample # : L669550-03

Sample ID : NEBOT 11FT

Site ID :

Collected By : Chris McKisson  
Collection Date : 11/15/13 10:50

Project # : 047813001

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium,Hexavalent	BDL	10.	mg/kg	3060A/7196A	11/24/13	5
Chromium,Trivalent	BDL	10.	mg/kg	Calc.	11/27/13	1
ORP	84.		mV	2580 B-2011	11/22/13	1
pH	9.0		su	9045D	11/25/13	1
Sodium Adsorption Ratio	4.9			Calc.	11/22/13	1
Specific Conductance	480		umhos/cm	9050AMod	11/26/13	1
Mercury	0.034	0.020	mg/kg	7471	11/25/13	1
Arsenic	4.4	1.0	mg/kg	6010B	11/27/13	1
Barium	81.	0.25	mg/kg	6010B	11/27/13	1
Cadmium	BDL	0.25	mg/kg	6010B	11/27/13	1
Chromium	8.5	0.50	mg/kg	6010B	11/27/13	1
Copper	13.	1.0	mg/kg	6010B	11/27/13	1
Lead	8.5	0.25	mg/kg	6010B	11/27/13	1
Nickel	9.1	1.0	mg/kg	6010B	11/27/13	1
Selenium	1.1	1.0	mg/kg	6010B	11/27/13	1
Silver	BDL	0.50	mg/kg	6010B	11/27/13	1
Zinc	36.	1.5	mg/kg	6010B	11/27/13	1
Benzene	0.0068	0.0025	mg/kg	8021/8015	11/21/13	5
Toluene	BDL	0.025	mg/kg	8021/8015	11/21/13	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	11/21/13	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	11/21/13	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	11/21/13	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	94.7		% Rec.	8021/8015	11/21/13	5
a,a,a-Trifluorotoluene(PID)	99.9		% Rec.	8021/8015	11/21/13	5
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	3546/DRO	11/22/13	1
Surrogate recovery(%)						
o-Terphenyl	85.4		% Rec.	3546/DRO	11/22/13	1
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L669550-03 (PH) - 9.0@19.0c  
L669550-03 (CR6) - Diluted due to sample color interference.





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# REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

December 02, 2013

Date Received : November 19, 2013  
Description : Voloshin Mortin 1-8

ESC Sample # : L669550-03

Sample ID : NEBOT 11FT

Site ID :

Collected By : Chris McKisson  
Collection Date : 11/15/13 10:50

Project # : 047813001

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Fluorene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Naphthalene	BDL	0.020	mg/kg	8270C-SIM	11/22/13	1
Phenanthrene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
1-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/22/13	1
2-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/22/13	1
2-Chloronaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/22/13	1
Surrogate Recovery						
Nitrobenzene-d5	113.		% Rec.	8270C-SIM	11/22/13	1
2-Fluorobiphenyl	87.6		% Rec.	8270C-SIM	11/22/13	1
p-Terphenyl-d14	101.		% Rec.	8270C-SIM	11/22/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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L669550-03 (PH) - 9.0@19.0c

L669550-03 (CR6) - Diluted due to sample color interference.



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# REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

December 02, 2013

Date Received : November 19, 2013  
Description : Voloshin Mortin 1-8

ESC Sample # : L669550-04

Sample ID : NESW 7FT

Site ID :

Collected By : Chris McKisson  
Collection Date : 11/15/13 10:55

Project # : 047813001

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium, Hexavalent	BDL	2.0	mg/kg	3060A/7196A	11/24/13	1
Chromium, Trivalent	7.5	2.0	mg/kg	Calc.	11/27/13	1
ORP	65.		mV	2580 B-2011	11/22/13	1
pH	9.5		su	9045D	11/25/13	1
Sodium Adsorption Ratio	17.			Calc.	11/22/13	1
Specific Conductance	860		umhos/cm	9050AMod	11/26/13	1
Mercury	0.020	0.020	mg/kg	7471	11/25/13	1
Arsenic	4.9	1.0	mg/kg	6010B	11/27/13	1
Barium	90.	0.25	mg/kg	6010B	11/27/13	1
Cadmium	BDL	0.25	mg/kg	6010B	11/27/13	1
Chromium	7.5	0.50	mg/kg	6010B	11/27/13	1
Copper	17.	1.0	mg/kg	6010B	11/27/13	1
Lead	9.3	0.25	mg/kg	6010B	11/27/13	1
Nickel	9.0	1.0	mg/kg	6010B	11/27/13	1
Selenium	1.8	1.0	mg/kg	6010B	11/27/13	1
Silver	BDL	0.50	mg/kg	6010B	11/27/13	1
Zinc	34.	1.5	mg/kg	6010B	11/27/13	1
Benzene	BDL	0.0025	mg/kg	8021/8015	11/21/13	5
Toluene	BDL	0.025	mg/kg	8021/8015	11/21/13	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	11/21/13	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	11/21/13	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	11/21/13	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	95.0		% Rec.	8021/8015	11/21/13	5
a,a,a-Trifluorotoluene(PID)	99.9		% Rec.	8021/8015	11/21/13	5
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	3546/DRO	11/22/13	1
Surrogate recovery(%)						
o-Terphenyl	83.7		% Rec.	3546/DRO	11/22/13	1
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L669550-04 (PH) - 9.5@18.6c



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Est. 1970

# REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

December 02, 2013

Date Received : November 19, 2013  
Description : Voloshin Mortin 1-8

ESC Sample # : L669550-04

Sample ID : NESW 7FT

Site ID :

Collected By : Chris McKisson  
Collection Date : 11/15/13 10:55

Project # : 047813001

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Fluorene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Naphthalene	BDL	0.020	mg/kg	8270C-SIM	11/22/13	1
Phenanthrene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
1-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/22/13	1
2-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/22/13	1
2-Chloronaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/22/13	1
Surrogate Recovery						
Nitrobenzene-d5	106.		% Rec.	8270C-SIM	11/22/13	1
2-Fluorobiphenyl	79.4		% Rec.	8270C-SIM	11/22/13	1
p-Terphenyl-d14	94.4		% Rec.	8270C-SIM	11/22/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 12/02/13 10:15 Printed: 12/02/13 10:15  
L669550-04 (PH) - 9.5@18.6c



