



October 7, 2015

Mr. Jacob Evans
Senior Environmental Specialist
Noble Energy, Inc.
2115 117th Avenue
Greeley, Colorado 80634

**RE: Remediation Activity, Well Installation, and Groundwater Monitoring Summary
State 18-1 Tank Battery
Weld County, Colorado
COGCC Spill Tracking #400861488**

Dear Mr. Evans:

LT Environmental, Inc. (LTE), under the direction of Noble Energy, Inc. (Noble), conducted environmental remediation and confirmation soil sampling following the identification of petroleum hydrocarbon impacted soil at the State 18-1 Tank Battery (Site). Following remediation activities, LTE, under the direction of Noble, installed groundwater monitoring wells and conducted groundwater monitoring activities at the Site. This report describes the remediation work conducted on July 21 through 28, 2015, and subsequent monitoring well installation and groundwater monitoring activities. The Site is located approximately 1.05 miles north of County Road 388 and 0.36 miles east of County Road 61 in Weld County, Colorado. The legal site description is the northeast quarter of the northwest quarter of Section 18, Township 5 North, Range 63 West, 6th Principal Meridian. The Site Location Map is provided as Figure 1.

Site History and Excavation Scope of Work

During water vault removal activities, impacted soil and groundwater was encountered. As a result, excavation activities were conducted on July 21 through 28, 2015. During excavation activities, LTE collected discrete soil samples from the sidewalls and floor of the excavation to confirm compliance with applicable Colorado Oil and Gas Conservation Commission (COGCC) Table 910-1 standards. The contractor operating the excavation equipment was BG Services, LLC of Fort Lupton, Colorado.

The excavation was located in the tank battery in the vicinity of the produced water vault. The Excavation Site Map is provided as Figure 2. The total extent of the excavation was approximately 35 feet east-west by 35 feet north-south to a total depth of 15 feet below ground surface (bgs). Excavated soil consisted primarily of clayey sand from ground surface to total depth with increasing clay content as the depth increases. No petroleum hydrocarbon staining or odor was observed at the final extent of the excavation. Groundwater was encountered at the base of the excavation. A total of approximately 700 cubic yards of soil were removed from the Site and transported to Waste Management North Weld Landfill in Ault, Colorado, for final disposal.



Excavation Soil Sampling

On July 21 through 28, 2015, under the direction of Noble, LTE personnel collected 11 discrete confirmation soil samples from the excavation sidewalls. All soil samples were collected, placed on ice, then submitted with a completed chain of custody form to Summit Scientific (Summit) of Golden, Colorado, for laboratory analysis of benzene, toluene, ethylbenzene, and total xylenes (BTEX), total petroleum hydrocarbons (TPH) as gasoline range organics (GRO), and naphthalene by United States Environmental Protection Agency (EPA) Method 8260B, and TPH as diesel range organics (DRO) by EPA Method 8015.

Excavation Soil Analytical Results

The COGCC Table 910-1 standards for BTEX, naphthalene, and TPH in soil are 0.17 milligrams per kilogram (mg/kg), 85 mg/kg, 100 mg/kg, 175 mg/kg, 23 mg/kg, and 500 mg/kg, respectively. Excavation soil analytical results indicated soil sample SS03@13' exceeded the COGCC Table 910-1 standards for benzene and TPH at concentrations of 0.23 mg/kg and 2,050 mg/kg, respectively, and soil sample SS04@13' exceeded the COGCC Table 910-1 standard for TPH at a concentration of 650 mg/kg. All other laboratory excavation soil analytical results were in compliance with applicable COGCC Table 910-1 standards.

Following receipt of the excavation soil sampling results, the Site was further excavated to remove soil impacts indicated by soil samples SS03@13' and SS04@13'. All other soil samples representative of the final extent of the excavation were in compliance with applicable COGCC Table 910-1 standards. The laboratory soil analytical results are presented on Figure 3 and summarized in Table 1. The excavation laboratory analytical reports are included at Attachment 1.

Soil Boring Advancement

On July 31, 2015, under the direction of Noble, LTE personnel advanced a total of five soil borings (SB01 through SB05) to delineate the potential extent of dissolved-phase petroleum hydrocarbon impact. The soil borings were advanced using a direct-push rig operated by Elite Drilling Services, LLC of Aurora, Colorado. The soil borings were completed as temporary monitoring wells to allow for groundwater monitoring.

The soil borings were logged by an LTE geologist, and the soil was characterized by visual inspection of the collected soil samples. The total depth of each soil boring was 16 feet bgs. The soil borings were continuously logged from ground surface to the total depth. The estimated depth to groundwater observed in the soil borings was approximately 12 to 14 feet bgs. Groundwater was not encountered in soil borings SB01 and SB02.

Soil identified at the Site was predominantly clayey sand from ground surface to approximately 13 feet bgs, then claystone from 13 feet bgs to total depth. The exception was soil boring SB05 was identified as claystone from ground surface to total depth. Elevated photo-ionization detector (PID) readings (greater than 10 parts per million) were observed in soil borings SB01, SB03, SB04,



and SB05. Petroleum hydrocarbon staining was observed in soil borings SB03 from 13 feet to 14 feet bgs and SB04 from 14 feet to 15 feet bgs.

Soil Boring Sampling

Soil borings were advanced using a 6-inch solid stem auger and a 2-foot split spoon to collect a continuous sample. During soil boring advancement, soil samples were collected and submitted for laboratory analysis based on the sample interval that exhibited visible soil staining or where the highest PID reading was observed above the groundwater saturated zone. On July 31, 2015, five soil samples (SB01@12', SB02@15', SB03@12', SB04@12', and SB05@12') were collected, placed on ice, then submitted with a completed chain of custody form to Summit, for analysis of BTEX, naphthalene, and TPH as GRO by EPA Method 8260B and TPH as DRO by EPA Method 8015.

Groundwater Monitoring Well Installation

Soil borings SB01 through SB05 were completed as temporary groundwater monitoring wells to delineate the potential extent of dissolved-phase petroleum hydrocarbon impact. The monitoring wells were constructed of 1-inch diameter polyvinyl chloride (PVC) casing extending from the surface stickups to depths of 15 feet bgs. The lower 10 feet of each monitoring well consists of 0.010-inch factory-slotted PVC well screen. Silica sand was placed from the bottom of each soil boring to one foot above the screened interval to act as filter pack for the monitoring well. Bentonite chips were placed from the top of the silica sand to the ground surface and hydrated to provide a seal against surface contamination and precipitation infiltration. The Well Completion Diagrams are included as Attachment 2.

Groundwater Sampling

On August 12, 2015, under the direction of Noble, LTE personnel collected groundwater samples from four monitoring wells (SB02 through SB05). Monitoring well SB01 was dry; therefore, a groundwater sample could not be collected. Prior to well development, depth to groundwater was measured and recorded for calculating well-specific target purge volumes and relative groundwater elevations. Following well development, groundwater samples were collected, placed on ice, then submitted with a completed chain of custody form to Origins Laboratory, Inc. of Denver, Colorado, for analysis of BTEX by EPA Method 8260C.

Soil Boring Analytical Results

The COGCC Table 910-1 standards for BTEX, naphthalene, and TPH in soil are 0.17 mg/kg, 85 mg/kg, 100 mg/kg, 175 mg/kg, 23 mg/kg, and 500 mg/kg, respectively. Soil analytical results indicated all soil samples were in compliance with applicable COGCC Table 910-1 standards. The soil analytical results are presented on Figure 4 and summarized in Table 2. The soil boring laboratory analytical report is included as Attachment 3.



Hydrogeology

Prior to well development, depth to groundwater was measured and recorded to calculate groundwater elevations. During the August 2015 monitoring event, depth to groundwater ranged from 8.46 feet below top of casing (btoc) in monitoring well SB05 to 13.65 feet btoc in monitoring well SB02. Groundwater was calculated to flow south-southeast with an average hydraulic gradient of 0.059 feet per foot. Relative groundwater elevations are presented in Figure 5 and summarized in Table 3.

Groundwater Analytical Results

The Colorado Department of Public Health and Environment-Water Quality Control Commission has established Regulation 41-The Basic Standards for Ground Water (WQCC Reg 41) for BTEX at 5.0 micrograms per liter ($\mu\text{g/L}$), 560 $\mu\text{g/L}$, 700 $\mu\text{g/L}$, and 1,400 $\mu\text{g/L}$, respectively. Laboratory analytical results indicated all groundwater analytical results were in compliance with applicable WQCC Reg 41 standards. Groundwater laboratory analytical results are presented on Figure 6 and summarized in Table 3. The laboratory groundwater analytical report is included as Attachment 4.

Summary

On July 21 through 28, 2015, Noble conducted oversight of source removal of petroleum hydrocarbon impacted soil at the Site. Under the direction of Noble, LTE personnel conducted confirmation soil sampling of the excavation activities. Per the excavation activities conducted and confirmation soil sample analytical results, the impacted soil was removed. Approximately 700 cubic yards of soil was removed from the excavation and transported to the Waste Management North Weld Landfill in Ault, Colorado, for final disposal.

On July 31, 2015, a total of five soil borings (SB01 through SB05) were advanced at the Site and soil samples were collected from the interval exhibiting petroleum hydrocarbon staining or the most elevated PID reading above the groundwater saturation zone. Laboratory soil analytical results indicated all soil borings were in compliance with applicable COGCC Table 910-1 standards.

All five soil borings were completed as temporary monitoring wells (SB01 through SB05) to delineate the dissolved-phase petroleum hydrocarbon impact and allow for groundwater sampling. On August 12, 2015, under the direction of Noble, LTE personnel conducted groundwater monitoring activities at all five monitoring wells. Upgradient monitoring well SB01 was dry; therefore, samples could only be collected from monitoring wells SB02 through SB05. Laboratory analytical results indicated that all groundwater analytical results were in compliance with applicable WQCC Reg 41 standards.

LTE, under the direction of Noble, will continue to conduct quarterly groundwater monitoring with the goal of obtaining four consecutive quarters with laboratory analytical results in compliance with applicable WQCC Reg 41 standards. The next quarterly groundwater monitoring



event is scheduled for November 2015. Further remediation efforts, if necessary, will be discussed in future correspondence.

LTE appreciates the opportunity to provide environmental services to Noble. Please call us at 303-433-9788 if you have any questions or comments regarding this report.

Sincerely,

LT ENVIRONMENTAL, INC.

A handwritten signature in black ink, appearing to read 'Chris Roy', written in a cursive style.

Chris Roy
Project Manager

Attachments

- Figure 1 Site Location Map
- Figure 2 Excavation Site Map
- Figure 3 Excavation Soil Analytical Results
- Figure 4 Soil Boring Analytical Results
- Figure 5 Relative Groundwater Elevation Map
- Figure 6 Groundwater Analytical Results
- Table 1 Excavation Soil Analytical Results
- Table 2 Soil Boring Analytical Results
- Table 3 Groundwater Analytical Results
- Attachment 1 Excavation Laboratory Analytical Reports
- Attachment 2 Well Completion Diagrams
- Attachment 3 Soil Boring Laboratory Analytical Report
- Attachment 4 Groundwater Laboratory Analytical Report

