16-Oct-2019

Chris McKisson
LT Environmental, Inc
820 Megan Ave. Unit B
Rifle, CO 81650

Re: **Kowach 1-9** Work Order: **19100773**

Dear Chris,

ALS Environmental received 2 samples on 09-Oct-2019 09:30 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental - Holland and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 24.

If you have any questions regarding this report, please feel free to contact me:

ADDRESS: 3352 128th Avenue, Holland, MI, USA
PHONE: +1 (616) 399-6070 FAX: +1 (616) 399-6185

Sincerely,

Electronically approved by: Chad Whelton

Chad Whelton
Project Manager

Report of Laboratory Analysis

Certificate No: MN 026-999-449

ALS Group, USA

Date: 16-Oct-19

Client: LT Environmental, Inc
Project: Kowach 1-9
Work Order: **19100773**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
19100773-01	SS-01	Soil		10/7/2019 09:35	10/9/2019 09:30	☐
19100773-02	GW-01	Groundwater		10/7/2019 09:30	10/9/2019 09:30	☐

ALS Group, USA

Date: 16-Oct-19

Qualifier	Description
*	Value exceeds Regulatory Limit
**	Estimated Value
a	Analyte is non-accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
Hr	BOD/CBOD - Sample was reset outside Hold Time, value should be considered estimated.
J	Analyte is present at an estimated concentration between the MDL and Report Limit
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

Units Reported	Description
% of sample	Percent of Sample
°C	Degrees Celcius
mg/Kg	Milligrams per Kilogram
mg/Kg-dry	Milligrams per Kilogram Dry Weight
mg/L	Milligrams per Liter
mmhos/cm @25°C	Millimhos-Centimeter at 25 Degrees Celcius
none	

s.u. Standard Units

ALS Group, USA

Date: *16-Oct-19*

Client: LT Environmental, Inc
Project: Kowach 1-9 **Work Order:** 19100773
Sample ID: SS-01 **Lab ID:** 19100773-01
Collection Date: 10/7/2019 09:35 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID			**SW8015M**	Prep: SW3550 10/13/19 18:54		Analyst: **KB**
DRO (C10-C28)	**520**		**5.9**	**mg/Kg-dry**	1	10/14/2019 05:21 PM
Surr: 4-Terphenyl-d14	*66.8*		*33-111*	*%REC*	1	10/14/2019 05:21 PM
GASOLINE RANGE ORGANICS BY GC-FID			**SW8015D**	Prep: SW5035 10/10/19 15:13		Analyst: **KB**
GRO (C6-C10)	ND		7.5	mg/Kg	1	10/12/2019 01:21 AM
Surr: Toluene-d8	*78.8*		*71-123*	*%REC*	1	10/12/2019 01:21 AM
MERCURY BY CVAA			**SW7471B**	Prep: SW7471 10/15/19 11:22		Analyst: **RSH**
Mercury	**0.11**		**0.018**	**mg/Kg-dry**	1	10/16/2019 08:00 AM
METALS BY ICP-MS			**SW6020A**	Prep: SW3050B 10/14/19 15:18		Analyst: **STP**
Arsenic	**3.3**		**0.46**	**mg/Kg-dry**	1	10/14/2019 07:34 PM
Barium	**330**		**4.6**	**mg/Kg-dry**	10	10/15/2019 02:33 PM
Cadmium	ND		0.19	mg/Kg-dry	1	10/14/2019 07:34 PM
Chromium	**17**		**0.46**	**mg/Kg-dry**	1	10/14/2019 07:34 PM
Copper	**31**		**4.6**	**mg/Kg-dry**	10	10/15/2019 02:33 PM
Lead	**10**		**0.46**	**mg/Kg-dry**	1	10/14/2019 07:34 PM
Nickel	**71**		**4.6**	**mg/Kg-dry**	10	10/15/2019 02:33 PM
Selenium	ND		0.46	mg/Kg-dry	1	10/14/2019 07:34 PM
Silver	ND		0.46	mg/Kg-dry	1	10/14/2019 07:34 PM
Zinc	**67**		**9.3**	**mg/Kg-dry**	10	10/15/2019 02:33 PM
SOLUBLE CATIONS FOR SAR			**SW6020A**	Prep: USDA Method 20B 10/16/19 11:00		Analyst: **STP**
Calcium	**230**		**5.0**	**mg/L**	10	10/16/2019 03:36 PM
Magnesium	**62**		**2.0**	**mg/L**	10	10/16/2019 03:36 PM
Sodium	**180**		**2.0**	**mg/L**	10	10/16/2019 03:36 PM
SODIUM ADSORPTION RATIO			**USDA H60 MET**	Prep: USDA Method 20B 10/16/19 11:00		Analyst: **STP**
Sodium Adsorption Ratio	**2.7**		**0.010**	**none**	1	10/16/2019
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHS)			**SW846 8270D**	Prep: SW3546 10/10/19 15:43		Analyst: **EEW**
Acenaphthene	ND		0.0049	mg/Kg-dry	1	10/11/2019 05:23 PM
Anthracene	ND		0.0049	mg/Kg-dry	1	10/11/2019 05:23 PM
Benzo(a)anthracene	**0.031**		**0.0049**	**mg/Kg-dry**	1	10/11/2019 05:23 PM
Benzo(a)pyrene	**0.040**		**0.0049**	**mg/Kg-dry**	1	10/11/2019 05:23 PM
Benzo(b)fluoranthene	ND		0.0049	mg/Kg-dry	1	10/11/2019 05:23 PM
Benzo(k)fluoranthene	ND		0.0049	mg/Kg-dry	1	10/11/2019 05:23 PM
Chrysene	**0.020**		**0.0049**	**mg/Kg-dry**	1	10/11/2019 05:23 PM
Dibenzo(a,h)anthracene	ND		0.0049	mg/Kg-dry	1	10/11/2019 05:23 PM
Fluoranthene	ND		0.0049	mg/Kg-dry	1	10/11/2019 05:23 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *16-Oct-19*