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Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

December 02, 2013

Date Received : November 19, 2013  
Description : Voloshin Mortin 1-8

ESC Sample # : L669550-05

Sample ID : BOT 12FT

Site ID :

Collected By : Chris McKisson  
Collection Date : 11/15/13 11:02

Project # : 047813001

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium,Hexavalent	BDL	2.0	mg/kg	3060A/7196A	11/24/13	1
Chromium,Trivalent	13.	2.0	mg/kg	Calc.	12/02/13	1
ORP	78.		mV	2580 B-2011	11/22/13	1
pH	8.9		su	9045D	11/25/13	1
Sodium Adsorption Ratio	4.4			Calc.	11/22/13	1
Specific Conductance	350		umhos/cm	9050AMod	11/26/13	1
Mercury	BDL	0.020	mg/kg	7471	11/25/13	1
Arsenic	2.3	1.0	mg/kg	6010B	11/27/13	1
Barium	56.	0.25	mg/kg	6010B	11/27/13	1
Cadmium	BDL	0.25	mg/kg	6010B	11/27/13	1
Chromium	13.	0.50	mg/kg	6010B	11/27/13	1
Copper	8.6	1.0	mg/kg	6010B	11/27/13	1
Lead	7.0	0.25	mg/kg	6010B	11/27/13	1
Nickel	7.0	1.0	mg/kg	6010B	11/27/13	1
Selenium	1.2	1.0	mg/kg	6010B	11/27/13	1
Silver	BDL	0.50	mg/kg	6010B	11/27/13	1
Zinc	31.	1.5	mg/kg	6010B	11/27/13	1
Benzene	BDL	0.0025	mg/kg	8021/8015	11/21/13	5
Toluene	BDL	0.025	mg/kg	8021/8015	11/21/13	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	11/21/13	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	11/21/13	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	11/21/13	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	95.0		% Rec.	8021/8015	11/21/13	5
a,a,a-Trifluorotoluene(PID)	99.8		% Rec.	8021/8015	11/21/13	5
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	3546/DRO	11/22/13	1
Surrogate recovery(%)						
o-Terphenyl	87.2		% Rec.	3546/DRO	11/22/13	1
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L669550-05 (PH) - 8.9@19.2c



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# REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

December 02, 2013

Date Received : November 19, 2013  
Description : Voloshin Mortin 1-8

ESC Sample # : L669550-05

Sample ID : BOT 12FT

Site ID :

Collected By : Chris McKisson  
Collection Date : 11/15/13 11:02

Project # : 047813001

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Fluorene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Naphthalene	BDL	0.020	mg/kg	8270C-SIM	11/22/13	1
Phenanthrene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
1-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/22/13	1
2-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/22/13	1
2-Chloronaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/22/13	1
Surrogate Recovery						
Nitrobenzene-d5	106.		% Rec.	8270C-SIM	11/22/13	1
2-Fluorobiphenyl	76.3		% Rec.	8270C-SIM	11/22/13	1
p-Terphenyl-d14	92.6		% Rec.	8270C-SIM	11/22/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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L669550-05 (PH) - 8.9@19.2c



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# REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

December 02, 2013

Date Received : November 19, 2013  
Description : Voloshin Mortin 1-8  
Sample ID : NSW 7FT  
Collected By : Chris McKisson  
Collection Date : 11/15/13 12:50

ESC Sample # : L669550-06

Site ID :

Project # : 047813001

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium, Hexavalent	BDL	10.	mg/kg	3060A/7196A	11/24/13	5
Chromium, Trivalent	BDL	10.	mg/kg	Calc.	12/02/13	1
ORP	54.		mV	2580 B-2011	11/22/13	1
pH	9.7		su	9045D	11/25/13	1
Sodium Adsorption Ratio	18.			Calc.	11/22/13	1
Specific Conductance	990		umhos/cm	9050AMod	11/26/13	1
Mercury	BDL	0.020	mg/kg	7471	11/25/13	1
Arsenic	6.4	1.0	mg/kg	6010B	11/22/13	1
Barium	76.	0.25	mg/kg	6010B	11/22/13	1
Cadmium	BDL	0.25	mg/kg	6010B	11/22/13	1
Chromium	6.8	0.50	mg/kg	6010B	11/22/13	1
Copper	11.	1.0	mg/kg	6010B	11/22/13	1
Lead	7.5	0.25	mg/kg	6010B	11/22/13	1
Nickel	7.4	1.0	mg/kg	6010B	11/22/13	1
Selenium	BDL	1.0	mg/kg	6010B	11/22/13	1
Silver	BDL	0.50	mg/kg	6010B	11/22/13	1
Zinc	34.	1.5	mg/kg	6010B	11/22/13	1
Benzene	BDL	0.0025	mg/kg	8021/8015	11/21/13	5
Toluene	BDL	0.025	mg/kg	8021/8015	11/21/13	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	11/21/13	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	11/21/13	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	11/21/13	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	95.2		% Rec.	8021/8015	11/21/13	5
a,a,a-Trifluorotoluene(PID)	101.		% Rec.	8021/8015	11/21/13	5
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	3546/DRO	11/22/13	1
Surrogate recovery(%)						
o-Terphenyl	73.9		% Rec.	3546/DRO	11/22/13	1
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L669550-06 (PH) - 9.7@19.0c  
L669550-06 (CR6) - Diluted due to sample color interference.