FIGURES

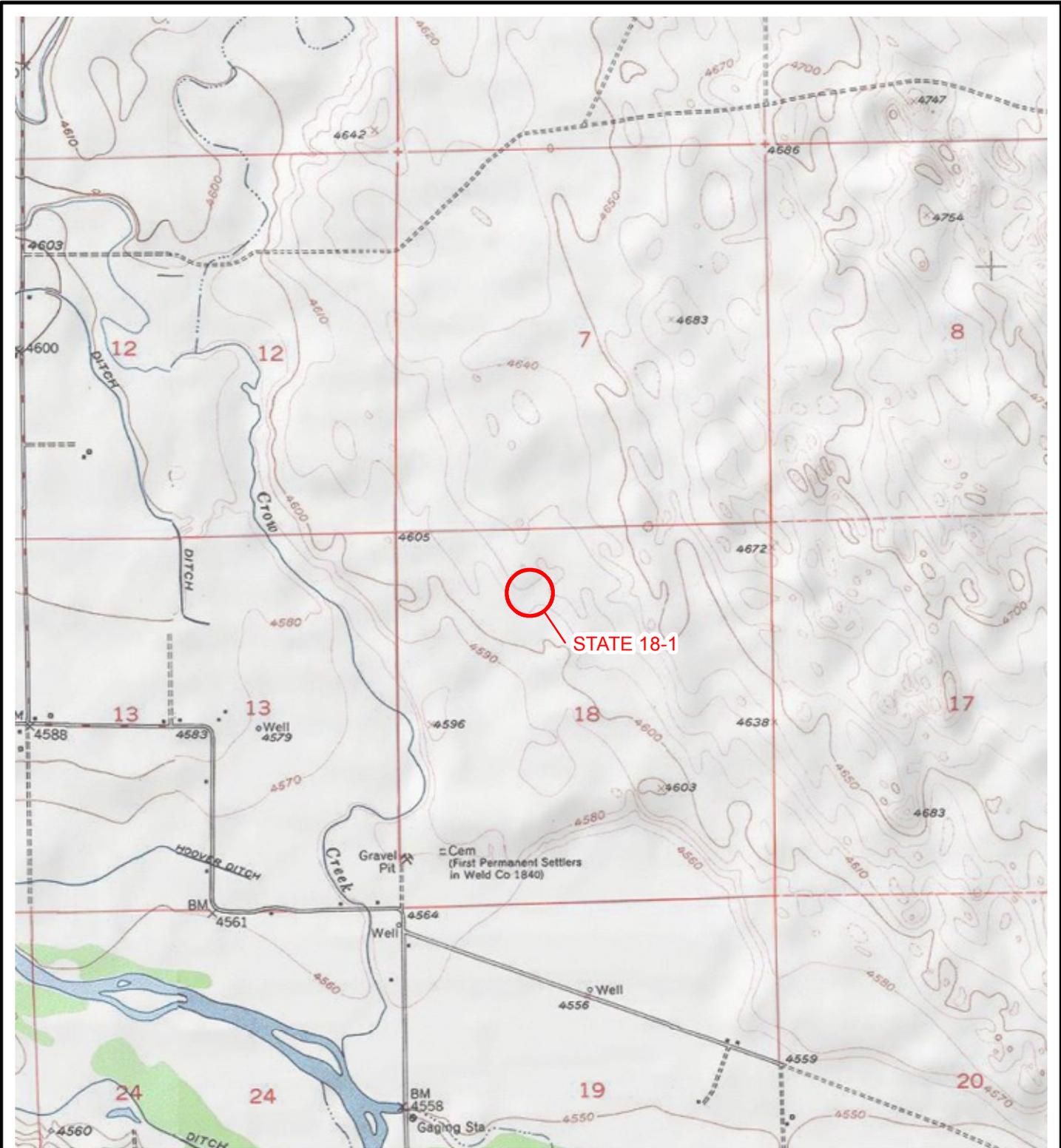


IMAGE COURTESY OF ESRI/USGS

LEGEND

 SITE LOCATION

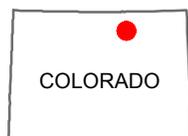
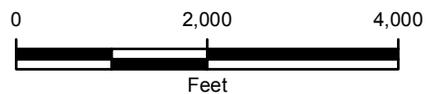


FIGURE 1
SITE LOCATION MAP
STATE 18-1
NENW SEC 18-T5N-R63W
WELD COUNTY, COLORADO
NOBLE ENERGY, INC.





LEGEND

- SOIL SAMPLE
- DCP LINE
- EXCAVATION EXTENT

IMAGE COURTESY OF ESRI

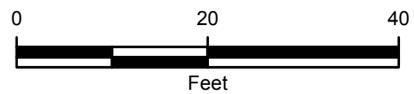
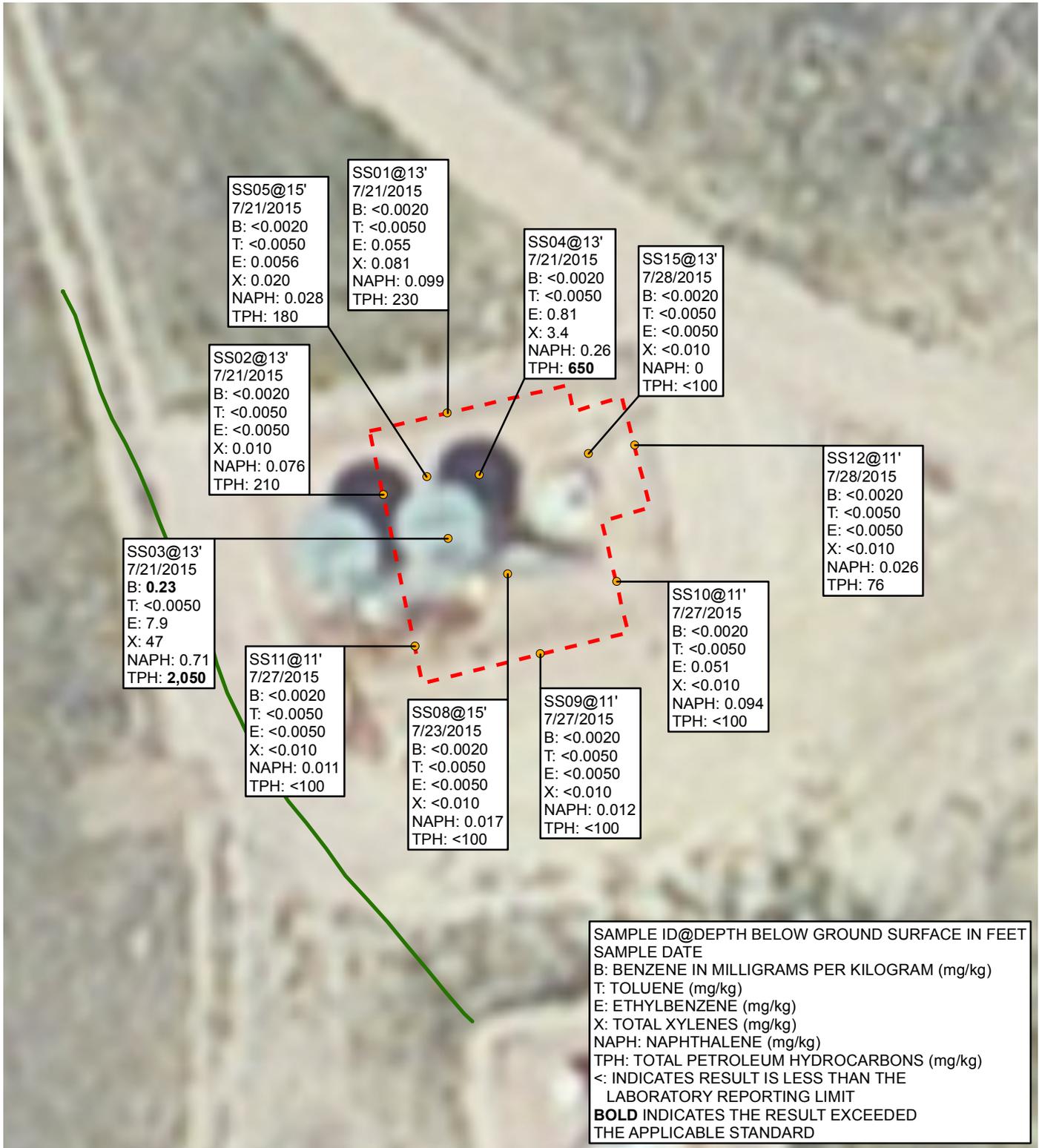


FIGURE 2
EXCAVATION SITE MAP
 STATE 18-1
 NENW SEC 18-T5N-R63W
 WELD COUNTY, COLORADO
 NOBLE ENERGY, INC.





SAMPLE ID@DEPTH BELOW GROUND SURFACE IN FEET
 SAMPLE DATE
 B: BENZENE IN MILLIGRAMS PER KILOGRAM (mg/kg)
 T: TOLUENE (mg/kg)
 E: ETHYLBENZENE (mg/kg)
 X: TOTAL XYLENES (mg/kg)
 NAPH: NAPHTHALENE (mg/kg)
 TPH: TOTAL PETROLEUM HYDROCARBONS (mg/kg)
 <: INDICATES RESULT IS LESS THAN THE LABORATORY REPORTING LIMIT
BOLD INDICATES THE RESULT EXCEEDED THE APPLICABLE STANDARD

LEGEND

- SOIL SAMPLE
- DCP LINE
- EXCAVATION EXTENT

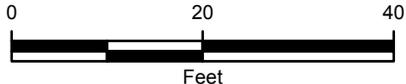
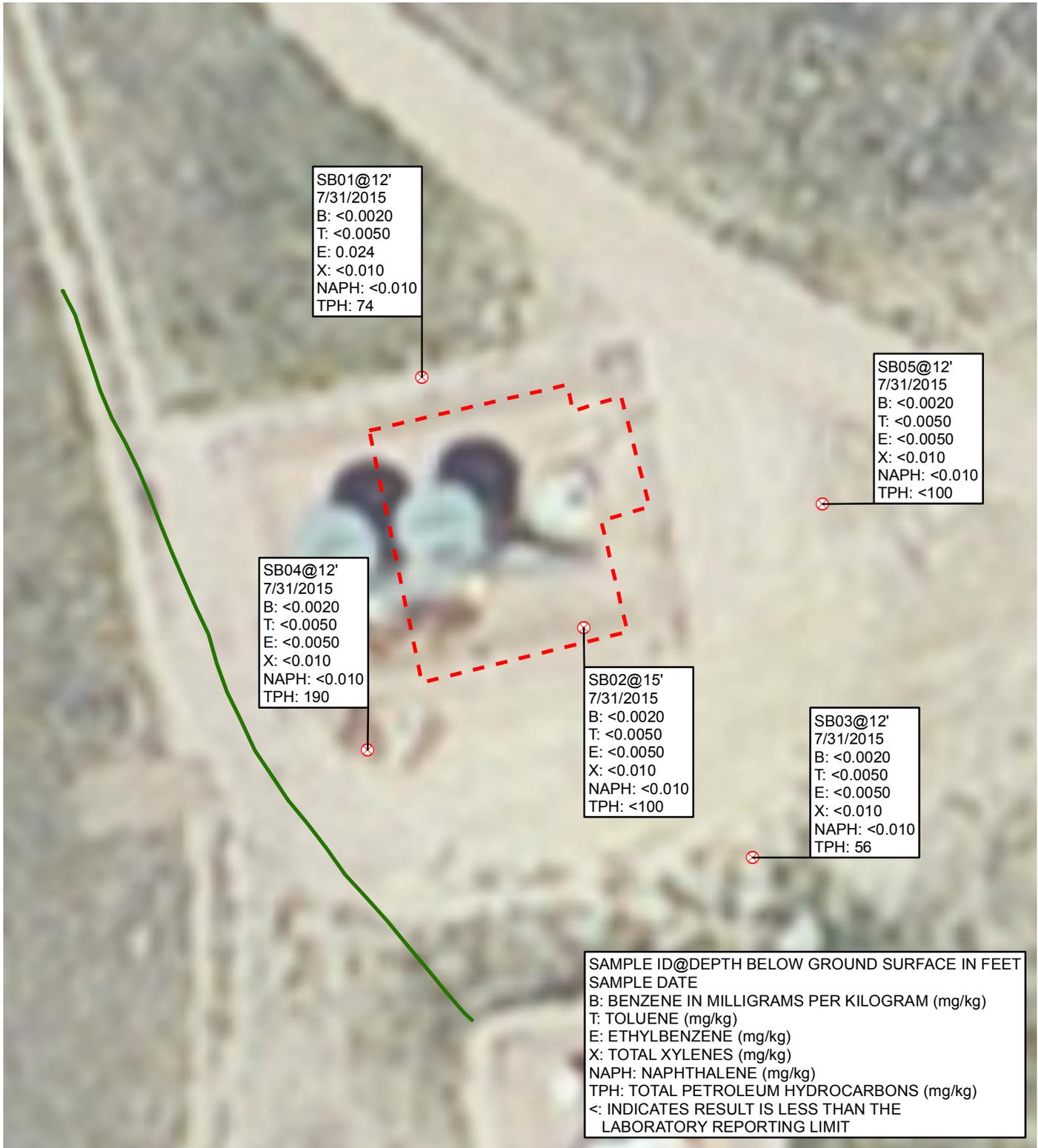


IMAGE COURTESY OF ESRI

FIGURE 3
EXCAVATION SOIL ANALYTICAL RESULTS
 STATE 18-1
 NENW SEC 18-T5N-R63W
 WELD COUNTY, COLORADO
 NOBLE ENERGY, INC.