Client: LT Environmental, Inc
Project: Kowach 1-9
Work Order: 19100773
Sample ID: SS-01
Lab ID: 19100773-01
Collection Date: 10/7/2019 09:35 AM
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Fluorene	ND		0.0049	mg/Kg-dry	1	10/11/2019 05:23 PM
Indeno(1,2,3-cd)pyrene	ND		0.0049	mg/Kg-dry	1	10/11/2019 05:23 PM
Naphthalene	ND		0.0049	mg/Kg-dry	1	10/11/2019 05:23 PM
Pyrene	**0.0087**		**0.0049**	**mg/Kg-dry**	1	10/11/2019 05:23 PM
Surr: 2-Fluorobiphenyl	*88.8*		*20-140*	*%REC*	1	10/11/2019 05:23 PM
Surr: 4-Terphenyl-d14	*63.4*		*22-172*	*%REC*	1	10/11/2019 05:23 PM
Surr: Nitrobenzene-d5	*89.3*		*28-140*	*%REC*	1	10/11/2019 05:23 PM
VOLATILE ORGANIC COMPOUNDS			**SW8260C**	Prep: SW5035 10/10/19 15:09		Analyst: **SJB**
Benzene	ND		0.045	mg/Kg-dry	1	10/15/2019 08:55 PM
Ethylbenzene	ND		0.045	mg/Kg-dry	1	10/15/2019 08:55 PM
m,p-Xylene	ND		0.090	mg/Kg-dry	1	10/15/2019 08:55 PM
o-Xylene	ND		0.045	mg/Kg-dry	1	10/15/2019 08:55 PM
Toluene	ND		0.045	mg/Kg-dry	1	10/15/2019 08:55 PM
Xylenes, Total	ND		0.14	mg/Kg-dry	1	10/15/2019 08:55 PM
Surr: 1,2-Dichloroethane-d4	*94.8*		*70-130*	*%REC*	1	10/15/2019 08:55 PM
Surr: 4-Bromofluorobenzene	*104*		*70-130*	*%REC*	1	10/15/2019 08:55 PM
Surr: Dibromofluoromethane	*83.5*		*70-130*	*%REC*	1	10/15/2019 08:55 PM
Surr: Toluene-d8	*96.2*		*70-130*	*%REC*	1	10/15/2019 08:55 PM
ELECTRICAL CONDUCTIVITY (SAR)			**USDA H60 MET**	Prep: USDA Method 20B 10/16/19 11:00		Analyst: **QTN**
Electrical Conductivity @ Saturation	**1.9**		**0.10**	**mmhos/cm @2**	20	10/16/2019 02:42 PM
CHROMIUM, TRIVALENT			**CALCULATION**			Analyst: **JZB**
Chromium, Trivalent	**17**		**1.2**	**mg/Kg-dry**	1	10/15/2019 04:16 PM
CHROMIUM, HEXAVALENT			**SW7196A**	Prep: SW3060A 10/15/19 08:00		Analyst: **RZM**
Chromium, Hexavalent	ND		1.2	mg/Kg-dry	1	10/15/2019 03:35 PM
MOISTURE			**SW3550C**			Analyst: **KTP**
Moisture	**16**		**0.10**	**% of sample**	1	10/11/2019 01:17 PM
PH			**SW9045D**	Prep: EXTRACT 10/10/19 15:39		Analyst: **DNW**
pH	**7.96**		**0.100**	**s.u.**	1	10/11/2019 10:45 AM
Temperature	**21.8**		**0.100**	**°C**	1	10/11/2019 10:45 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *16-Oct-19*