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# REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

December 02, 2013

Date Received : November 19, 2013  
Description : Voloshin Mortin 1-8

Sample ID : NSW 7FT

Collected By : Chris McKisson  
Collection Date : 11/15/13 12:50

ESC Sample # : L669550-06

Site ID :

Project # : 047813001

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Fluorene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Naphthalene	BDL	0.020	mg/kg	8270C-SIM	11/22/13	1
Phenanthrene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
1-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/22/13	1
2-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/22/13	1
2-Chloronaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/22/13	1
Surrogate Recovery						
Nitrobenzene-d5	105.		% Rec.	8270C-SIM	11/22/13	1
2-Fluorobiphenyl	84.7		% Rec.	8270C-SIM	11/22/13	1
p-Terphenyl-d14	100.		% Rec.	8270C-SIM	11/22/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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L669550-06 (PH) - 9.7@19.0c

L669550-06 (CR6) - Diluted due to sample color interference.



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# REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

December 02, 2013

Date Received : November 19, 2013  
Description : Voloshin Mortin 1-8

ESC Sample # : L669550-07

Sample ID : NSW02 8FT

Site ID :

Collected By : Chris McKisson  
Collection Date : 11/15/13 15:00

Project # : 047813001

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium, Hexavalent	BDL	2.0	mg/kg	3060A/7196A	11/24/13	1
Chromium, Trivalent	7.3	2.0	mg/kg	Calc.	12/02/13	1
ORP	65.		mV	2580 B-2011	11/22/13	1
pH	9.2		su	9045D	11/25/13	1
Sodium Adsorption Ratio	9.5			Calc.	11/22/13	1
Specific Conductance	600		umhos/cm	9050AMod	11/26/13	1
Mercury	0.022	0.020	mg/kg	7471	11/25/13	1
Arsenic	5.2	1.0	mg/kg	6010B	11/22/13	1
Barium	48.	0.25	mg/kg	6010B	11/22/13	1
Cadmium	BDL	0.25	mg/kg	6010B	11/22/13	1
Chromium	7.3	0.50	mg/kg	6010B	11/22/13	1
Copper	10.	1.0	mg/kg	6010B	11/22/13	1
Lead	7.2	0.25	mg/kg	6010B	11/22/13	1
Nickel	6.9	1.0	mg/kg	6010B	11/22/13	1
Selenium	BDL	1.0	mg/kg	6010B	11/22/13	1
Silver	BDL	0.50	mg/kg	6010B	11/22/13	1
Zinc	32.	1.5	mg/kg	6010B	11/22/13	1
Benzene	BDL	0.0025	mg/kg	8021/8015	11/21/13	5
Toluene	BDL	0.025	mg/kg	8021/8015	11/21/13	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	11/21/13	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	11/21/13	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	11/21/13	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	95.1		% Rec.	8021/8015	11/21/13	5
a,a,a-Trifluorotoluene(PID)	99.9		% Rec.	8021/8015	11/21/13	5
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	3546/DRO	11/22/13	1
Surrogate recovery(%)						
o-Terphenyl	84.8		% Rec.	3546/DRO	11/22/13	1
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L669550-07 (PH) - 9.2@19.3c





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REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

December 02, 2013

Date Received : November 19, 2013  
Description : Voloshin Mortin 1-8

Sample ID : NSW02 8FT

Collected By : Chris McKisson  
Collection Date : 11/15/13 15:00

ESC Sample # : L669550-07

Site ID :

Project # : 047813001

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Fluorene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Naphthalene	BDL	0.020	mg/kg	8270C-SIM	11/22/13	1
Phenanthrene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/22/13	1
1-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/22/13	1
2-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/22/13	1
2-Chloronaphthalene	BDL	0.020	mg/kg	8270C-SIM	11/22/13	1
Surrogate Recovery						
Nitrobenzene-d5	112.		% Rec.	8270C-SIM	11/22/13	1
2-Fluorobiphenyl	72.4		% Rec.	8270C-SIM	11/22/13	1
p-Terphenyl-d14	79.2		% Rec.	8270C-SIM	11/22/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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L669550-07 (PH) - 9.2@19.3c

Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L669550-02	WG693442	SAMP	Chromium,Hexavalent	R2859081	O
L669550-03	WG693442	SAMP	Chromium,Hexavalent	R2859081	O
L669550-06	WG693442	SAMP	Chromium,Hexavalent	R2859081	O

Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
0	(ESC) Sample diluted due to matrix interferences that impaired the ability to make an accurate analytical determination. The detection limit is elevated in order to reflect the necessary dilution.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Summary of Remarks For Samples Printed  
12/02/13 at 10:16:02

TSR Signing Reports: 358  
R5 - Desired TAT

Sample: L669550-01 Account: LTENVRCO Received: 11/19/13 09:30 Due Date: 12/02/13 00:00 RPT Date: 12/02/13 10:15  
Sample: L669550-02 Account: LTENVRCO Received: 11/19/13 09:30 Due Date: 12/02/13 00:00 RPT Date: 12/02/13 10:15  
Sample: L669550-03 Account: LTENVRCO Received: 11/19/13 09:30 Due Date: 12/02/13 00:00 RPT Date: 12/02/13 10:15  
Sample: L669550-04 Account: LTENVRCO Received: 11/19/13 09:30 Due Date: 12/02/13 00:00 RPT Date: 12/02/13 10:15  
Sample: L669550-05 Account: LTENVRCO Received: 11/19/13 09:30 Due Date: 12/02/13 00:00 RPT Date: 12/02/13 10:15  
Sample: L669550-06 Account: LTENVRCO Received: 11/19/13 09:30 Due Date: 12/02/13 00:00 RPT Date: 12/02/13 10:15  
Sample: L669550-07 Account: LTENVRCO Received: 11/19/13 09:30 Due Date: 12/02/13 00:00 RPT Date: 12/02/13 10:15