SB01@12'
7/31/2015
B: <0.0020
T: <0.0050
E: 0.024
X: <0.010
NAPH: <0.010
TPH: 74

SB05@12'
7/31/2015
B: <0.0020
T: <0.0050
E: <0.0050
X: <0.010
NAPH: <0.010
TPH: <100

SB04@12'
7/31/2015
B: <0.0020
T: <0.0050
E: <0.0050
X: <0.010
NAPH: <0.010
TPH: 190

SB02@15'
7/31/2015
B: <0.0020
T: <0.0050
E: <0.0050
X: <0.010
NAPH: <0.010
TPH: <100

SB03@12'
7/31/2015
B: <0.0020
T: <0.0050
E: <0.0050
X: <0.010
NAPH: <0.010
TPH: 56

SAMPLE ID@DEPTH BELOW GROUND SURFACE IN FEET
SAMPLE DATE
B: BENZENE IN MILLIGRAMS PER KILOGRAM (mg/kg)
T: TOLUENE (mg/kg)
E: ETHYLBENZENE (mg/kg)
X: TOTAL XYLENES (mg/kg)
NAPH: NAPHTHALENE (mg/kg)
TPH: TOTAL PETROLEUM HYDROCARBONS (mg/kg)
<: INDICATES RESULT IS LESS THAN THE LABORATORY REPORTING LIMIT

LEGEND

-  SOIL BORING
-  DCP LINE
-  EXCAVATION EXTENT

IMAGE COURTESY OF ESRI

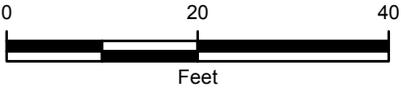
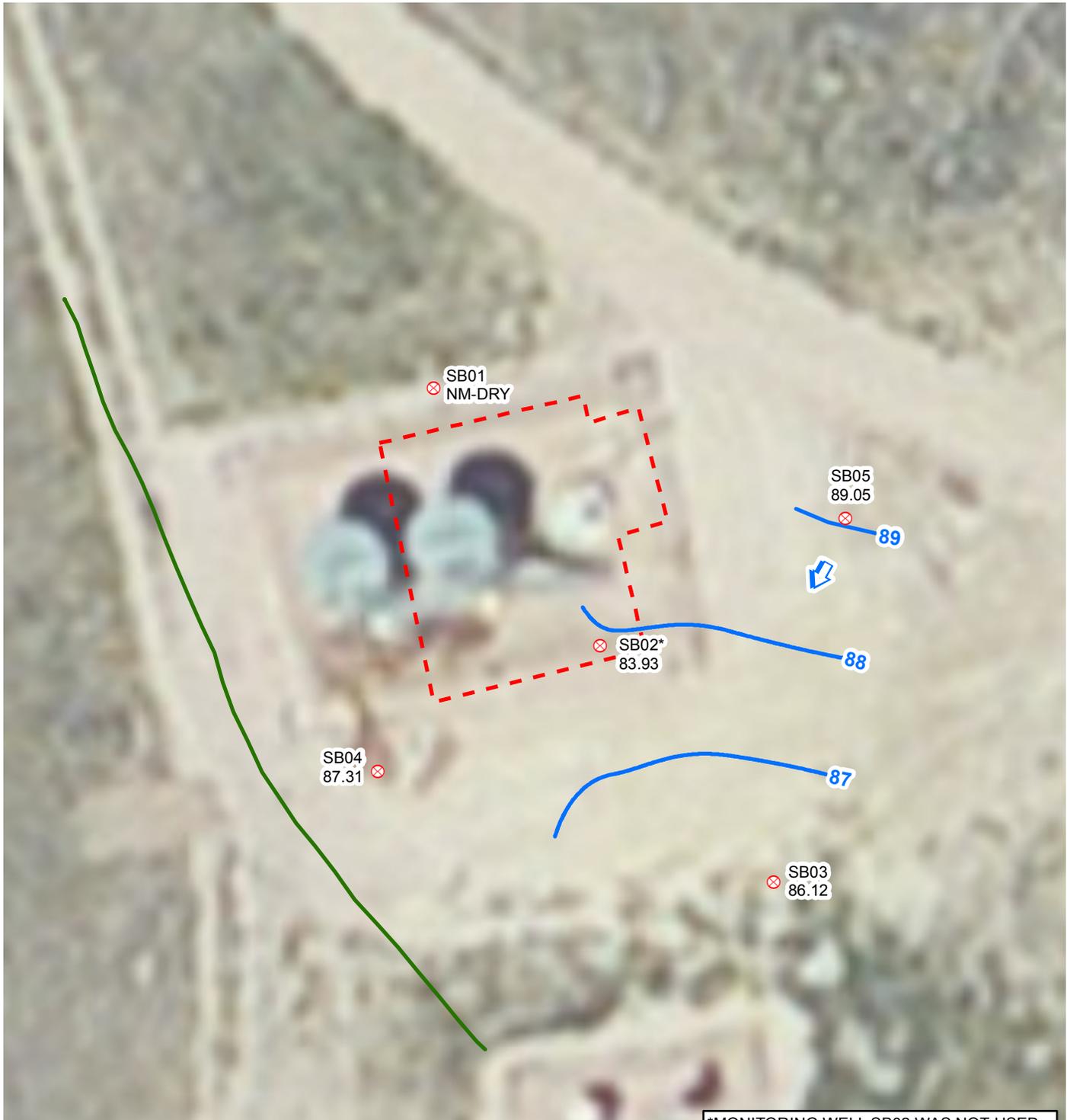


FIGURE 4
SOIL BORING ANALYTICAL RESULTS
STATE 18-1
NENW SEC 18-T5N-R63W
WELD COUNTY, COLORADO
NOBLE ENERGY, INC.





*MONITORING WELL SB02 WAS NOT USED TO GENERATE GROUNDWATER ELEVATION CONTOURS FOR THIS SAMPLING EVENT.

IMAGE COURTESY OF ESRI

LEGEND

- SOIL BORING
- CALCULATED GROUNDWATER FLOW DIRECTION
- DCP LINE
- RELATIVE GROUNDWATER ELEVATION CONTOUR
- CONTOUR INTERVAL = 1 FOOT
- GRADIENT = 0.059 FEET/FOOT
- EXCAVATION EXTENT

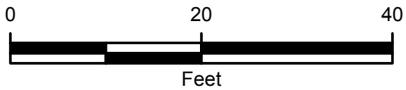


FIGURE 5
RELATIVE GROUNDWATER ELEVATION MAP
 STATE 18-1
 NENW SEC 18-T5N-R63W
 WELD COUNTY, COLORADO
 NOBLE ENERGY, INC.



SAMPLE ID
 SAMPLE DATE
 B: BENZENE IN MICROGRAMS PER LITER (µg/L)
 T: TOLUENE (µg/L)
 E: ETHYLBENZENE (µg/L)
 X: TOTAL XYLENES (µg/L)
 <: INDICATES RESULT IS LESS THAN THE LABORATORY REPORTING LIMIT
 NS-DRY: NOT SAMPLED-DRY

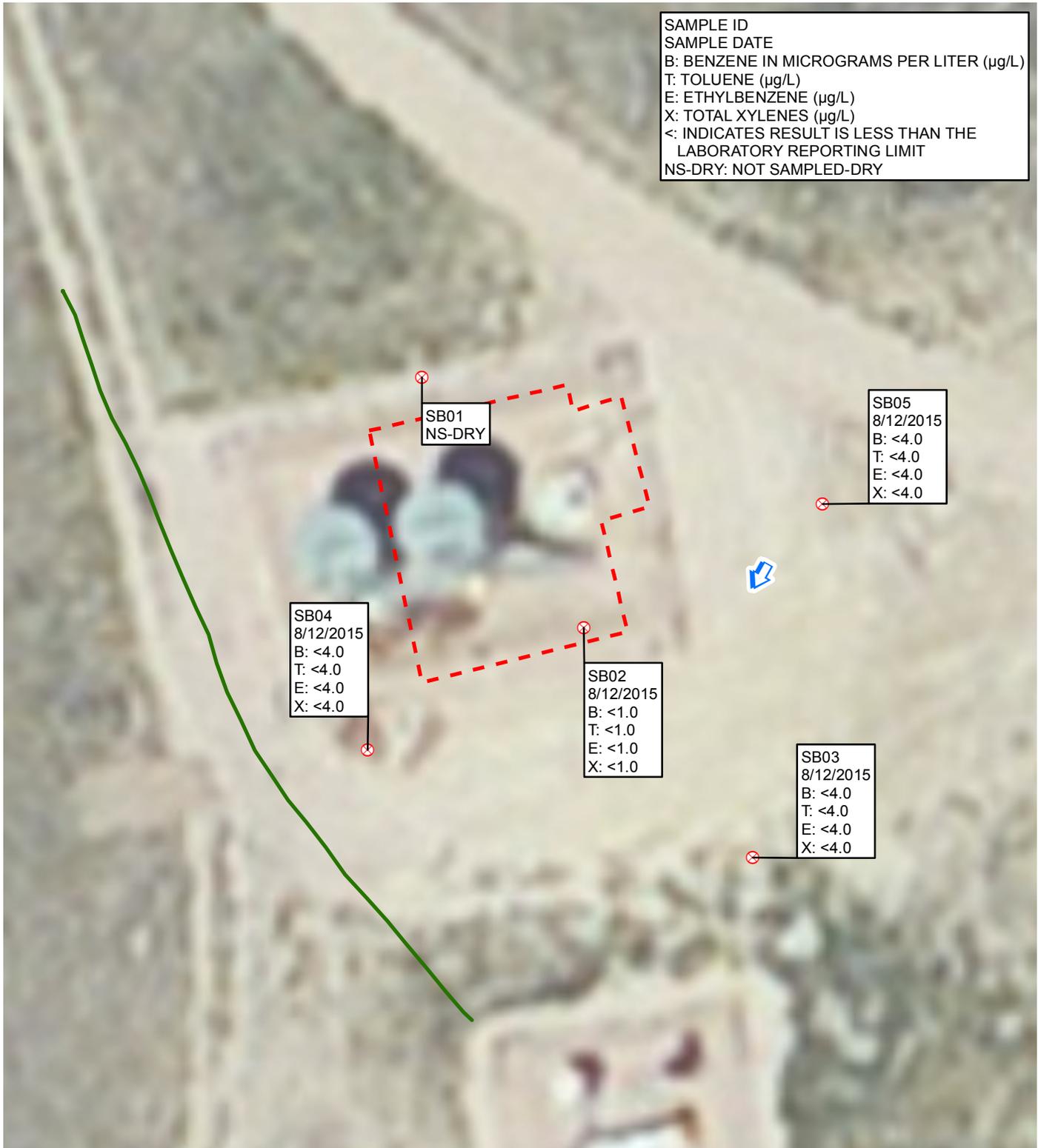


IMAGE COURTESY OF ESRI

LEGEND

-  SOIL BORING
-  CALCULATED GROUNDWATER FLOW DIRECTION
-  DCP LINE
-  EXCAVATION EXTENT

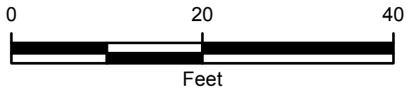


FIGURE 6
GROUNDWATER ANALYTICAL RESULTS
STATE 18-1
NENW SEC 18-T5N-R63W
WELD COUNTY, COLORADO
NOBLE ENERGY, INC.



TABLES



TABLE 1

**EXCAVATION SOIL ANALYTICAL RESULTS
STATE 18-1 TANK BATTERY
WELD COUNTY, COLORADO
NOBLE ENERGY, INC.**

Soil Sample	Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Naphthalene (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	TPH (mg/kg)
SS01@13'	7/21/2015	<0.0020	<0.0050	0.055	0.081	0.099	<50	230	230
SS02@13'	7/21/2015	<0.0020	<0.0050	<0.0050	0.010	0.076	<50	210	210
SS03@13'	7/21/2015	0.23	<0.0050	7.9	47	0.71	1,500	550	2,050
SS04@13'	7/21/2015	<0.0020	<0.0050	0.81	3.4	0.26	380	270	650
SS05@15'	7/21/2015	<0.0020	<0.0050	0.0056	0.020	0.028	<50	180	180
SS08@15'	7/23/2015	<0.0020	<0.0050	<0.0050	<0.010	0.017	<50	<50	<100
SS09@11'	7/27/2015	<0.0020	<0.0050	<0.0050	<0.010	0.012	<50	<50	<100
SS10@11'	7/27/2015	<0.0020	<0.0050	0.051	<0.010	0.094	<50	<50	<100
SS11@11'	7/27/2015	<0.0020	<0.0050	<0.0050	<0.010	0.011	<50	<50	<100
SS12@11'	7/28/2015	<0.0020	<0.0050	<0.0050	<0.010	0.026	<50	76	76
SS15@13'	7/28/2015	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50	<50	<100
COGCC Table 910-1 Standard		0.17	85	100	175	23	--	--	500

NOTES:

COGCC - Colorado Oil and Gas Conservation Commission

DRO - diesel range organics analyzed by EPA Method 8015

GRO - gasoline range organics analyzed by EPA Method 8260B

mg/kg - milligrams per kilogram

TPH - total petroleum hydrocarbons is the sum of GRO and DRO

Bold indicates the result exceeds the applicable standard

< - indicates result is less than the stated laboratory reporting limit

-- - not applicable

Benzene, toluene, ethylbenzene, total xylenes, and naphthalene analyzed by EPA Method 8260B

TABLE 2

**SOIL BORING ANALYTICAL RESULTS
STATE 18-1 TANK BATTERY
WELD COUNTY, COLORADO
NOBLE ENERGY, INC.**

Soil Sample	Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Naphthalene (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	TPH (mg/kg)
SB01@12'	7/31/2015	<0.0020	<0.0050	0.024	<0.010	<0.010	<50	74	74
SB02@15'	7/31/2015	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50	<50	<100
SB03@12'	7/31/2015	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50	56	56
SB04@12'	7/31/2015	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50	190	190
SB05@12'	7/31/2015	<0.0020	<0.0050	<0.0050	<0.010	<0.010	<50	<50	<100
COGCC Table 910-1 Standard		0.17	85	100	175	23	--	--	500

NOTES:

COGCC - Colorado Oil and Gas Conservation Commission

DRO - diesel range organics analyzed by EPA Method 8015

GRO - gasoline range organics analyzed by EPA Method 8260B

mg/kg - milligrams per kilogram

TPH - total petroleum hydrocarbons is the sum of GRO and DRO

< - indicates result is less than the stated laboratory reporting limit

-- - not applicable

Benzene, toluene, ethylbenzene, total xylenes, and naphthalene analyzed by EPA Method 8260B

TABLE 3

**GROUNDWATER ANALYTICAL RESULTS
STATE 18-1 TANK BATTERY
WELD COUNTY, COLORADO
NOBLE ENERGY, INC.**

Monitoring Well	Date	Depth to Water (feet btoc)	Relative Groundwater Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
SB01	8/12/2015	ND	NM	Monitoring well dry - no sample collected			
SB02	8/12/2015	13.65	83.93	<1.0	<1.0	<1.0	<1.0
SB03	8/12/2015	11.76	86.12	<4.0	<4.0	<4.0	<4.0
SB04	8/12/2015	9.75	87.31	<4.0	<4.0	<4.0	<4.0
SB05	8/12/2015	8.46	89.05	<4.0	<4.0	<4.0	<4.0
CDPHE WQCC Reg 41				5.0	560	700	1,400

NOTES:

btoc - below top of casing

µg/L - micrograms per liter

ND - not detected

NM - not measured

< - indicates result is less than the stated laboratory reporting limit

Benzene, toluene, ethylbenzene, and total xylenes analyzed by EPA Method 8260C

CDPHE WQCC Reg 41 - Colorado Department of Public Health and Environment-Water Quality Control Commission
Regulation 41- The Basic Standards for Ground Water

ATTACHMENT 1
EXCAVATION LABORATORY ANALYTICAL REPORTS



Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

July 22, 2015

Chris Roy
LT Environmental, Inc.
4600 West 60th Avenue
Arvada, CO 80003
RE: State 18-1

Enclosed are the results of analyses for samples received by Summit Scientific on 07/21/15 17:52. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Shrewsbury', written in a cursive style.