Client: LT Environmental, Inc
Project: Kowach 1-9 **Work Order:** 19100773
Sample ID: GW-01 **Lab ID:** 19100773-02
Collection Date: 10/7/2019 09:30 AM **Matrix:** GROUNDWATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260C**			Analyst: **SJB**
Benzene	**0.11**		**0.0050**	**mg/L**	5	10/15/2019 08:33 PM
Ethylbenzene	**0.022**		**0.0050**	**mg/L**	5	10/15/2019 08:33 PM
m,p-Xylene	**0.028**		**0.010**	**mg/L**	5	10/15/2019 08:33 PM
o-Xylene	**0.018**		**0.0050**	**mg/L**	5	10/15/2019 08:33 PM
Toluene	**0.036**		**0.0050**	**mg/L**	5	10/15/2019 08:33 PM
Xylenes, Total	**0.047**		**0.015**	**mg/L**	5	10/15/2019 08:33 PM
Surr: 1,2-Dichloroethane-d4	*87.0*		*75-120*	*%REC*	5	10/15/2019 08:33 PM
Surr: 4-Bromofluorobenzene	*97.2*		*80-110*	*%REC*	5	10/15/2019 08:33 PM
Surr: Dibromofluoromethane	*90.3*		*85-115*	*%REC*	5	10/15/2019 08:33 PM
Surr: Toluene-d8	*94.8*		*85-110*	*%REC*	5	10/15/2019 08:33 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 16-Oct-19

Client: LT Environmental, Inc

Work Order: 19100773

Project: Kowach 1-9

QC BATCH REPORT

Batch ID: **143881** Instrument ID **GC8** Method: **SW8015M**

MBLK Sample ID: **DBLKS1-143881-143881** Units: **mg/Kg** Analysis Date: **10/14/2019 11:32 A**

Client ID: Run ID: **GC8_191014A** SeqNo: **5988634** Prep Date: **10/13/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	ND	5.0								
Surr: 4-Terphenyl-d14	*2.064*	0	*3.33*	0	*62*	*33-111*	0			

LCS Sample ID: **DLCSS1-143881-143881** Units: **mg/Kg** Analysis Date: **10/14/2019 12:01 P**