**YOUR LAB OF CHOICE**

LT Environmental- Rifle, CO  
Rob Fishburn  
820 Megan Ave, Unit B

Rifle, CO 81650

Quality Assurance Report  
Level II

L669550

12065 Lebanon Rd.  
Mt. Juliet, TN 37122  
(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

December 02, 2013

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Benzene	< .0005	mg/kg			WG693254	11/20/13 22:37
Ethylbenzene	< .0005	mg/kg			WG693254	11/20/13 22:37
Toluene	< .005	mg/kg			WG693254	11/20/13 22:37
TPH (GC/FID) Low Fraction	< .1	mg/kg			WG693254	11/20/13 22:37
Total Xylene	< .0015	mg/kg			WG693254	11/20/13 22:37
a,a,a-Trifluorotoluene(FID)		% Rec.	95.80	59-128	WG693254	11/20/13 22:37
a,a,a-Trifluorotoluene(PID)		% Rec.	101.0	54-144	WG693254	11/20/13 22:37
Arsenic	< 1	mg/kg			WG693201	11/21/13 22:58
Barium	< .25	mg/kg			WG693201	11/21/13 22:58
Cadmium	< .25	mg/kg			WG693201	11/21/13 22:58
Chromium	< .5	mg/kg			WG693201	11/21/13 22:58
Copper	< 1	mg/kg			WG693201	11/21/13 22:58
Lead	< .25	mg/kg			WG693201	11/21/13 22:58
Nickel	< 1	mg/kg			WG693201	11/21/13 22:58
Selenium	< 1	mg/kg			WG693201	11/21/13 22:58
Silver	< .5	mg/kg			WG693201	11/21/13 22:58
Zinc	< 1.5	mg/kg			WG693201	11/21/13 22:58
TPH (GC/FID) High Fraction	< 4	mg/kg			WG693416	11/22/13 05:12
o-Terphenyl		% Rec.	81.70	50-150	WG693416	11/22/13 05:12
1-Methylnaphthalene	< .02	mg/kg			WG693579	11/22/13 06:53
2-Chloronaphthalene	< .02	mg/kg			WG693579	11/22/13 06:53
2-Methylnaphthalene	< .02	mg/kg			WG693579	11/22/13 06:53
Acenaphthene	< .006	mg/kg			WG693579	11/22/13 06:53
Acenaphthylene	< .006	mg/kg			WG693579	11/22/13 06:53
Anthracene	< .006	mg/kg			WG693579	11/22/13 06:53
Benzo(a)anthracene	< .006	mg/kg			WG693579	11/22/13 06:53
Benzo(a)pyrene	< .006	mg/kg			WG693579	11/22/13 06:53
Benzo(b)fluoranthene	< .006	mg/kg			WG693579	11/22/13 06:53
Benzo(g,h,i)perylene	< .006	mg/kg			WG693579	11/22/13 06:53
Benzo(k)fluoranthene	< .006	mg/kg			WG693579	11/22/13 06:53
Chrysene	< .006	mg/kg			WG693579	11/22/13 06:53
Dibenz(a,h)anthracene	< .006	mg/kg			WG693579	11/22/13 06:53
Fluoranthene	< .006	mg/kg			WG693579	11/22/13 06:53
Fluorene	< .006	mg/kg			WG693579	11/22/13 06:53
Indeno(1,2,3-cd)pyrene	< .006	mg/kg			WG693579	11/22/13 06:53
Naphthalene	< .02	mg/kg			WG693579	11/22/13 06:53
Phenanthrene	< .006	mg/kg			WG693579	11/22/13 06:53
Pyrene	< .006	mg/kg			WG693579	11/22/13 06:53
2-Fluorobiphenyl		% Rec.	81.00	51.1-131	WG693579	11/22/13 06:53
Nitrobenzene-d5		% Rec.	108.0	40.9-147	WG693579	11/22/13 06:53
p-Terphenyl-d14		% Rec.	88.20	45.3-138	WG693579	11/22/13 06:53
Chromium, Hexavalent	< 2	mg/kg			WG693442	11/24/13 06:20
Mercury	< .02	mg/kg			WG693837	11/25/13 09:15
Mercury	< .02	mg/kg			WG693839	11/25/13 11:34
Arsenic	< 1	mg/kg			WG693202	11/26/13 22:10

\* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



**YOUR LAB OF CHOICE**

LT Environmental- Rifle, CO  
Rob Fishburn  
820 Megan Ave, Unit B

Rifle, CO 81650

Quality Assurance Report  
Level II

L669550

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December 02, 2013

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Barium	< .25	mg/kg			WG693202	11/26/13 22:10
Cadmium	< .25	mg/kg			WG693202	11/26/13 22:10
Chromium	< .5	mg/kg			WG693202	11/26/13 22:10
Copper	< 1	mg/kg			WG693202	11/26/13 22:10
Lead	< .25	mg/kg			WG693202	11/26/13 22:10
Selenium	< 1	mg/kg			WG693202	11/26/13 22:10
Silver	< .5	mg/kg			WG693202	11/26/13 22:10
Zinc	< 1.5	mg/kg			WG693202	11/26/13 22:10
Nickel	< 1	mg/kg			WG693202	11/27/13 05:27
Specific Conductance	0.900	umhos/cm			WG694381	11/26/13 18:46