Paul Shrewsbury
President



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

Project: State 18-1

Project Number: 008315048
Project Manager: Chris Roy

Reported:
07/22/15 07:49

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS01@13'	1507229-01	Soil	07/21/15 13:05	07/21/15 17:52
SS02@13'	1507229-02	Soil	07/21/15 13:10	07/21/15 17:52
SS03@13'	1507229-03	Soil	07/21/15 15:00	07/21/15 17:52
SS04@13'	1507229-04	Soil	07/21/15 13:15	07/21/15 17:52
SS05@15'	1507229-05	Soil	07/21/15 13:20	07/21/15 17:52

Summit Scientific

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



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

Project: State 18-1

Project Number: 008315048
Project Manager: Chris Roy

Reported:
07/22/15 07:49

Summit Scientific 1507229

S₂

741 Corporate Circle, Suite J&K ♦ Golden, Colorado 80401
303-277-9310 ♦ 303-374-5933

Page 1 of 1

Client: LT Environmental, Inc. Project Manager: Chris Roy
Address: 4600 West 60th Ave E-Mail: Croye.Henriem@Lte Remediation
City/State/Zip: Arvada, CO 80003
Phone: 303-433-9788 Fax: 303-433-1432 Project Name: State 18-1
Sampler Name: Water Project Number: 008315048

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested				Special Instructions
					HCl	HNO3	None	Other (Specify)	Groundwater	Soil	Air-Canister #	Other (Specify)	BTEX	VOCs	DRG	Depth	
1	SS01@13'	7/21/15	1305	1						X				X	X	X	
2	SS02@13'		1310	1						X							
3	SS23@13'		1500	1						X							
4	SS04@13'		1315	1						X							
5	SS05@15'		1320	1						X							
6																	
7																	
8																	
9																	
10																	

Relinquished by: <u>[Signature]</u>	Date/Time: <u>7/21/15 1700</u>	Received by: <u>Renee Ferguson</u>	Date/Time: <u>7/21/15 17:00</u>	Turn Around Time (Check) Same Day <input checked="" type="checkbox"/> 72 hours ___ 24 hours ___ Standard ___ 48 hours ___ Sample Integrity: Temperature Upon Receipt: <u>6.2</u> Intact: <input checked="" type="checkbox"/> Yes No	Notes:
Relinquished by:	Date/Time:	Received by:	Date/Time:		
Relinquished by:	Date/Time:	Received by:	Date/Time:		

www.s2scientific.com



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

Project: State 18-1

Project Number: 008315048
Project Manager: Chris Roy

Reported:
07/22/15 07:49

SS01@13'
1507229-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/21/15 13:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	230	50	mg/kg	1	1507249	07/21/15	07/21/15	8015M	

Date Sampled: 07/21/15 13:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>		117 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/21/15 13:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.099	0.010	mg/kg	1	1507248	07/21/15	07/22/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.055	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.081	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: 07/21/15 13:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		96.4 %	23-173		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		85.2 %	20-170		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		130 %	21-167		"	"	"	"	

Summit Scientific

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



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

Project: State 18-1
Project Number: 008315048
Project Manager: Chris Roy

Reported:
07/22/15 07:49

SS02@13'
1507229-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/21/15 13:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	210	50	mg/kg	1	1507249	07/21/15	07/21/15	8015M	

Date Sampled: **07/21/15 13:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>		109 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/21/15 13:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.076	0.010	mg/kg	1	1507248	07/21/15	07/22/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.010	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **07/21/15 13:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		93.0 %	23-173		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		79.4 %	20-170		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		136 %	21-167		"	"	"	"	

Summit Scientific

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



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

Project: State 18-1

Project Number: 008315048
Project Manager: Chris Roy

Reported:
07/22/15 07:49

SS03@13'
1507229-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/21/15 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	550	50	mg/kg	1	1507249	07/21/15	07/21/15	8015M	

Date Sampled: **07/21/15 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>		119 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/21/15 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.71	0.010	mg/kg	1	1507248	07/21/15	07/22/15	EPA 8260B	
Benzene	0.23	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	7.9	0.50	"	100	"	"	07/21/15	"	
Xylenes (total)	47	1.0	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	1500	50	"	"	"	"	"	"	

Date Sampled: **07/21/15 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		81.1 %	23-173		"	"	07/22/15	"	
<i>Surrogate: Toluene-d8</i>		82.6 %	20-170		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		121 %	21-167		"	"	"	"	

Summit Scientific

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



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

Project: State 18-1

Project Number: 008315048
Project Manager: Chris Roy

Reported:
07/22/15 07:49

SS04@13'
1507229-04 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/21/15 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	270	50	mg/kg	1	1507249	07/21/15	07/22/15	8015M	

Date Sampled: **07/21/15 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>		118 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/21/15 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.26	0.010	mg/kg	1	1507248	07/21/15	07/22/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.81	0.0050	"	"	"	"	"	"	
Xylenes (total)	3.4	1.0	"	100	"	"	07/21/15	"	
Gasoline Range Hydrocarbons	380	50	"	"	"	"	"	"	

Date Sampled: **07/21/15 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		98.2 %	23-173		"	"	07/22/15	"	
<i>Surrogate: Toluene-d8</i>		87.1 %	20-170		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		99.3 %	21-167		"	"	"	"	

Summit Scientific

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

Project: State 18-1
Project Number: 008315048
Project Manager: Chris Roy

Reported:
07/22/15 07:49

SS05@15'
1507229-05 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/21/15 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	180	50	mg/kg	1	1507249	07/21/15	07/22/15	8015M	

Date Sampled: **07/21/15 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>		107 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/21/15 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.028	0.010	mg/kg	1	1507248	07/21/15	07/22/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.0056	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.020	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **07/21/15 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		95.8 %	23-173		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		93.1 %	20-170		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		103 %	21-167		"	"	"	"	

Summit Scientific

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



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

Project: State 18-1

Project Number: 008315048
Project Manager: Chris Roy

Reported:
07/22/15 07:49

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch 1507249 - EPA 3550A

Blank (1507249-BLK1)

Prepared & Analyzed: 07/21/15

C10-C28 (DRO)	ND	50	mg/kg								
Surrogate: <i>o</i> -Terphenyl	12.8		"	12.2		105	30-150				

LCS (1507249-BS1)

Prepared & Analyzed: 07/21/15

C10-C28 (DRO)	482	50	mg/kg	501		96.2	73-134				
Surrogate: <i>o</i> -Terphenyl	13.0		"	12.2		107	30-150				

Matrix Spike (1507249-MS1)

Source: 1507228-01

Prepared & Analyzed: 07/21/15

C10-C28 (DRO)	466	50	mg/kg	488	26.7	90.0	50-148				
Surrogate: <i>o</i> -Terphenyl	12.8		"	11.9		108	30-150				

Matrix Spike Dup (1507249-MSD1)

Source: 1507228-01

Prepared & Analyzed: 07/21/15

C10-C28 (DRO)	460	50	mg/kg	488	26.7	88.8	50-148	1.26	13		
Surrogate: <i>o</i> -Terphenyl	12.6		"	11.9		106	30-150				

Summit Scientific

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

Project: State 18-1
Project Number: 008315048
Project Manager: Chris Roy

Reported:
07/22/15 07:49

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

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

Batch 1507248 - EPA 5030 Soil MS

Blank (1507248-BLK1)

Prepared & Analyzed: 07/21/15

Naphthalene	ND	0.010	mg/kg							
Benzene	ND	0.0020	"							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0372</i>		<i>"</i>	<i>0.0396</i>		<i>94.0</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0375</i>		<i>"</i>	<i>0.0400</i>		<i>93.7</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0406</i>		<i>"</i>	<i>0.0400</i>		<i>101</i>	<i>21-167</i>			

LCS (1507248-BS1)

Prepared & Analyzed: 07/21/15

Naphthalene	0.134	0.010	mg/kg	0.150		89.4	66-138			
Benzene	0.144	0.0020	"	0.150		96.0	58-130			
Toluene	0.145	0.0050	"	0.150		96.9	61-134			
Ethylbenzene	0.154	0.0050	"	0.150		102	74-139			
m,p-Xylene	0.308	0.010	"	0.300		103	73-137			
o-Xylene	0.148	0.0050	"	0.150		99.0	73-141			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0371</i>		<i>"</i>	<i>0.0396</i>		<i>93.6</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0386</i>		<i>"</i>	<i>0.0400</i>		<i>96.4</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0404</i>		<i>"</i>	<i>0.0400</i>		<i>101</i>	<i>21-167</i>			

Matrix Spike (1507248-MS1)

Source: 1507228-01

Prepared & Analyzed: 07/21/15

Naphthalene	0.120	0.010	mg/kg	0.144	ND	82.9	10-158			
Benzene	0.140	0.0020	"	0.144	ND	97.1	30-131			
Toluene	0.142	0.0050	"	0.144	ND	98.7	30-134			
Ethylbenzene	0.146	0.0050	"	0.144	ND	101	22-153			
m,p-Xylene	0.291	0.010	"	0.288	ND	101	10-159			
o-Xylene	0.142	0.0050	"	0.144	ND	98.6	31-151			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0364</i>		<i>"</i>	<i>0.0381</i>		<i>95.5</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0378</i>		<i>"</i>	<i>0.0385</i>		<i>98.2</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0384</i>		<i>"</i>	<i>0.0385</i>		<i>99.8</i>	<i>21-167</i>			

Summit Scientific

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

Project: State 18-1
Project Number: 008315048
Project Manager: Chris Roy

Reported:
07/22/15 07:49

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

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

Batch 1507248 - EPA 5030 Soil MS

Matrix Spike Dup (1507248-MSD1)	Source: 1507228-01			Prepared & Analyzed: 07/21/15						
Naphthalene	0.115	0.010	mg/kg	0.141	ND	81.9	10-158	3.52	42	
Benzene	0.134	0.0020	"	0.141	ND	95.1	30-131	4.38	34	
Toluene	0.135	0.0050	"	0.141	ND	95.6	30-134	5.45	30	
Ethylbenzene	0.139	0.0050	"	0.141	ND	98.9	22-153	4.84	24	
m,p-Xylene	0.278	0.010	"	0.282	ND	98.7	10-159	4.59	68	
o-Xylene	0.137	0.0050	"	0.141	ND	96.9	31-151	3.98	38	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0362</i>		<i>"</i>	<i>0.0372</i>		<i>97.3</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0371</i>		<i>"</i>	<i>0.0376</i>		<i>98.8</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0387</i>		<i>"</i>	<i>0.0376</i>		<i>103</i>	<i>21-167</i>			

Summit Scientific

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

Project: State 18-1

Project Number: 008315048
Project Manager: Chris Roy

Reported:
07/22/15 07:49

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

Summit Scientific

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

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

July 24, 2015

Chris Roy
LT Environmental, Inc.
4600 West 60th Avenue
Arvada, CO 80003
RE: State 18-1

Enclosed are the results of analyses for samples received by Summit Scientific on 07/23/15 18:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Paul Shrewsbury
President



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

Project: State 18-1

Project Number: 008315048
Project Manager: Chris Roy

Reported:
07/24/15 06:22

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS08@15'	1507252-01	Soil	07/23/15 14:00	07/23/15 18:30

Summit Scientific 1507252
S2

741 Corporate Circle, Suite J ♦ Golden, Colorado 80401
303-277-9310 ♦ 303-374-5933

Page 1 of 1

Client: LTG Project Manager: Chris Roy
Address: _____ E-Mail: croyle@henk.com + noble
City/State/Zip: _____
Phone: 303-437-9788 Fax: _____ Project Name: State 18-1
Sampler Name: D18.5' Project Number: 008315