Client ID: Run ID: **GC8_191014A** SeqNo: **5988636** Prep Date: **10/13/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	321.1	5.0	333	0	96.4	58-111	0			
Surr: 4-Terphenyl-d14	*1.655*	0	*3.33*	0	*49.7*	*33-111*	0			

MS Sample ID: **19100802-01A MS** Units: **mg/Kg** Analysis Date: **10/14/2019 12:59 P**

Client ID: Run ID: **GC8_191014A** SeqNo: **5988640** Prep Date: **10/13/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	303.1	4.9	327.8	2.273	91.8	58-111	0			
Surr: 4-Terphenyl-d14	*1.794*	0	*3.278*	0	*54.7*	*33-111*	0			

MSD Sample ID: **19100802-01A MSD** Units: **mg/Kg** Analysis Date: **10/14/2019 01:28 P**

Client ID: Run ID: **GC8_191014A** SeqNo: **5988642** Prep Date: **10/13/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	294.4	5.0	331.8	2.273	88.1	58-111	303.1	2.91	30	
Surr: 4-Terphenyl-d14	*1.722*	0	*3.318*	0	*51.9*	*33-111*	1.794	*4.11*	*30*	

The following samples were analyzed in this batch: 19100773-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: LT Environmental, Inc
Work Order: 19100773
Project: Kowach 1-9

QC BATCH REPORT

Batch ID: **143826** Instrument ID **GC9** Method: **SW8015D**

MBLK Sample ID: **MBLK-143826-143826** Units: **µg/Kg-dry** Analysis Date: **10/11/2019 02:08 P**
Client ID: Run ID: **GC9_191010A** SeqNo: **5984320** Prep Date: **10/10/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	ND	5,000								
Surr: Toluene-d8	*4556*	0	*5000*	0	*91.1*	*71-123*	0			

MBLK Sample ID: **MBLK-143826-143826** Units: **µg/Kg-dry** Analysis Date: **10/11/2019 02:08 P**
Client ID: Run ID: **GC9_191011A** SeqNo: **5986993** Prep Date: **10/10/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	ND	5,000								
Surr: Toluene-d8	*4122*	0	*5000*	0	*82.4*	*71-123*	0			

LCS Sample ID: **LCS-143826-143826** Units: **µg/Kg-dry** Analysis Date: **10/11/2019 02:37 P**
Client ID: Run ID: **GC9_191010A** SeqNo: **5984321** Prep Date: **10/10/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	416300	5,000	500000	0	83.3	71-123	0			
Surr: Toluene-d8	*5580*	0	*5000*	0	*112*	*71-123*	0			

LCS Sample ID: **LCS-143826-143826** Units: **µg/Kg-dry** Analysis Date: **10/11/2019 02:37 P**
Client ID: Run ID: **GC9_191011A** SeqNo: **5986994** Prep Date: **10/10/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	426800	5,000	500000	0	85.4	71-123	0			
Surr: Toluene-d8	*5036*	0	*5000*	0	*101*	*71-123*	0			

MS Sample ID: **19100772-01A MS** Units: **µg/Kg-dry** Analysis Date: **10/11/2019 04:05 P**
Client ID: Run ID: **GC9_191010A** SeqNo: **5984527** Prep Date: **10/10/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	994900	5,100	1014000	56650	92.5	71-123	0			
Surr: Toluene-d8	*4950*	0	*5071*	0	*97.6*	*71-123*	0			

MSD Sample ID: **19100772-01A MSD** Units: **µg/Kg-dry** Analysis Date: **10/11/2019 04:34 P**
Client ID: Run ID: **GC9_191010A** SeqNo: **5984528** Prep Date: **10/10/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	986300	5,100	1028000	56650	90.5	71-123	994900	0.87	30	
Surr: Toluene-d8	*5102*	0	*5139*	0	*99.3*	*71-123*	4950	*3.02*	*30*	

The following samples were analyzed in this batch: 19100773-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: LT Environmental, Inc
Work Order: 19100773
Project: Kowach 1-9