Analyte	Units	Result	Duplicate		Limit	Ref Samp	Batch
			Duplicate	RPD			
Arsenic	mg/kg	2.40	2.86	20.0	20	L669426-08	WG693201
Barium	mg/kg	41.0	40.0	2.00	20	L669426-08	WG693201
Cadmium	mg/kg	0.0	0.0598	282.*	20	L669426-08	WG693201
Chromium	mg/kg	7.60	7.23	5.00	20	L669426-08	WG693201
Copper	mg/kg	5.30	5.10	4.00	20	L669426-08	WG693201
Lead	mg/kg	4.90	4.89	1.00	20	L669426-08	WG693201
Nickel	mg/kg	4.60	4.26	7.00	20	L669426-08	WG693201
Selenium	mg/kg	0.0	-0.279	62.0*	20	L669426-08	WG693201
Silver	mg/kg	0.0	0.0599	36.0*	20	L669426-08	WG693201
Zinc	mg/kg	12.0	11.5	5.00	20	L669426-08	WG693201
ORP	mV	110.	110.	0.905	20	L668993-01	WG693468
ORP	mV	99.0	99.0	0.0	20	L669820-01	WG693468
Chromium,Hexavalent	mg/kg	0.0	0.0	0.0	20	L669550-01	WG693442
Chromium,Hexavalent	mg/kg	0.0	0.0	0.0	20	L669550-07	WG693442
Mercury	mg/kg	0.0890	0.0776	13.0	20	L670053-08	WG693837
pH	su	7.50	7.50	0.399	1	L669244-01	WG694114
pH	su	9.00	9.00	0.333	1	L669561-04	WG694114
Mercury	mg/kg	0.0	0.00742	2.00	20	L669589-01	WG693839
Arsenic	mg/kg	6.50	5.44	18.0	20	L669244-04	WG693202
Barium	mg/kg	64.0	62.1	3.00	20	L669244-04	WG693202
Cadmium	mg/kg	0.0	0.0288	1670*	20	L669244-04	WG693202
Chromium	mg/kg	40.0	28.1	34.0*	20	L669244-04	WG693202
Copper	mg/kg	8.00	7.06	12.0	20	L669244-04	WG693202
Lead	mg/kg	17.0	15.4	8.00	20	L669244-04	WG693202
Selenium	mg/kg	2.80	1.94	38.0*	20	L669244-04	WG693202
Silver	mg/kg	0.0	0.108	89.0*	20	L669244-04	WG693202
Zinc	mg/kg	18.0	17.7	0.0	20	L669244-04	WG693202
Nickel	mg/kg	3.70	4.38	16.0	20	L669244-04	WG693202
Specific Conductance	umhos/cm	390.	390.	0.0	20	L669550-01	WG694381

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820 Megan Ave, Unit B

Rifle, CO 81650

Quality Assurance Report  
Level II

L669550

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Tax I.D. 62-0814289

Est. 1970

December 02, 2013

Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
Specific Conductance	umhos/cm	2700	2700	0.222	20	L670284-02	WG694381

Analyte	Units	Known Val	Result	% Rec	Limit	Batch
Benzene	mg/kg	.05	0.0477	95.5	70-130	WG693254
Ethylbenzene	mg/kg	.05	0.0489	97.8	70-130	WG693254
Toluene	mg/kg	.05	0.0497	99.3	70-130	WG693254
Total Xylene	mg/kg	.15	0.142	94.7	70-130	WG693254
a,a,a-Trifluorotoluene(PID)				101.0	54-144	WG693254
TPH (GC/FID) Low Fraction	mg/kg	5.5	4.45	80.9	63.5-137	WG693254
a,a,a-Trifluorotoluene(FID)				97.70	59-128	WG693254
Arsenic	mg/kg	237	231.	97.0	83.1-117	WG693201
Barium	mg/kg	252	248.	98.0	84.1-116	WG693201
Cadmium	mg/kg	191	177.	93.0	83.2-117	WG693201
Chromium	mg/kg	128	121.	95.0	81.3-118	WG693201
Copper	mg/kg	123	121.	98.0	83.7-116	WG693201
Lead	mg/kg	103	97.1	94.0	83.1-117	WG693201
Nickel	mg/kg	118	103.	87.0	82-118	WG693201
Selenium	mg/kg	110	106.	96.0	78.7-122	WG693201
Silver	mg/kg	47.3	44.4	94.0	66.2-134	WG693201
Zinc	mg/kg	183	173.	94.0	82-118	WG693201
ORP	mV	100	100.	100.	90-110	WG693468
TPH (GC/FID) High Fraction	mg/kg	60	45.1	75.2	50-150	WG693416
o-Terphenyl				84.80	50-150	WG693416
1-Methylnaphthalene	mg/kg	.08	0.0617	77.1	62.5-121	WG693579
2-Chloronaphthalene	mg/kg	.08	0.0711	88.9	62.1-120	WG693579
2-Methylnaphthalene	mg/kg	.08	0.0598	74.8	62.5-121	WG693579
Acenaphthene	mg/kg	.08	0.0677	84.6	62.4-121	WG693579
Acenaphthylene	mg/kg	.08	0.0686	85.7	62.9-123	WG693579
Anthracene	mg/kg	.08	0.0741	92.7	64.9-129	WG693579
Benzo(a)anthracene	mg/kg	.08	0.0647	80.9	61.8-125	WG693579
Benzo(a)pyrene	mg/kg	.08	0.0682	85.3	63.4-119	WG693579
Benzo(b)fluoranthene	mg/kg	.08	0.0731	91.4	62.7-119	WG693579
Benzo(g,h,i)perylene	mg/kg	.08	0.0822	103.	68.2-129	WG693579
Benzo(k)fluoranthene	mg/kg	.08	0.0789	98.6	64.5-128	WG693579
Chrysene	mg/kg	.08	0.0751	93.9	64.4-128	WG693579
Dibenz(a,h)anthracene	mg/kg	.08	0.0827	103.	65.3-128	WG693579
Fluoranthene	mg/kg	.08	0.0705	88.1	61.8-129	WG693579
Fluorene	mg/kg	.08	0.0615	76.8	60.8-121	WG693579
Indeno(1,2,3-cd)pyrene	mg/kg	.08	0.0833	104.	67.6-129	WG693579
Naphthalene	mg/kg	.08	0.0668	83.5	59.5-116	WG693579
Phenanthrene	mg/kg	.08	0.0654	81.8	59.4-121	WG693579
Pyrene	mg/kg	.08	0.0712	89.0	61.2-130	WG693579
2-Fluorobiphenyl				93.30	51.1-131	WG693579
Nitrobenzene-d5				105.0	40.9-147	WG693579
p-Terphenyl-d14				106.0	45.3-138	WG693579
Chromium,Hexavalent	mg/kg	146	150.	103.	80-120	WG693442

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Rifle, CO 81650

Quality Assurance Report  
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Tax I.D. 62-0814289