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested				Special Instructions		
					HCl	HNO3	None	Other (Specify)	Groundwater	Soil	Air-Canister #	Other (Specify)	Asbestos	GC/MS DRO	Depth			
1	SS08@15'	7/23/15	1400	1						X								
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		

Relinquished by: [Signature] Date/Time: 7/23/15 1830 Received by: Rhonda Ferguson Date/Time: 18:38 7/23/15
 Relinquished by: _____ Date/Time: _____ Received by: _____ Date/Time: _____
 Relinquished by: _____ Date/Time: _____ Received by: _____ Date/Time: 7/23 1830

Turn Around Time (Check)
 Same Day 72 hours _____
 24 hours _____ Standard _____
 48 hours _____
 Sample Integrity:
 Temperature Upon Receipt: 26.4
 Intact: Yes No

www.s2scientific.com

Summit Scientific

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



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

Project: State 18-1
Project Number: 008315048
Project Manager: Chris Roy

Reported:
07/24/15 06:22

SS08@15'
1507252-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/23/15 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1507264	07/23/15	07/24/15	8015M	

Date Sampled: **07/23/15 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		104 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/23/15 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.017	0.010	mg/kg	1	1507270	07/23/15	07/24/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **07/23/15 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		103 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		100 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.5 %	21-167		"	"	"	"	

Summit Scientific

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



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

Project: State 18-1
Project Number: 008315048
Project Manager: Chris Roy

Reported:
07/24/15 06:22

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch 1507264 - EPA 3550A

Blank (1507264-BLK1)				Prepared & Analyzed: 07/23/15							
C10-C28 (DRO)	ND	50	mg/kg								
<i>Surrogate: o-Terphenyl</i>	12.1		"	12.2		99.3	30-150				
LCS (1507264-BS1)				Prepared & Analyzed: 07/23/15							
C10-C28 (DRO)	414	50	mg/kg	501		82.7	73-134				
<i>Surrogate: o-Terphenyl</i>	12.1		"	12.2		98.9	30-150				
Matrix Spike (1507264-MS1)				Source: 1507251-01		Prepared & Analyzed: 07/23/15					
C10-C28 (DRO)	428	50	mg/kg	496	42.1	77.8	50-148				
<i>Surrogate: o-Terphenyl</i>	12.4		"	12.1		103	30-150				
Matrix Spike Dup (1507264-MSD1)				Source: 1507251-01		Prepared & Analyzed: 07/23/15					
C10-C28 (DRO)	422	50	mg/kg	495	42.1	76.8	50-148	1.32		13	
<i>Surrogate: o-Terphenyl</i>	12.5		"	12.1		104	30-150				

Summit Scientific

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

Project: State 18-1
Project Number: 008315048
Project Manager: Chris Roy

Reported:
07/24/15 06:22

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

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

Batch 1507270 - EPA 5030 Soil MS

Blank (1507270-BLK1)

Prepared & Analyzed: 07/23/15

Naphthalene	ND	0.010	mg/kg							
Benzene	ND	0.0020	"							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0389</i>		<i>"</i>	<i>0.0396</i>		<i>98.2</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0394</i>		<i>"</i>	<i>0.0400</i>		<i>98.5</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0377</i>		<i>"</i>	<i>0.0400</i>		<i>94.4</i>	<i>21-167</i>			

LCS (1507270-BS1)

Prepared & Analyzed: 07/23/15

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.121	0.0020	"	0.100		121	58-130			
Toluene	0.121	0.0050	"	0.100		121	61-134			
Ethylbenzene	0.129	0.0050	"	0.0992		130	74-139			
m,p-Xylene	0.263	0.010	"	0.200		132	73-137			
o-Xylene	0.130	0.0050	"	0.0984		132	73-141			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0393</i>		<i>"</i>	<i>0.0396</i>		<i>99.3</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0400</i>		<i>"</i>	<i>0.0400</i>		<i>100</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0374</i>		<i>"</i>	<i>0.0400</i>		<i>93.4</i>	<i>21-167</i>			

Matrix Spike (1507270-MS1)

Source: 1507251-01

Prepared & Analyzed: 07/23/15

Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.116	0.0020	"	0.0938	ND	123	30-131			
Toluene	0.116	0.0050	"	0.0938	ND	123	30-134			
Ethylbenzene	0.128	0.0050	"	0.0931	ND	138	22-153			
m,p-Xylene	0.263	0.010	"	0.187	0.00868	136	10-159			
o-Xylene	0.128	0.0050	"	0.0923	ND	139	31-151			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0370</i>		<i>"</i>	<i>0.0371</i>		<i>99.5</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0381</i>		<i>"</i>	<i>0.0375</i>		<i>102</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0351</i>		<i>"</i>	<i>0.0375</i>		<i>93.6</i>	<i>21-167</i>			

Summit Scientific

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



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

Project: State 18-1

Project Number: 008315048
Project Manager: Chris Roy

Reported:
07/24/15 06:22

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

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

Batch 1507270 - EPA 5030 Soil MS

Matrix Spike Dup (1507270-MSD1)	Source: 1507251-01			Prepared & Analyzed: 07/23/15					
Naphthalene	ND	0.010	mg/kg	ND			10-158		42
Benzene	0.117	0.0020	"	0.0933	ND	125	30-131	1.13	34
Toluene	0.116	0.0050	"	0.0933	ND	125	30-134	0.478	30
Ethylbenzene	0.130	0.0050	"	0.0925	ND	140	22-153	1.37	24
m,p-Xylene	0.268	0.010	"	0.186	0.00868	139	10-159	2.19	68
o-Xylene	0.128	0.0050	"	0.0918	ND	140	31-151	0.205	38
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0375</i>		<i>"</i>	<i>0.0369</i>		<i>102</i>	<i>23-173</i>		
<i>Surrogate: Toluene-d8</i>	<i>0.0372</i>		<i>"</i>	<i>0.0373</i>		<i>99.8</i>	<i>20-170</i>		
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0343</i>		<i>"</i>	<i>0.0373</i>		<i>92.0</i>	<i>21-167</i>		

Summit Scientific

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



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

Project: State 18-1

Project Number: 008315048
Project Manager: Chris Roy

Reported:
07/24/15 06:22

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

Summit Scientific

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

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

July 28, 2015

Chris Roy
LT Environmental, Inc.
4600 West 60th Avenue
Arvada, CO 80003
RE: State 18-1

Enclosed are the results of analyses for samples received by Summit Scientific on 07/27/15 18:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Paul Shrewsbury
President



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

Project: State 18-1

Project Number: 008315048

Project Manager: Chris Roy

Reported:
07/28/15 07:00

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS09@11'	1507269-01	Soil	07/27/15 13:15	07/27/15 18:00
SS10@11'	1507269-02	Soil	07/27/15 13:30	07/27/15 18:00
SS11@11'	1507269-03	Soil	07/27/15 13:45	07/27/15 18:00

Summit Scientific

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



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

Project: State 18-1

Project Number: 008315048
Project Manager: Chris Roy

Reported:
07/28/15 07:00

Summit Scientific 1507269

S₂

741 Corporate Circle, Suite J&K ♦ Golden, Colorado 80401
303-277-9310 ♦ 303-374-5933

Page 1 of 1

Client: LT Environmental, Inc. Project Manager: Chris Roy
Address: 4600 West 60th Ave E-Mail: LTENV.COM F 11656 Resolution
City/State/Zip: Arvada, CO 80003
Phone: 303-433-9788 Fax: 303-433-1432 Project Name: State 18-1
Sampler Name: DASL Project Number: 008315

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested				Special Instructions
					HCl	HNO3	None	Other (Specify)	Groundwater	Soil	Air-Canister #	Other (Specify)	BTX	PAH	DRD	Depth	
1	SS09011	7/27/15	1365	1					X				X	X	X		
2	SS18011		1330	1					X				X	X	X		
3	SS11011		1345	1					X				X	X	X		
4																	
5																	
6																	
7																	
8																	
9																	
10																	
Relinquished by: <u>[Signature]</u>		Date/Time: <u>7/27/15 1730</u>		Received by: <u>[Signature]</u>		Date/Time: <u>7/27/15 1730</u>		Turn Around Time (Check)				Notes:					
								Same Day <input checked="" type="checkbox"/> 72 hours <input type="checkbox"/>				on ice					
								24 hours <input type="checkbox"/> Standard <input type="checkbox"/>									
								48 hours <input type="checkbox"/>									
Relinquished by: <u>[Signature]</u>		Date/Time: <u>7/27/15 1800</u>		Received by: <u>[Signature]</u>		Date/Time: <u>7/27 1800</u>		Sample Integrity:									
Relinquished by:		Date/Time:		Received by:		Date/Time:		Temperature Upon Receipt: <u>12.9°C</u>									
								Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No									

www.s2scientific.com

Summit Scientific

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



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

Project: State 18-1
Project Number: 008315048
Project Manager: Chris Roy

Reported:
07/28/15 07:00

SS09@11'
1507269-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/27/15 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1507290	07/27/15	07/27/15	8015M	

Date Sampled: **07/27/15 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		103 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/27/15 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.012	0.010	mg/kg	1	1507289	07/27/15	07/27/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **07/27/15 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		109 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		96.2 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	21-167		"	"	"	"	

Summit Scientific

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



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

Project: State 18-1
Project Number: 008315048
Project Manager: Chris Roy

Reported:
07/28/15 07:00

SS10@11'
1507269-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/27/15 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1507290	07/27/15	07/27/15	8015M	

Date Sampled: **07/27/15 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		103 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/27/15 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.094	0.010	mg/kg	1	1507289	07/27/15	07/27/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.051	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **07/27/15 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		99.0 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		112 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		114 %	21-167		"	"	"	"	

Summit Scientific

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



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

Project: State 18-1
Project Number: 008315048
Project Manager: Chris Roy

Reported:
07/28/15 07:00

SS11@11'
1507269-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/27/15 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1507290	07/27/15	07/27/15	8015M	

Date Sampled: **07/27/15 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		103 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/27/15 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.011	0.010	mg/kg	1	1507289	07/27/15	07/28/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **07/27/15 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		104 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		96.8 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		92.8 %	21-167		"	"	"	"	

Summit Scientific

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



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

Project: State 18-1
Project Number: 008315048
Project Manager: Chris Roy

Reported:
07/28/15 07:00

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch 1507290 - EPA 3550A

Blank (1507290-BLK1)

Prepared & Analyzed: 07/27/15

C10-C28 (DRO)	ND	50	mg/kg								
<i>Surrogate: o-Terphenyl</i>	12.6		"	12.2		104	30-150				

LCS (1507290-BS1)

Prepared & Analyzed: 07/27/15

C10-C28 (DRO)	464	50	mg/kg	501		92.5	73-134				
<i>Surrogate: o-Terphenyl</i>	12.5		"	12.2		102	30-150				

Matrix Spike (1507290-MS1)

Source: 1507264-01

Prepared & Analyzed: 07/27/15

C10-C28 (DRO)	426	50	mg/kg	461	12.1	89.7	50-148				
<i>Surrogate: o-Terphenyl</i>	11.1		"	11.2		99.2	30-150				

Matrix Spike Dup (1507290-MSD1)

Source: 1507264-01

Prepared & Analyzed: 07/27/15

C10-C28 (DRO)	419	50	mg/kg	466	12.1	87.3	50-148	1.76		13	
<i>Surrogate: o-Terphenyl</i>	11.0		"	11.3		97.3	30-150				

Summit Scientific

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



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

Project: State 18-1
Project Number: 008315048
Project Manager: Chris Roy

Reported:
07/28/15 07:00

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

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

Batch 1507289 - EPA 5030 Soil MS

Blank (1507289-BLK1)

Prepared & Analyzed: 07/27/15

Naphthalene	ND	0.010	mg/kg							
Benzene	ND	0.0020	"							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0398</i>		<i>"</i>	<i>0.0396</i>		<i>100</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0398</i>		<i>"</i>	<i>0.0400</i>		<i>99.4</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0389</i>		<i>"</i>	<i>0.0400</i>		<i>97.3</i>	<i>21-167</i>			

LCS (1507289-BS1)

Prepared & Analyzed: 07/27/15

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.109	0.0020	"	0.100		109	58-130			
Toluene	0.108	0.0050	"	0.100		108	61-134			
Ethylbenzene	0.114	0.0050	"	0.0992		114	74-139			
m,p-Xylene	0.230	0.010	"	0.200		115	73-137			
o-Xylene	0.115	0.0050	"	0.0984		117	73-141			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0380</i>		<i>"</i>	<i>0.0396</i>		<i>95.8</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0428</i>		<i>"</i>	<i>0.0400</i>		<i>107</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0375</i>		<i>"</i>	<i>0.0400</i>		<i>93.8</i>	<i>21-167</i>			

Matrix Spike (1507289-MS1)

Source: 1507264-01

Prepared & Analyzed: 07/27/15

Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.108	0.0020	"	0.0929	ND	116	30-131			
Toluene	0.108	0.0050	"	0.0929	ND	116	30-134			
Ethylbenzene	0.114	0.0050	"	0.0922	ND	124	22-153			
m,p-Xylene	0.233	0.010	"	0.186	ND	126	10-159			
o-Xylene	0.117	0.0050	"	0.0914	ND	127	31-151			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0384</i>		<i>"</i>	<i>0.0368</i>		<i>104</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0378</i>		<i>"</i>	<i>0.0372</i>		<i>102</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0359</i>		<i>"</i>	<i>0.0372</i>		<i>96.6</i>	<i>21-167</i>			