QC BATCH REPORT

Batch ID: **143997** Instrument ID **HG4** Method: **SW7471B**

MBLK Sample ID: **MBLK-143997-143997** Units: **mg/Kg** Analysis Date: **10/15/2019 01:22 P**
Client ID: Run ID: **HG4_191015A** SeqNo: **5989475** Prep Date: **10/15/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	ND	0.020								

LCS Sample ID: **LCS-143997-143997** Units: **mg/Kg** Analysis Date: **10/15/2019 01:24 P**
Client ID: Run ID: **HG4_191015A** SeqNo: **5989476** Prep Date: **10/15/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.16	0.020	0.1665	0	96.1	80-120	0			

MS Sample ID: **19100713-01CMS** Units: **mg/Kg** Analysis Date: **10/15/2019 01:28 P**
Client ID: Run ID: **HG4_191015A** SeqNo: **5989478** Prep Date: **10/15/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1478	0.016	0.1348	0.02904	88.1	75-125	0			

MSD Sample ID: **19100713-01CMSD** Units: **mg/Kg** Analysis Date: **10/15/2019 01:30 P**
Client ID: Run ID: **HG4_191015A** SeqNo: **5989479** Prep Date: **10/15/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1623	0.017	0.1386	0.02904	96.2	75-125	0.1478	9.35	35	

The following samples were analyzed in this batch: 19100773-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: LT Environmental, Inc
Work Order: 19100773
Project: Kowach 1-9

QC BATCH REPORT

Batch ID: **143943** Instrument ID **ICPMS4** Method: **SW6020A**

MBLK Sample ID: **MBLK-143943-143943** Units: **mg/Kg** Analysis Date: **10/14/2019 04:33 P**
Client ID: Run ID: **ICPMS4_191014B** SeqNo: **5987274** Prep Date: **10/14/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.25								
Barium	ND	0.25								
Cadmium	ND	0.10								
Chromium	ND	0.25								
Copper	ND	0.25								
Lead	ND	0.25								
Nickel	ND	0.25								
Selenium	ND	0.25								
Silver	ND	0.25								
Zinc	ND	0.50								

LCS Sample ID: **LCS-143943-143943** Units: **mg/Kg** Analysis Date: **10/14/2019 04:35 P**
Client ID: Run ID: **ICPMS4_191014B** SeqNo: **5987275** Prep Date: **10/14/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.741	0.25	5	0	94.8	80-120	0			
Barium	5.157	0.25	5	0	103	80-120	0			
Cadmium	5.207	0.10	5	0	104	80-120	0			
Chromium	5.038	0.25	5	0	101	80-120	0			
Copper	4.778	0.25	5	0	95.6	80-120	0			
Lead	5.264	0.25	5	0	105	80-120	0			
Nickel	4.753	0.25	5	0	95.1	80-120	0			
Selenium	5.166	0.25	5	0	103	80-120	0			
Silver	4.451	0.25	5	0	89	80-120	0			
Zinc	5.004	0.50	5	0	100	80-120	0			

MS Sample ID: **19101042-04AMS** Units: **mg/Kg** Analysis Date: **10/14/2019 07:44 P**
Client ID: Run ID: **ICPMS4_191014B** SeqNo: **5988940** Prep Date: **10/14/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	12.69	0.40	8.052	5.794	85.7	75-125	0			
Cadmium	6.963	0.16	8.052	0.1683	84.4	75-125	0			
Chromium	23.28	0.40	8.052	13.07	127	75-125	0			S
Lead	19.71	0.40	8.052	10.5	114	75-125	0			
Nickel	18.7	0.40	8.052	10.9	96.8	75-125	0			
Selenium	7.399	0.40	8.052	0.581	84.7	75-125	0			
Silver	6.119	0.40	8.052	0.08368	75	75-125	0			S

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: LT Environmental, Inc
Work Order: 19100773
Project: Kowach 1-9