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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Mercury	mg/kg	12.4	13.4	108.	71.6-128	WG693837
pH	su	5.93	5.80	97.8*	98.3-101.7	WG694114
Mercury	mg/kg	12.4	13.0	105.	71.6-128	WG693839
Arsenic	mg/kg	237	219.	92.0	83.1-117	WG693202
Barium	mg/kg	252	239.	95.0	84.1-116	WG693202
Cadmium	mg/kg	191	171.	89.0	83.2-117	WG693202
Chromium	mg/kg	128	116.	91.0	81.3-118	WG693202
Copper	mg/kg	123	115.	94.0	83.7-116	WG693202
Lead	mg/kg	103	93.5	91.0	83.1-117	WG693202
Selenium	mg/kg	110	100.	91.0	78.7-122	WG693202
Silver	mg/kg	47.3	43.4	92.0	66.2-134	WG693202
Zinc	mg/kg	183	168.	92.0	82-118	WG693202
Nickel	mg/kg	118	103.	87.0	82-118	WG693202
Specific Conductance	umhos/cm	510	510.	100.	85-115	WG694381

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Benzene	mg/kg	0.0475	0.0477	95.0	70-130	0.510	20	WG693254
Ethylbenzene	mg/kg	0.0487	0.0489	97.0	70-130	0.410	20	WG693254
Toluene	mg/kg	0.0493	0.0497	99.0	70-130	0.660	20	WG693254
Total Xylene	mg/kg	0.142	0.142	94.0	70-130	0.280	20	WG693254
a,a,a-Trifluorotoluene(PID)				101.0	54-144			WG693254
TPH (GC/FID) Low Fraction	mg/kg	4.86	4.45	88.0	63.5-137	8.87	20	WG693254
a,a,a-Trifluorotoluene(FID)				98.00	59-128			WG693254
ORP	mV	100.	100.	100.	90-110	0.0	20	WG693468
TPH (GC/FID) High Fraction	mg/kg	41.8	45.1	70.0	50-150	7.63	20	WG693416
o-Terphenyl				77.60	50-150			WG693416
1-Methylnaphthalene	mg/kg	0.0702	0.0617	88.0	62.5-121	12.9	20	WG693579
2-Chloronaphthalene	mg/kg	0.0792	0.0711	99.0	62.1-120	10.7	20	WG693579
2-Methylnaphthalene	mg/kg	0.0693	0.0598	87.0	62.5-121	14.6	20	WG693579
Acenaphthene	mg/kg	0.0749	0.0677	94.0	62.4-121	10.2	20	WG693579
Acenaphthylene	mg/kg	0.0765	0.0686	96.0	62.9-123	10.9	20	WG693579
Anthracene	mg/kg	0.0823	0.0741	103.	64.9-129	10.5	20	WG693579
Benzo(a)anthracene	mg/kg	0.0776	0.0647	97.0	61.8-125	18.1	20	WG693579
Benzo(a)pyrene	mg/kg	0.0755	0.0682	94.0	63.4-119	10.1	20	WG693579
Benzo(b)fluoranthene	mg/kg	0.0764	0.0731	95.0	62.7-119	4.41	20	WG693579
Benzo(g,h,i)perylene	mg/kg	0.0914	0.0822	114.	68.2-129	10.6	20	WG693579
Benzo(k)fluoranthene	mg/kg	0.0838	0.0789	105.	64.5-128	6.07	20	WG693579
Chrysene	mg/kg	0.0800	0.0751	100.	64.4-128	6.23	20	WG693579
Dibenz(a,h)anthracene	mg/kg	0.0917	0.0827	115.	65.3-128	10.3	20	WG693579
Fluoranthene	mg/kg	0.0784	0.0705	98.0	61.8-129	10.6	20	WG693579
Fluorene	mg/kg	0.0681	0.0615	85.0	60.8-121	10.3	20	WG693579
Indeno(1,2,3-cd)pyrene	mg/kg	0.0919	0.0833	115.	67.6-129	9.84	20	WG693579

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Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Naphthalene	mg/kg	0.0768	0.0668	96.0	59.5-116	13.9	20	WG693579
Phenanthrene	mg/kg	0.0733	0.0654	92.0	59.4-121	11.3	20	WG693579
Pyrene	mg/kg	0.0807	0.0712	101.	61.2-130	12.5	20	WG693579
2-Fluorobiphenyl				87.60	51.1-131			WG693579
Nitrobenzene-d5				96.90	40.9-147			WG693579
p-Terphenyl-d14				101.0	45.3-138			WG693579
Chromium, Hexavalent	mg/kg	144.	150.	99.0	80-120	4.08	20	WG693442
pH	su	5.80	5.80	98*	98.3-101.7	0.0	20	WG694114
Specific Conductance	umhos/	510.	510.	100.	85-115	0.0	20	WG694381