Summit Scientific

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



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

Project: State 18-1

Project Number: 008315048
Project Manager: Chris Roy

Reported:
07/28/15 07:00

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

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

Batch 1507289 - EPA 5030 Soil MS

Matrix Spike Dup (1507289-MSD1)	Source: 1507264-01			Prepared & Analyzed: 07/27/15						
Naphthalene	ND	0.010	mg/kg	ND	ND	119	10-158		42	
Benzene	0.115	0.0020	"	0.0963	ND	119	30-131	6.55	34	
Toluene	0.115	0.0050	"	0.0963	ND	119	30-134	6.12	30	
Ethylbenzene	0.127	0.0050	"	0.0956	ND	133	22-153	10.4	24	
m,p-Xylene	0.259	0.010	"	0.192	ND	134	10-159	10.2	68	
o-Xylene	0.130	0.0050	"	0.0948	ND	137	31-151	11.0	38	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0427</i>		<i>"</i>	<i>0.0382</i>		<i>112</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0390</i>		<i>"</i>	<i>0.0385</i>		<i>101</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0380</i>		<i>"</i>	<i>0.0385</i>		<i>98.6</i>	<i>21-167</i>			

Summit Scientific

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



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

Project: State 18-1

Project Number: 008315048
Project Manager: Chris Roy

Reported:
07/28/15 07:00

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

Summit Scientific

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

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

July 29, 2015

Chris Roy
LT Environmental, Inc.
4600 West 60th Avenue
Arvada, CO 80003
RE: State 18-1

Enclosed are the results of analyses for samples received by Summit Scientific on 07/28/15 18:56. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Paul Shrewsbury
President



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

Project: State 18-1

Project Number: 008315048
Project Manager: Chris Roy

Reported:
07/29/15 07:02

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS12@11'	1507279-01	Soil	07/28/15 14:00	07/28/15 18:56
SS15@13'	1507279-02	Soil	07/28/15 14:30	07/28/15 18:56

Summit Scientific

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



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

Project: State 18-1

Project Number: 008315048
Project Manager: Chris Roy

Reported:
07/29/15 07:02

Summit Scientific ^{S₂} 1507279

741 Corporate Circle, Suite J&K ♦ Golden, Colorado 80401
303-277-9310 ♦ 303-374-5933

Page 1 of 1

Client: LT Environmental, Inc. Project Manager: Chris Roy
Address: 4600 West 60th Ave E-Mail: croyc@ltenv.com Wble Ram
City/State/Zip: Arvada, CO 80003
Phone: 303-433-9788 Fax: 303-433-1432 Project Name: State 18-1
Sampler Name: DH/er Project Number: 008315048

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested				Special Instructions
					HCl	HNO3	None	Other (Specify)	Groundwater	Soil	Air-Canister #	Other (Specify)	BTX	GRE DRU	Asph		
1	SS12E11	7/28/15	1400	1					X					X	X	X	
2	SS12E13	↓	1430	1					X					X	X	X	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Relinquished by: <u>[Signature]</u> Date/Time: <u>7/28/15 18:15</u>	Received by: <u>Renata Ferguson</u> Date/Time: <u>7/28/15 18:15</u>	Turn Around Time (Check) Same Day <input checked="" type="checkbox"/> 72 hours <input type="checkbox"/> 24 hours <input type="checkbox"/> Standard <input type="checkbox"/> 48 hours <input type="checkbox"/> Sample Integrity: Temperature Upon Receipt: <input type="checkbox"/> Intact: Yes <input type="checkbox"/> No <input type="checkbox"/>	Notes:
Relinquished by: <u>[Signature]</u> Date/Time: <u>7/28</u>	Received by: <u>[Signature]</u> Date/Time: <u>18:15</u>		
Relinquished by: <u>[Signature]</u> Date/Time: <u></u>	Received by: <u>[Signature]</u> Date/Time: <u></u>		

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

Project: State 18-1
Project Number: 008315048
Project Manager: Chris Roy

Reported:
07/29/15 07:02

SS12@11'
1507279-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/28/15 14:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	76	50	mg/kg	1	1507300	07/28/15	07/29/15	8015M	

Date Sampled: 07/28/15 14:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		99.4 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/28/15 14:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.026	0.010	mg/kg	1	1507299	07/28/15	07/28/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: 07/28/15 14:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		106 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	21-167		"	"	"	"	

Summit Scientific

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



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

Project: State 18-1
Project Number: 008315048
Project Manager: Chris Roy

Reported:
07/29/15 07:02

SS15@13'
1507279-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/28/15 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1507300	07/28/15	07/29/15	8015M	

Date Sampled: **07/28/15 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		108 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/28/15 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1507299	07/28/15	07/28/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **07/28/15 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		110 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.8 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.8 %	21-167		"	"	"	"	

Summit Scientific

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

Project: State 18-1
Project Number: 008315048
Project Manager: Chris Roy

Reported:
07/29/15 07:02

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch 1507300 - EPA 3550A

Blank (1507300-BLK1)				Prepared & Analyzed: 07/28/15							
C10-C28 (DRO)	ND	50	mg/kg								
<i>Surrogate: o-Terphenyl</i>	12.3		"	12.2	101	30-150					
LCS (1507300-BS1)				Prepared & Analyzed: 07/28/15							
C10-C28 (DRO)	548	50	mg/kg	501	109	73-134					
<i>Surrogate: o-Terphenyl</i>	12.6		"	12.2	103	30-150					
Matrix Spike (1507300-MS1)				Source: 1507277-01		Prepared & Analyzed: 07/28/15					
C10-C28 (DRO)	463	50	mg/kg	496	14.7	90.3	50-148				
<i>Surrogate: o-Terphenyl</i>	12.2		"	12.1	101	30-150					
Matrix Spike Dup (1507300-MSD1)				Source: 1507277-01		Prepared & Analyzed: 07/28/15					
C10-C28 (DRO)	460	50	mg/kg	492	14.7	90.5	50-148	0.559	13		
<i>Surrogate: o-Terphenyl</i>	12.3		"	12.0	103	30-150					

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

Project: State 18-1
Project Number: 008315048
Project Manager: Chris Roy

Reported:
07/29/15 07:02

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

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

Batch 1507299 - EPA 5030 Soil MS

Blank (1507299-BLK1)

Prepared & Analyzed: 07/28/15

Naphthalene	ND	0.010	mg/kg							
Benzene	ND	0.0020	"							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0387</i>		<i>"</i>	<i>0.0396</i>		<i>97.7</i>		<i>23-173</i>		
<i>Surrogate: Toluene-d8</i>	<i>0.0381</i>		<i>"</i>	<i>0.0400</i>		<i>95.2</i>		<i>20-170</i>		
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0374</i>		<i>"</i>	<i>0.0400</i>		<i>93.4</i>		<i>21-167</i>		

LCS (1507299-BS1)

Prepared & Analyzed: 07/28/15

Naphthalene	ND	0.010	mg/kg					66-138		
Benzene	0.117	0.0020	"	0.100		117		58-130		
Toluene	0.115	0.0050	"	0.100		115		61-134		
Ethylbenzene	0.125	0.0050	"	0.0992		126		74-139		
m,p-Xylene	0.256	0.010	"	0.200		128		73-137		
o-Xylene	0.125	0.0050	"	0.0984		127		73-141		
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0390</i>		<i>"</i>	<i>0.0396</i>		<i>98.4</i>		<i>23-173</i>		
<i>Surrogate: Toluene-d8</i>	<i>0.0399</i>		<i>"</i>	<i>0.0400</i>		<i>99.8</i>		<i>20-170</i>		
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0373</i>		<i>"</i>	<i>0.0400</i>		<i>93.3</i>		<i>21-167</i>		

Matrix Spike (1507299-MS1)

Source: 1507277-01

Prepared & Analyzed: 07/28/15

Naphthalene	ND	0.010	mg/kg		ND			10-158		
Benzene	0.117	0.0020	"	0.0960	ND	122		30-131		
Toluene	0.117	0.0050	"	0.0960	ND	122		30-134		
Ethylbenzene	0.129	0.0050	"	0.0952	ND	136		22-153		
m,p-Xylene	0.260	0.010	"	0.192	ND	136		10-159		
o-Xylene	0.129	0.0050	"	0.0944	ND	137		31-151		
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0379</i>		<i>"</i>	<i>0.0380</i>		<i>99.8</i>		<i>23-173</i>		
<i>Surrogate: Toluene-d8</i>	<i>0.0389</i>		<i>"</i>	<i>0.0384</i>		<i>101</i>		<i>20-170</i>		
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0355</i>		<i>"</i>	<i>0.0384</i>		<i>92.4</i>		<i>21-167</i>		

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

Project: State 18-1

Project Number: 008315048
Project Manager: Chris Roy

Reported:
07/29/15 07:02

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

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

Batch 1507299 - EPA 5030 Soil MS

Matrix Spike Dup (1507299-MSD1)	Source: 1507277-01			Prepared & Analyzed: 07/28/15						
Naphthalene	ND	0.010	mg/kg	ND	ND	119	10-158		42	
Benzene	0.110	0.0020	"	0.0928	ND	119	30-131	5.71	34	
Toluene	0.110	0.0050	"	0.0928	ND	119	30-134	5.51	30	
Ethylbenzene	0.122	0.0050	"	0.0920	ND	133	22-153	5.49	24	
m,p-Xylene	0.251	0.010	"	0.185	ND	136	10-159	3.63	68	
o-Xylene	0.125	0.0050	"	0.0913	ND	136	31-151	3.86	38	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0379</i>		<i>"</i>	<i>0.0367</i>		<i>103</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0373</i>		<i>"</i>	<i>0.0371</i>		<i>100</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0346</i>		<i>"</i>	<i>0.0371</i>		<i>93.3</i>	<i>21-167</i>			

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



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

Project: State 18-1

Project Number: 008315048
Project Manager: Chris Roy

Reported:
07/29/15 07:02

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

Summit Scientific

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

ATTACHMENT 2
WELL COMPLETION DIAGRAMS





Compliance • Engineering • Remediation
LT Environmental, Inc.
 4600 W. 60th Avenue
 Arvada, Colorado 80003

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

BORING/WELL NO.: SB01 **PROJECT:** State 18-1
DATE: 07/31/2015 - 09:31 **PROJECT NO.:** 008315048
LOGGED BY: Dan Hosler **DRILLED BY:** Elite Drilling
DRILL MTHD: 6" Solid Stem Auger **SAMPLE MTHD:** 2' split spoon

DETECTOR: UltraRae 3000 **HOLE DIA.:** 6.00" **TD:** 15.0' **DTW:** Not Encountered
GRAVEL PACK: 10-20 silica sand **SEAL:** Bentonite chips **GROUT:** NA
CASING TYPE: PVC **CASING DIA.:** 2.0" **CASING LENGTH:** 5.0'
SCREEN TYPE: PVC **SCREEN SLOT:** 0.01" **SCREEN LENGTH:** 10.0'

Vapor (ppm) 0.0 1500.0	Staining	Moisture Content	Sample	Sample Run (ft/ft)	Depth (ft. bgs.)	USCS	Soil Type	Lithology Description	Well Construction
0.00		Dry		2/2	0		SC: SAND - 0.0' - 11.0' - fine grained, dark brown, some clay, little fine gravel, dry, no odor, no staining Fine grained sand lens at 6' bgs		
0.00				2/2	2.2				
0.00				2/2	5				
0.00				2/2	7.2				
0.00				2/2	9.2				
0.80		Dry		2/2	11.2		SP: SAND - 11.0' - 14.0' - fine grained, brown, dry, no odor, no staining		
193.00			SB01 @ 12'	2/2	12.2				
1.10		Dry		2/2	15		CLS: CLAYSTONE - 14.0' - 16.0' - brown, little silt, dry, no odor, no staining		



Compliance • Engineering • Remediation
LT Environmental, Inc.
 4600 W. 60th Avenue
 Arvada, Colorado 80003

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

BORING/WELL NO.: SB03 **PROJECT:** State 18-1
DATE: 07/31/2015 - 10:53 **PROJECT NO.:** 008315048
LOGGED BY: Dan Hosler **DRILLED BY:** Elite Drilling
DRILL MTHD: 6" Solid Stem Auger **SAMPLE MTHD:** 2' split spoon

DETECTOR: UltraRae 3000 **HOLE DIA.:** 6.00" **TD:** 15.0' **DTW:** 12.0'
GRAVEL PACK: 10-20 silica sand **SEAL:** Bentonite chips **GROUT:** NA
CASING TYPE: PVC **CASING DIA.:** 2.0" **CASING LENGTH:** 5.0'
SCREEN TYPE: PVC **SCREEN SLOT:** 0.01" **SCREEN LENGTH:** 10.0'