QC BATCH REPORT

Batch ID: **143943** Instrument ID **ICPMS4** Method: **SW6020A**

MS Sample ID: **19101042-04AMS** Units: **mg/Kg** Analysis Date: **10/15/2019 02:47 P**
Client ID: Run ID: **ICPMS4_191015B** SeqNo: **5990013** Prep Date: **10/14/2019** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	389.9	4.0	8.052	320.9	857	75-125	0			SO
Copper	28.15	4.0	8.052	17.68	130	75-125	0			S
Zinc	64.57	8.1	8.052	43.03	268	75-125	0			SO

MSD Sample ID: **19101042-04AMSD** Units: **mg/Kg** Analysis Date: **10/14/2019 07:46 P**
Client ID: Run ID: **ICPMS4_191014B** SeqNo: **5988941** Prep Date: **10/14/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	11.1	0.38	7.669	5.794	69.2	75-125	12.69	13.4	20	S
Cadmium	5.518	0.15	7.669	0.1683	69.8	75-125	6.963	23.2	20	SR
Chromium	18.69	0.38	7.669	13.07	73.3	75-125	23.28	21.9	20	SR
Lead	16.59	0.38	7.669	10.5	79.4	75-125	19.71	17.2	20	
Nickel	14.97	0.38	7.669	10.9	53	75-125	18.7	22.1	20	SR
Selenium	5.918	0.38	7.669	0.581	69.6	75-125	7.399	22.2	20	SR
Silver	4.77	0.38	7.669	0.08368	61.1	75-125	6.119	24.8	20	SR

MSD Sample ID: **19101042-04AMSD** Units: **mg/Kg** Analysis Date: **10/15/2019 02:48 P**
Client ID: Run ID: **ICPMS4_191015B** SeqNo: **5990014** Prep Date: **10/14/2019** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	376.5	3.8	7.669	320.9	726	75-125	389.9	3.49	20	SO
Copper	26.21	3.8	7.669	17.68	111	75-125	28.15	7.13	20	
Zinc	57.08	7.7	7.669	43.03	183	75-125	64.57	12.3	20	SO

The following samples were analyzed in this batch: 19100773-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: LT Environmental, Inc
Work Order: 19100773
Project: Kowach 1-9

QC BATCH REPORT

Batch ID: **144076** Instrument ID **ICPMS4** Method: **SW6020A**

DUP Sample ID: **19101044-07ADUP** Units: **mg/L** Analysis Date: **10/16/2019 03:56 P**
Client ID: Run ID: **ICPMS4_191016A** SeqNo: **5992789** Prep Date: **10/16/2019** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	182.3	5.0	0	0	0	0-0	166.6	8.96		
Magnesium	47.4	2.0	0	0	0	0-0	43.92	7.62		
Sodium	416.3	2.0	0	0	0	0-0	383.8	8.13		

The following samples were analyzed in this batch: 19100773-01A

Batch ID: **144076** Instrument ID **SAR** Method: **USDA H60 Metho**

DUP Sample ID: **19101044-07ADUP** Units: **none** Analysis Date: **10/16/2019**
Client ID: Run ID: **SAR_191016A** SeqNo: **5992811** Prep Date: **10/16/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium Adsorption Ratio	7.103	0.010	0	0	0		6.835	3.86	50	

The following samples were analyzed in this batch: 19100773-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: LT Environmental, Inc
Work Order: 19100773
Project: Kowach 1-9

QC BATCH REPORT

Batch ID: **143799** Instrument ID **SVMS6** Method: **SW846 8270D**

MBLK Sample ID: **SBLKS1-143799-143799** Units: **µg/Kg** Analysis Date: **10/11/2019 11:42 A**