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
TPH (GC/FID) Low Fraction	mg/kg	12.9	0.0883	5.5	47.0	28.5-138	L669524-01	WG693254
a,a,a-Trifluorotoluene(FID)					93.70	59-128		WG693254
Arsenic	mg/kg	50.5	2.86	50	95.0	75-125	L669426-08	WG693201
Barium	mg/kg	95.3	40.0	50	110.	75-125	L669426-08	WG693201
Cadmium	mg/kg	48.9	0.0598	50	98.0	75-125	L669426-08	WG693201
Chromium	mg/kg	58.1	7.23	50	100.	75-125	L669426-08	WG693201
Copper	mg/kg	56.4	5.10	50	100.	75-125	L669426-08	WG693201
Lead	mg/kg	53.2	4.89	50	97.0	75-125	L669426-08	WG693201
Nickel	mg/kg	50.8	4.26	50	93.0	75-125	L669426-08	WG693201
Selenium	mg/kg	47.5	-0.279	50	95.0	75-125	L669426-08	WG693201
Silver	mg/kg	47.9	0.0599	50	96.0	75-125	L669426-08	WG693201
Zinc	mg/kg	62.7	11.5	50	100.	75-125	L669426-08	WG693201
Benzene	mg/kg	0.190	0.0	.05	76.0	49.7-127	L669524-01	WG693254
Ethylbenzene	mg/kg	0.195	0.0	.05	78.0	40.8-141	L669524-01	WG693254
Toluene	mg/kg	0.186	0.000328	.05	74.0	49.8-132	L669524-01	WG693254
Total Xylene	mg/kg	0.594	0.000605	.15	79.0	41.2-140	L669524-01	WG693254
a,a,a-Trifluorotoluene(PID)					101.0	54-144		WG693254
TPH (GC/FID) High Fraction	mg/kg	48.1	0.0	60	80.0	50-150	L669561-04	WG693416
o-Terphenyl					89.60	50-150		WG693416
1-Methylnaphthalene	mg/kg	0.0585	0.	.016	73.1	58.9-123	L669476-01	WG693579
2-Chloronaphthalene	mg/kg	0.0567	0.	.016	70.9	61.6-120	L669476-01	WG693579
2-Methylnaphthalene	mg/kg	0.0607	0.	.016	75.9	50.7-129	L669476-01	WG693579
Acenaphthene	mg/kg	0.0602	0.	.016	75.3	51.6-124	L669476-01	WG693579
Acenaphthylene	mg/kg	0.0605	0.	.016	75.6	58.3-126	L669476-01	WG693579
Anthracene	mg/kg	0.0648	0.00487	.016	74.9	47.9-137	L669476-01	WG693579
Benzo(a)anthracene	mg/kg	0.0578	0.00698	.016	63.5	34.2-138	L669476-01	WG693579
Benzo(a)pyrene	mg/kg	0.0603	0.00618	.016	67.6	34.6-133	L669476-01	WG693579
Benzo(b)fluoranthene	mg/kg	0.0578	0.00746	.016	62.9	19.8-142	L669476-01	WG693579
Benzo(g,h,i)perylene	mg/kg	0.0626	0.0102	.016	65.5	20-149	L669476-01	WG693579
Benzo(k)fluoranthene	mg/kg	0.0588	0.00631	.016	65.6	32.1-137	L669476-01	WG693579
Chrysene	mg/kg	0.0584	0.00711	.016	64.1	36.6-137	L669476-01	WG693579
Dibenz(a,h)anthracene	mg/kg	0.0617	0.00651	.016	69.0	27.1-145	L669476-01	WG693579

\* Performance of this Analyte is outside of established criteria.

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**YOUR LAB OF CHOICE**

LT Environmental- Rifle, CO  
Rob Fishburn  
820 Megan Ave, Unit B

Rifle, CO 81650

Quality Assurance Report  
Level II

L669550

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1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

December 02, 2013

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
Fluoranthene	mg/kg	0.0642	0.00768	.016	70.6	39.8-141	L669476-01	WG693579
Fluorene	mg/kg	0.0521	0.	.016	65.2	42.5-130	L669476-01	WG693579
Indeno(1,2,3-cd)pyrene	mg/kg	0.0617	0.00735	.016	68.0	19-151	L669476-01	WG693579
Naphthalene	mg/kg	0.0680	0.00388	.016	80.1	40.6-135	L669476-01	WG693579
Phenanthrene	mg/kg	0.0574	0.00518	.016	65.3	39.7-129	L669476-01	WG693579
Pyrene	mg/kg	0.0585	0.00765	.016	63.6	31.5-141	L669476-01	WG693579
2-Fluorobiphenyl					66.80	51.1-131		WG693579
Nitrobenzene-d5					83.80	40.9-147		WG693579
p-Terphenyl-d14					76.00	45.3-138		WG693579
Chromium, Hexavalent	mg/kg	19.5	0.0	20	98.0	75-125	L669561-01	WG693442
Mercury	mg/kg	0.316	0.0776	.25	95.0	80-120	L670053-08	WG693837
Mercury	mg/kg	0.256	0.00742	.25	100.	80-120	L669589-01	WG693839
Arsenic	mg/kg	50.7	5.44	50	90.0	75-125	L669244-04	WG693202
Barium	mg/kg	114.	62.1	50	100.	75-125	L669244-04	WG693202
Cadmium	mg/kg	47.9	0.0288	50	96.0	75-125	L669244-04	WG693202
Chromium	mg/kg	75.4	28.1	50	95.0	75-125	L669244-04	WG693202
Copper	mg/kg	56.5	7.06	50	99.0	75-125	L669244-04	WG693202
Lead	mg/kg	61.6	15.4	50	92.0	75-125	L669244-04	WG693202
Selenium	mg/kg	46.3	1.94	50	89.0	75-125	L669244-04	WG693202
Silver	mg/kg	47.8	0.108	50	95.0	75-125	L669244-04	WG693202
Zinc	mg/kg	67.6	17.7	50	100.	75-125	L669244-04	WG693202
Nickel	mg/kg	49.4	4.38	50	90.0	75-125	L669244-04	WG693202

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
TPH (GC/FID) Low Fraction	mg/kg	14.6	12.9	52.8	28.5-138	12.2	23.6	L669524-01	WG693254
a,a,a-Trifluorotoluene(FID)				93.40	59-128				WG693254
Arsenic	mg/kg	48.4	50.5	91.0	75-125	4.00	20	L669426-08	WG693201
Barium	mg/kg	93.5	95.3	107.	75-125	2.00	20	L669426-08	WG693201
Cadmium	mg/kg	47.0	48.9	94.0	75-125	4.00	20	L669426-08	WG693201
Chromium	mg/kg	56.1	58.1	97.7	75-125	4.00	20	L669426-08	WG693201
Copper	mg/kg	54.8	56.4	99.4	75-125	3.00	20	L669426-08	WG693201
Lead	mg/kg	51.3	53.2	92.8	75-125	4.00	20	L669426-08	WG693201
Nickel	mg/kg	49.3	50.8	90.1	75-125	3.00	20	L669426-08	WG693201
Selenium	mg/kg	45.9	47.5	92.4	75-125	3.00	20	L669426-08	WG693201
Silver	mg/kg	46.4	47.9	92.6	75-125	3.00	20	L669426-08	WG693201
Zinc	mg/kg	61.1	62.7	99.1	75-125	3.00	20	L669426-08	WG693201
Benzene	mg/kg	0.182	0.190	73.0	49.7-127	4.11	23.5	L669524-01	WG693254
Ethylbenzene	mg/kg	0.184	0.195	73.7	40.8-141	5.67	23.8	L669524-01	WG693254
Toluene	mg/kg	0.177	0.186	70.5	49.8-132	5.14	23.5	L669524-01	WG693254
Total Xylene	mg/kg	0.562	0.594	74.9	41.2-140	5.52	23.7	L669524-01	WG693254
a,a,a-Trifluorotoluene(PID)				100.0	54-144				WG693254