Vapor (ppm) 0.0 1500.0	Staining	Moisture Content	Sample	Sample Run (ft/ft)	Depth (ft. bgs.)	USCS	Soil Type	Lithology Description	Well Construction
					0				
				2/2				CLS: CLAYSTONE - 0.0' - 16.0' - very fine grained, clayey, brown, dry, no odor, no staining, some orange oxidation staining at 8' bgs, little stain at 13' to 14' bgs, wet at 11' bgs	
0.00				2/2					
0.00				2/2	5				
0.10				2/2					
0.90				2/2					
0.00				2/2	10				
75.02				2/2					
				2/2					
50.45				2/2					
				2/2	15				
				2/2					



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LT Environmental, Inc.
 4600 W. 60th Avenue
 Arvada, Colorado 80003

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

BORING/WELL NO.: SB04 **PROJECT:** State 18-1
DATE: 07/31/2015 - 12:07 **PROJECT NO.:** 008315048
LOGGED BY: Dan Hosler **DRILLED BY:** Elite Drilling
DRILL MTHD: 6" Solid Stem Auger **SAMPLE MTHD:** 2' split spoon

DETECTOR: UltraRae 3000

GRAVEL PACK: 10-20 silica sand

CASING TYPE: PVC

SCREEN TYPE: PVC

HOLE DIA.: 6.00"

SEAL: Bentonite chips

CASING DIA.: 2.0"

SCREEN SLOT: 0.01"

TD: 15.0' **DTW:** 12.0'

GROUT: NA

CASING LENGTH: 5.0'

SCREEN LENGTH: 10.0'

Vapor (ppm) 0.0 1500.0	Staining	Moisture Content	Sample	Sample Run (ft/ft)	Depth (ft. bgs.)	USCS	Soil Type	Lithology Description	Well Construction
0.00		Dry		2/2	0		SP: SAND - 0.0' - 7.0' - fine grained, brown, dry, no odor, no staining		
0.00		Dry		2/2	2.5		CL: CLAY - 7.0' - 12.0' - brown, some silt, dry, no odor, no staining, orange oxidation staining		
0.00		Dry		2/2	5				
0.00		Dry		2/2	7.5				
46.95		Wet	SB04 @ 12'	2/2	12		SP: SAND - 12.0' - 13.0' - fine grained, brown, wet, no odor, no staining		
1.05		Dry		2/2	13.5		CLS: CLAYSTONE - 13.0' - 16.0' - brown, some silt, dry, no odor, staining and odor at 14'-15' bgs		
				2/2	15				



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LT Environmental, Inc.
 4600 W. 60th Avenue
 Arvada, Colorado 80003

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

BORING/WELL NO.: SB05 **PROJECT:** State 18-1
DATE: 07/31/2015 - 13:03 **PROJECT NO.:** 008315048
LOGGED BY: Dan Hosler **DRILLED BY:** Elite Drilling
DRILL MTHD: 6" Solid Stem Auger **SAMPLE MTHD:** 2' split spoon

DETECTOR: UltraRae 3000 **HOLE DIA.:** 6.00" **TD:** 15.0' **DTW:** 14.0'
GRAVEL PACK: 10-20 silica sand **SEAL:** Bentonite chips **GROUT:** NA
CASING TYPE: PVC **CASING DIA.:** 2.0" **CASING LENGTH:** 5.0'
SCREEN TYPE: PVC **SCREEN SLOT:** 0.01" **SCREEN LENGTH:** 10.0'

Vapor (ppm) 0.0 1500.0	Staining	Moisture Content	Sample	Sample Run (ft/ft)	Depth (ft. bgs.)	USCS	Soil Type	Lithology Description	Well Construction
0.00			Dry	2/2	0			CLS: CLAYSTONE - 0.0' - 16.0' - silty, brown, dry, no odor, orange oxidation staining, wet at 14' bgs	
0.00				2/2	2				
0.00				2/2	4				
0.00				2/2	5				
0.00				2/2	6				
0.00				2/2	8				
0.00				2/2	10				
13.25			SB05 @ 12'	2/2	12				
0.00			Wet	2/2	14				
0.00				2/2	15				

ATTACHMENT 3
SOIL BORING LABORATORY ANALYTICAL REPORT



Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

August 07, 2015

Chris Roy
LT Environmental, Inc.
4600 West 60th Avenue
Arvada, CO 80003
RE: NEP - State 18-1

Enclosed are the results of analyses for samples received by Summit Scientific on 07/31/15 17:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Paul Shrewsbury
President



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

Project: NEP - State 18-1

Project Number: 0083-15098
Project Manager: Chris Roy

Reported:
08/07/15 13:39

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB01@12'	1508003-01	Soil	07/31/15 10:00	07/31/15 17:00
SB02@15'	1508003-02	Soil	07/31/15 10:30	07/31/15 17:00
SB03@12'	1508003-03	Soil	07/31/15 11:30	07/31/15 17:00
SB04@12'	1508003-04	Soil	07/31/15 12:30	07/31/15 17:00
SB05@12'	1508003-05	Soil	07/31/15 13:30	07/31/15 17:00

Summit Scientific

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

Project: NEP - State 18-1

Project Number: 0083-15098
Project Manager: Chris Roy

Reported:
08/07/15 13:39

Summit Scientific 1508003

S₂

741 Corporate Circle, Suite J&K ♦ Golden, Colorado 80401
303-277-9310 ♦ 303-374-5933

Page 1 of 1

Client: LT Environmental, Inc. Project Manager: Chris Roy
Address: 4600 West 60th Ave E-Mail: cray@ltenv.com + Noble Remediation
City/State/Zip: Arvada, CO 80003
Phone: 303-433-9788 Fax: 303-433-1432 Project Name: State 18-1
Sampler Name: D. Hojer Project Number: 008315098

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested				Special Instructions
					HCl	HNO3	None	Other (Specify)	Groundwater	Soil	Air-Canister #	Other (Specify)	BTEX	GRD DRD	Naphh	
1	S802@12'	7/31/15	1000	1						X			X	X	X	
2	S802@15'		1030	1						X						
3	S803@12'		1130	1						X						
4	S804@12'		1230	1						X						
5	S805@12'		1330	1						X						
6																
7																
8																
9																
10																
Relinquished by: <u>[Signature]</u>		Date/Time: <u>7/31/15 1700</u>	Received by: <u>[Signature]</u>		Date/Time: <u>7/31/15 1700</u>	Turn Around Time (Check)			Notes: <u>on file</u>							
Relinquished by: <u>[Signature]</u>		Date/Time: <u>7/31/15 1745</u>	Received by: <u>[Signature]</u>		Date/Time: <u>7/31 1745</u>	Same Day <input type="checkbox"/>			72 hours <input type="checkbox"/>							
Relinquished by: <u>[Signature]</u>		Date/Time: <u>7/31/15 1745</u>	Received by: <u>[Signature]</u>		Date/Time: <u>7/31 1745</u>	24 hours <input type="checkbox"/>			Standard <input checked="" type="checkbox"/>							
Relinquished by: <u>[Signature]</u>		Date/Time: <u>7/31/15 1745</u>	Received by: <u>[Signature]</u>		Date/Time: <u>7/31 1745</u>	48 hours <input type="checkbox"/>			Sample Integrity:							
Relinquished by: <u>[Signature]</u>		Date/Time: <u>7/31/15 1745</u>	Received by: <u>[Signature]</u>		Date/Time: <u>7/31 1745</u>	Temperature Upon Receipt: <u>0.2°C</u>			Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No							

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Summit Scientific

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



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

Project: NEP - State 18-1

Project Number: 0083-15098
Project Manager: Chris Roy

Reported:
08/07/15 13:39

SB01@12'
1508003-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/31/15 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	74	50	mg/kg	1	1508005	08/03/15	08/03/15	8015M	

Date Sampled: **07/31/15 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>		99.2 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/31/15 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1508006	08/03/15	08/04/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.024	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **07/31/15 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		104 %	23-173		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		113 %	20-170		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		96.9 %	21-167		"	"	"	"	

Summit Scientific

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

Project: NEP - State 18-1

Project Number: 0083-15098
Project Manager: Chris Roy

Reported:
08/07/15 13:39

SB02@15'
1508003-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/31/15 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1508005	08/03/15	08/03/15	8015M	

Date Sampled: **07/31/15 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		98.9 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/31/15 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1508006	08/03/15	08/03/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **07/31/15 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.9 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.8 %	21-167		"	"	"	"	

Summit Scientific

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

Project: NEP - State 18-1

Project Number: 0083-15098
Project Manager: Chris Roy

Reported:
08/07/15 13:39

SB03@12'
1508003-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/31/15 11:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	56	50	mg/kg	1	1508005	08/03/15	08/03/15	8015M	

Date Sampled: 07/31/15 11:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		101 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/31/15 11:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1508006	08/03/15	08/04/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: 07/31/15 11:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		103 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.2 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.0 %	21-167		"	"	"	"	

Summit Scientific

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



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

Project: NEP - State 18-1

Project Number: 0083-15098
Project Manager: Chris Roy

Reported:
08/07/15 13:39

SB04@12'
1508003-04 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/31/15 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	190	50	mg/kg	1	1508005	08/03/15	08/03/15	8015M	

Date Sampled: **07/31/15 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>		100 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/31/15 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1508006	08/03/15	08/04/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **07/31/15 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		102 %	23-173		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		97.0 %	20-170		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		98.5 %	21-167		"	"	"	"	

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

Project: NEP - State 18-1

Project Number: 0083-15098
Project Manager: Chris Roy

Reported:
08/07/15 13:39

SB05@12'
1508003-05 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/31/15 13:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1508005	08/03/15	08/03/15	8015M	

Date Sampled: 07/31/15 13:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		100 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/31/15 13:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1508006	08/03/15	08/04/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: 07/31/15 13:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		101 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.9 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.8 %	21-167		"	"	"	"	

Summit Scientific

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

Project: NEP - State 18-1

Project Number: 0083-15098
Project Manager: Chris Roy

Reported:
08/07/15 13:39

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch 1508005 - EPA 3550A

Blank (1508005-BLK1)

Prepared & Analyzed: 08/03/15

C10-C28 (DRO)	ND	50	mg/kg								
<i>Surrogate: o-Terphenyl</i>	12.3		"	12.2		101	30-150				

LCS (1508005-BS1)

Prepared & Analyzed: 08/03/15

C10-C28 (DRO)	490	50	mg/kg	501		97.9	73-134				
<i>Surrogate: o-Terphenyl</i>	12.3		"	12.2		101	30-150				

Matrix Spike (1508005-MS1)

Source: 1508003-02

Prepared & Analyzed: 08/03/15

C10-C28 (DRO)	512	50	mg/kg	485	ND	106	50-148				
<i>Surrogate: o-Terphenyl</i>	13.3		"	11.8		112	30-150				

Matrix Spike Dup (1508005-MSD1)

Source: 1508003-02

Prepared & Analyzed: 08/03/15

C10-C28 (DRO)	487	50	mg/kg	494	ND	98.6	50-148	4.99	13		
<i>Surrogate: o-Terphenyl</i>	12.3		"	12.0		102	30-150				

Summit Scientific

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

Project: NEP - State 18-1

Project Number: 0083-15098
Project Manager: Chris Roy

Reported:
08/07/15 13:39

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

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

Batch 1508006 - EPA 5030 Soil MS

Blank (1508006-BLK1)

Prepared & Analyzed: 08/03/15

Naphthalene	ND	0.010	mg/kg							
Benzene	ND	0.0020	"							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0400</i>		<i>"</i>	<i>0.0396</i>		<i>101</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0397</i>		<i>"</i>	<i>0.0400</i>		<i>99.2</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0400</i>		<i>"</i>	<i>0.0400</i>		<i>100</i>	<i>21-167</i>			

LCS (1508006-BS1)

Prepared & Analyzed: 08/03/15

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.101	0.0020	"	0.100		101	58-130			
Toluene	0.101	0.0050	"	0.100		101	61-134			
Ethylbenzene	0.102	0.0050	"	0.0992		103	74-139			
m,p-Xylene	0.212	0.010	"	0.200		106	73-137			
o-Xylene	0.105	0.0050	"	0.0984		107	73-141			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0369</i>		<i>"</i>	<i>0.0396</i>		<i>93.3</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0419</i>		<i>"</i>	<i>0.0400</i>		<i>105</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0378</i>		<i>"</i>	<i>0.0400</i>		<i>94.4</i>	<i>21-167</i>			

Matrix Spike (1508006-MS1)

Source: 1508003-02

Prepared & Analyzed: 08/03/15

Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.111	0.0020	"	0.0956	ND	116	30-131			
Toluene	0.110	0.0050	"	0.0956	ND	115	30-134			
Ethylbenzene	0.117	0.0050	"	0.0948	ND	123	22-153			
m,p-Xylene	0.241	0.010	"	0.191	ND	126	10-159			
o-Xylene	0.118	0.0050	"	0.0941	ND	125	31-151			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0383</i>		<i>"</i>	<i>0.0379</i>		<i>101</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0399</i>		<i>"</i>	<i>0.0382</i>		<i>104</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0369</i>		<i>"</i>	<i>0.0382</i>		<i>96.6</i>	<i>21-167</i>			

Summit Scientific

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

Project: NEP - State 18-1

Project Number: 0083-15098
Project Manager: Chris Roy

Reported:
08/07/15 13:39

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

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

Batch 1508006 - EPA 5030 Soil MS

Matrix Spike Dup (1508006-MSD1)	Source: 1508003-02			Prepared & Analyzed: 08/03/15						
Naphthalene	ND	0.010	mg/kg	ND	ND	10-158			42	
Benzene	0.119	0.0020	"	0.0984	ND	121	30-131	6.65	34	
Toluene	0.120	0.0050	"	0.0984	ND	122	30-134	9.08	30	
Ethylbenzene	0.130	0.0050	"	0.0976	ND	133	22-153	10.9	24	
m,p-Xylene	0.266	0.010	"	0.196	ND	136	10-159	10.0	68	
o-Xylene	0.132	0.0050	"	0.0969	ND	136	31-151	11.3	38	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0405</i>		<i>"</i>	<i>0.0390</i>		<i>104</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0403</i>		<i>"</i>	<i>0.0394</i>		<i>102</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0381</i>		<i>"</i>	<i>0.0394</i>		<i>96.8</i>	<i>21-167</i>			

Summit Scientific

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

Project: NEP - State 18-1

Project Number: 0083-15098
Project Manager: Chris Roy

Reported:
08/07/15 13:39

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

Summit Scientific

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

ATTACHMENT 4
GROUNDWATER LABORATORY ANALYTICAL REPORT





August 18, 2015

LT Environmental, Inc.