TPH (GC/FID) High Fraction	mg/kg	43.4	48.1	72.4	50-150	10.1	20	L669561-04	WG693416
o-Terphenyl				83.10	50-150				WG693416

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Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
1-Methylnaphthalene	mg/kg	0.0684	0.0585	85.5	58.9-123	15.7	20	L669476-01	WG693579
2-Chloronaphthalene	mg/kg	0.0594	0.0567	74.3	61.6-120	4.67	20	L669476-01	WG693579
2-Methylnaphthalene	mg/kg	0.0662	0.0607	82.7	50.7-129	8.57	20	L669476-01	WG693579
Acenaphthene	mg/kg	0.0626	0.0602	78.3	51.6-124	3.92	20	L669476-01	WG693579
Acenaphthylene	mg/kg	0.0626	0.0605	78.3	58.3-126	3.55	20	L669476-01	WG693579
Anthracene	mg/kg	0.0645	0.0648	74.5	47.9-137	0.550	20	L669476-01	WG693579
Benzo(a)anthracene	mg/kg	0.0604	0.0578	66.8	34.2-138	4.44	22.8	L669476-01	WG693579
Benzo(a)pyrene	mg/kg	0.0572	0.0603	63.8	34.6-133	5.22	26.3	L669476-01	WG693579
Benzo(b)fluoranthene	mg/kg	0.0582	0.0578	63.5	19.8-142	0.790	30.3	L669476-01	WG693579
Benzo(g,h,i)perylene	mg/kg	0.0644	0.0626	67.8	20-149	2.86	27.1	L669476-01	WG693579
Benzo(k)fluoranthene	mg/kg	0.0575	0.0588	64.0	32.1-137	2.16	24.6	L669476-01	WG693579
Chrysene	mg/kg	0.0584	0.0584	64.1	36.6-137	0.100	22.7	L669476-01	WG693579
Dibenz(a,h)anthracene	mg/kg	0.0646	0.0617	72.6	27.1-145	4.59	21.9	L669476-01	WG693579
Fluoranthene	mg/kg	0.0642	0.0642	70.7	39.8-141	0.0500	22.2	L669476-01	WG693579
Fluorene	mg/kg	0.0543	0.0521	67.9	42.5-130	4.11	20	L669476-01	WG693579
Indeno(1,2,3-cd)pyrene	mg/kg	0.0620	0.0617	68.3	19-151	0.420	25	L669476-01	WG693579
Naphthalene	mg/kg	0.0811	0.0680	96.6	40.6-135	17.6	20	L669476-01	WG693579
Phenanthrene	mg/kg	0.0601	0.0574	68.6	39.7-129	4.58	20	L669476-01	WG693579
Pyrene	mg/kg	0.0613	0.0585	67.1	31.5-141	4.65	23.5	L669476-01	WG693579
2-Fluorobiphenyl				70.30	51.1-131				WG693579
Nitrobenzene-d5				96.90	40.9-147				WG693579
p-Terphenyl-d14				80.70	45.3-138				WG693579
Chromium,Hexavalent	mg/kg	20.1	19.5	100.	75-125	3.03	20	L669561-01	WG693442
Mercury	mg/kg	0.345	0.316	107.	80-120	9.00	20	L670053-08	WG693837
Mercury	mg/kg	0.265	0.256	103.	80-120	3.00	20	L669589-01	WG693839
Arsenic	mg/kg	51.3	50.7	91.7	75-125	1.00	20	L669244-04	WG693202
Barium	mg/kg	117.	114.	110.	75-125	3.00	20	L669244-04	WG693202
Cadmium	mg/kg	47.6	47.9	95.2	75-125	1.00	20	L669244-04	WG693202
Chromium	mg/kg	71.1	75.4	86.0	75-125	6.00	20	L669244-04	WG693202
Copper	mg/kg	56.9	56.5	99.6	75-125	1.00	20	L669244-04	WG693202
Lead	mg/kg	65.3	61.6	99.8	75-125	6.00	20	L669244-04	WG693202
Selenium	mg/kg	47.1	46.3	90.4	75-125	2.00	20	L669244-04	WG693202
Silver	mg/kg	47.7	47.8	95.2	75-125	0.0	20	L669244-04	WG693202
Zinc	mg/kg	67.3	67.6	99.3	75-125	0.0	20	L669244-04	WG693202
Nickel	mg/kg	48.6	49.4	88.5	75-125	2.00	20	L669244-04	WG693202

Post Spike

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Post Spike

Serial Dilution

Batch number /Run number / Sample number cross reference

WG693254: R2858424 R2858705: L669550-01 02 03 04 05 06 07  
WG693201: R2858518 R2858951: L669550-06 07  
WG693468: R2858589: L669550-01 02 03 04 05 06 07  
WG693294: R2858719: L669550-01 02 03 04 05 06 07  
WG693416: R2858754: L669550-01 02 03 04 05 06 07  
WG693579: R2858801 R2858962: L669550-01 02 03 04 05 06 07  
WG693442: R2859081: L669550-01 02 03 04 05 06 07  
WG693837: R2859407: L669550-01 02 03  
WG694114: R2859479: L669550-01 02 03 04 05 06 07  
WG693839: R2859600: L669550-04 05 06 07  
WG693202: R2860182 R2860234: L669550-01 02 03 04 05  
WG694381: R2860228: L669550-01 02 03 04 05 06 07

\* \* Calculations are performed prior to rounding of reported values.  
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The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.