Charles Greeson

4600 West 60th Avenue

Arvada CO 80003

Project Name - Noble - State 18-1

Project Number - 008315048

Attached are your analytical results for Noble - State 18-1 received by Origins Laboratory, Inc. August 12, 2015. This project is associated with Origins project number X508145-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods. These methods are identified as follows; "SW" are defined in SW-846, "EPA" are defined in 40CFR part 136 and "SM" are defined in the most current revision of Standard Methods For the Examination of Water and Wastewater.

The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody. As such, this report shall not be reproduced except in full, without the written approval of Origin's laboratory.

Unless otherwise noted, the analytical results for all soil samples are reported on a wet weight basis. All analytical analyses were performed under NELAP guidelines unless noted by a data qualifier.

Any holding time exceedances, deviations from the method specifications or deviations from Origins Laboratory's Standard Operating Procedures are outlined in the case narrative.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory, Inc.
303.433.1322
o-squad@oelabinc.com



1725 Elk Place, Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

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

Charles Greeson
Project Number: 008315048
Project: Noble - State 18-1

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB02	X508145-01	Water	August 12, 2015 11:48	08/12/2015 14:12
SB03	X508145-02	Water	August 12, 2015 11:36	08/12/2015 14:12
SB04	X508145-03	Water	August 12, 2015 11:10	08/12/2015 14:12
SB05	X508145-04	Water	August 12, 2015 12:05	08/12/2015 14:12

Origins Laboratory, Inc.



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

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

Charles Greeson
 Project Number: 008315048
 Project: Noble - State 18-1

Origins Laboratory

F-012207-01-R1
 Effective Date: 01/09/12

Sample Receipt Checklist

Origins Work Order: XSO8145 Client: LTE
 Client Project ID: State 18-1
 Checklist Completed by: Jeff Smith Shipped Via: HTD
 Date/time completed: 8/12/15 (UPS, FedEx, Hand Delivered, Pick-up, etc.)
 Airbill #: NA
 Matrix(s) Received: (Check all that apply): Soil/Solid Water Other: _____
 Cooler Number/Temperature: 1 / 7.6 °C 1 / _____ °C 1 / _____ °C (Describe)
 Thermometer ID: T003

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ^{(1)?}		X		Sampled Same Day
Is there ice present (document if blue ice is used)	X			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		X		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		X		
Were all samples received intact ^{(1)?}	X			
Was adequate sample volume provided ^{(1)?}	X			
Are short holding time analytes or samples with HTs due within 48 hours present ^{(1)?}		X		
Is a chain-of-custody (COC) present and filled out completely ^{(1)?}	X			
Does the COC agree with the number and type of sample bottles received ^{(1)?}	X			
Do the sample IDs on the bottle labels match the COC ^{(1)?}	X			
Is the COC properly relinquished by the client with date and time recorded ^{(1)?}	X			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.		X		
Are samples preserved that require preservation and was it checked ^{(1)?} (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO3, HCL, H2SO4) / (pH >10 for samples preserved with NaAsO2+NaOH, ZnAc+NaOH)		X		
Additional Comments (if any):				

⁽¹⁾If NO, then contact the client before proceeding with analysis and note date/time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.

Reviewed by [Signature] (Project Manager)

Date/Time Reviewed 8/13/15

Origins Laboratory, Inc.

[Signature]

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

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

Charles Greeson
 Project Number: 008315048
 Project: Noble - State 18-1

SB02

8/12/2015 11:48:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	-------

Origins Laboratory, Inc.
X508145-01 (Water)

BTEX by EPA 8260C

Benzene	ND	1.0	ug/L	1	5H13010	08/13/2015	08/13/2015	
Toluene	ND	1.0	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	
Xylenes, total	ND	1.0	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	110 %	84-121			"	"	"	
Surrogate: Toluene-d8	97.1 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	98.7 %	84-114			"	"	"	

Origins Laboratory, Inc.



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

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

Charles Greeson
 Project Number: 008315048
 Project: Noble - State 18-1

SB03

8/12/2015 11:36:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X508145-02 (Water)

BTEX by EPA 8260C

Benzene	ND	4.0	ug/L	4	5H13010	08/13/2015	08/13/2015	
Toluene	ND	4.0	"	"	"	"	"	
Ethylbenzene	ND	4.0	"	"	"	"	"	
Xylenes, total	ND	4.0	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	111 %	84-121			"	"	"	
Surrogate: Toluene-d8	97.6 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	98.4 %	84-114			"	"	"	

Origins Laboratory, Inc.



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

Charles Greeson
 Project Number: 008315048
 Project: Noble - State 18-1

SB04

8/12/2015 11:10:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X508145-03 (Water)

BTEX by EPA 8260C

Benzene	ND	4.0	ug/L	4	5H13010	08/13/2015	08/13/2015	
Toluene	ND	4.0	"	"	"	"	"	
Ethylbenzene	ND	4.0	"	"	"	"	"	
Xylenes, total	ND	4.0	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	110 %	84-121			"	"	"	
Surrogate: Toluene-d8	101 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	94.7 %	84-114			"	"	"	

Origins Laboratory, Inc.



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

Charles Greeson
 Project Number: 008315048
 Project: Noble - State 18-1

SB05

8/12/2015 12:05:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X508145-04 (Water)

BTEX by EPA 8260C

Benzene	ND	4.0	ug/L	4	5H13010	08/13/2015	08/13/2015	
Toluene	ND	4.0	"	"	"	"	"	
Ethylbenzene	ND	4.0	"	"	"	"	"	
Xylenes, total	ND	4.0	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	111 %	84-121			"	"	"	
Surrogate: Toluene-d8	99.8 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	98.1 %	84-114			"	"	"	

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

Charles Greeson
 Project Number: 008315048
 Project: Noble - State 18-1

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5H13010 - EPA 5030B (Water)

Blank (5H13010-BLK1)

Prepared: 08/13/2015 Analyzed: 08/13/2015

Benzene	ND	1.0	ug/L							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes, total	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	65		"	62.5	103		84-121			
Surrogate: Toluene-d8	64		"	62.5	102		85-115			
Surrogate: 4-Bromofluorobenzene	60		"	62.5	95.4		84-114			

Origins Laboratory, Inc.



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

Charles Greeson
 Project Number: 008315048
 Project: Noble - State 18-1

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5H13010 - EPA 5030B (Water)

Blank (5H13010-BLK2)

Prepared: 08/13/2015 Analyzed: 08/13/2015

Benzene	ND	1.0	ug/L							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes, total	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	72		"	62.5	115		84-121			
Surrogate: Toluene-d8	61		"	62.5	97.7		85-115			
Surrogate: 4-Bromofluorobenzene	60		"	62.5	95.9		84-114			

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LT Environmental, Inc.
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 Arvada CO 80003

Charles Greeson
 Project Number: 008315048
 Project: Noble - State 18-1

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5H13010 - EPA 5030B (Water)

LCS (5H13010-BS1)

Prepared: 08/13/2015 Analyzed: 08/13/2015

Benzene	52.3	1.0	ug/L	50.0		105	75-126			
Toluene	54.0	1.0	"	50.0		108	78.7-126			
Ethylbenzene	53.1	1.0	"	50.0		106	80-130			
m,p-Xylene	105	2.0	"	100		105	77.2-133			
o-Xylene	51.2	1.0	"	50.0		102	77.9-126			
Surrogate: 1,2-Dichloroethane-d4	61		"	62.5		97.0	84-121			
Surrogate: Toluene-d8	63		"	62.5		101	85-115			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		98.3	84-114			

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Charles Greeson
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 Project: Noble - State 18-1

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5H13010 - EPA 5030B (Water)

LCS (5H13010-BS2)

Prepared: 08/13/2015 Analyzed: 08/13/2015

Benzene	57.6	1.0	ug/L	50.0		115	75-126			
Toluene	55.2	1.0	"	50.0		110	78.7-126			
Ethylbenzene	58.2	1.0	"	50.0		116	80-130			
m,p-Xylene	116	2.0	"	100		116	77.2-133			
o-Xylene	58.4	1.0	"	50.0		117	77.9-126			
Surrogate: 1,2-Dichloroethane-d4	66		"	62.5		106	84-121			
Surrogate: Toluene-d8	61		"	62.5		97.0	85-115			
Surrogate: 4-Bromofluorobenzene	60		"	62.5		95.9	84-114			

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

Charles Greeson
 Project Number: 008315048
 Project: Noble - State 18-1

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5H13010 - EPA 5030B (Water)

Matrix Spike (5H13010-MS1)	Source: X508140-01			Prepared: 08/13/2015 Analyzed: 08/13/2015						
Benzene	56.6	1.0	ug/L	50.0	ND	113	74-130			
Toluene	55.4	1.0	"	50.0	ND	111	73-131			
Ethylbenzene	58.2	1.0	"	50.0	ND	116	76-132			
m,p-Xylene	116	2.0	"	100	ND	116	69-139			
o-Xylene	57.8	1.0	"	50.0	ND	116	74-131			
Surrogate: 1,2-Dichloroethane-d4	67		"	62.5		107	84-121			
Surrogate: Toluene-d8	61		"	62.5		97.1	85-115			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.8	84-114			

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Charles Greeson
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 Project: Noble - State 18-1

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5H13010 - EPA 5030B (Water)

Matrix Spike (5H13010-MS2)	Source: X508140-02			Prepared: 08/13/2015 Analyzed: 08/13/2015						
Benzene	54.5	1.0	ug/L	50.0	ND	109	74-130			
Toluene	52.0	1.0	"	50.0	ND	104	73-131			
Ethylbenzene	55.7	1.0	"	50.0	ND	111	76-132			
m,p-Xylene	111	2.0	"	100	ND	111	69-139			
o-Xylene	56.0	1.0	"	50.0	ND	112	74-131			
Surrogate: 1,2-Dichloroethane-d4	66		"	62.5		106	84-121			
Surrogate: Toluene-d8	61		"	62.5		97.0	85-115			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		98.9	84-114			

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LT Environmental, Inc.
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 Arvada CO 80003

Charles Greeson
 Project Number: 008315048
 Project: Noble - State 18-1

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5H13010 - EPA 5030B (Water)

Matrix Spike Dup (5H13010-MSD1)	Source: X508140-01			Prepared: 08/13/2015 Analyzed: 08/13/2015						
Benzene	51.5	1.0	ug/L	50.0	ND	103	74-130	9.43	20	
Toluene	51.2	1.0	"	50.0	ND	102	73-131	7.88	20	
Ethylbenzene	53.7	1.0	"	50.0	ND	107	76-132	8.06	20	
m,p-Xylene	107	2.0	"	100	ND	107	69-139	7.69	20	
o-Xylene	54.2	1.0	"	50.0	ND	108	74-131	6.50	20	
Surrogate: 1,2-Dichloroethane-d4	65		"	62.5		104	84-121			
Surrogate: Toluene-d8	61		"	62.5		97.8	85-115			
Surrogate: 4-Bromofluorobenzene	60		"	62.5		96.7	84-114			

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Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5H13010 - EPA 5030B (Water)

Matrix Spike Dup (5H13010-MSD2)	Source: X508140-02			Prepared: 08/13/2015 Analyzed: 08/13/2015						
Benzene	54.5	1.0	ug/L	50.0	ND	109	74-130	0.0734	20	
Toluene	54.6	1.0	"	50.0	ND	109	73-131	4.75	20	
Ethylbenzene	57.4	1.0	"	50.0	ND	115	76-132	3.06	20	
m,p-Xylene	116	2.0	"	100	ND	116	69-139	4.00	20	
o-Xylene	58.6	1.0	"	50.0	ND	117	74-131	4.63	20	
Surrogate: 1,2-Dichloroethane-d4	66		"	62.5		105	84-121			
Surrogate: Toluene-d8	62		"	62.5		99.6	85-115			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.2	84-114			

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

Charles Greeson
Project Number: 008315048
Project: Noble - State 18-1

Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

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Jen Pellegrini For Noelle Doyle Mathis, President