Client ID: Run ID: **SVMS6_191011A** SeqNo: **5986124** Prep Date: **10/10/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	ND	4.2								
Anthracene	ND	4.2								
Benzo(a)anthracene	ND	4.2								
Benzo(a)pyrene	ND	4.2								
Benzo(b)fluoranthene	ND	4.2								
Benzo(k)fluoranthene	ND	4.2								
Chrysene	ND	4.2								
Dibenzo(a,h)anthracene	ND	4.2								
Fluoranthene	ND	4.2								
Fluorene	ND	4.2								
Indeno(1,2,3-cd)pyrene	ND	4.2								
Naphthalene	ND	4.2								
Pyrene	ND	4.2								
Surr: 2-Fluorobiphenyl	*3154*	0	*3333*	0	*94.6*	*20-140*	0			
Surr: 4-Terphenyl-d14	*2404*	0	*3333*	0	*72.1*	*22-172*	0			
Surr: Nitrobenzene-d5	*3110*	0	*3333*	0	*93.3*	*28-140*	0			

LCS Sample ID: **SLCSS1-143799-143799** Units: **µg/Kg** Analysis Date: **10/11/2019 11:57 A**

Client ID: Run ID: **SVMS6_191011A** SeqNo: **5986125** Prep Date: **10/10/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1100	4.2	1333	0	82.5	40-140	0			
Anthracene	1134	4.2	1333	0	85.1	40-140	0			
Benzo(a)anthracene	1190	4.2	1333	0	89.3	40-140	0			
Benzo(a)pyrene	1291	4.2	1333	0	96.8	40-140	0			
Benzo(b)fluoranthene	1235	4.2	1333	0	92.6	40-140	0			
Benzo(k)fluoranthene	1177	4.2	1333	0	88.3	40-140	0			
Chrysene	1113	4.2	1333	0	83.5	40-140	0			
Dibenzo(a,h)anthracene	1381	4.2	1333	0	104	40-140	0			
Fluoranthene	1067	4.2	1333	0	80	40-140	0			
Fluorene	1173	4.2	1333	0	88	40-140	0			
Indeno(1,2,3-cd)pyrene	1389	4.2	1333	0	104	40-140	0			
Naphthalene	1129	4.2	1333	0	84.7	40-140	0			
Pyrene	1141	4.2	1333	0	85.6	40-140	0			
Surr: 2-Fluorobiphenyl	*2898*	0	*3333*	0	*86.9*	*20-140*	0			
Surr: 4-Terphenyl-d14	*2154*	0	*3333*	0	*64.6*	*22-172*	0			
Surr: Nitrobenzene-d5	*2635*	0	*3333*	0	*79.1*	*28-140*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: LT Environmental, Inc
Work Order: 19100773
Project: Kowach 1-9

QC BATCH REPORT

Batch ID: **143799** Instrument ID **SVMS6** Method: **SW846 8270D**

MS Sample ID: **19100395-01C MS** Units: **µg/Kg** Analysis Date: **10/11/2019 12:13 P**

Client ID: Run ID: **SVMS6_191011A** SeqNo: **5986126** Prep Date: **10/10/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1230	4.1	1325	0	92.9	40-140	0			
Anthracene	1305	4.1	1325	0	98.5	40-140	0			
Benzo(a)anthracene	1476	4.1	1325	27.09	109	40-140	0			
Benzo(a)pyrene	1445	4.1	1325	13.04	108	40-140	0			
Benzo(b)fluoranthene	1429	4.1	1325	17.6	107	40-140	0			
Benzo(k)fluoranthene	1284	4.1	1325	7.087	96.4	40-140	0			
Chrysene	1195	4.1	1325	30.95	87.9	40-140	0			
Dibenzo(a,h)anthracene	1467	4.1	1325	5.424	110	40-140	0			
Fluoranthene	1539	4.1	1325	0	116	40-140	0			
Fluorene	1338	4.1	1325	0	101	40-140	0			
Indeno(1,2,3-cd)pyrene	1602	4.1	1325	9.428	120	40-140	0			
Naphthalene	1249	4.1	1325	0	94.3	40-140	0			
Pyrene	1451	4.1	1325	0	110	40-140	0			
Surr: 2-Fluorobiphenyl	*2985*	0	*3312*	0	*90.1*	*20-140*	0			
Surr: 4-Terphenyl-d14	*2370*	0	*3312*	0	*71.6*	*22-172*	0			
Surr: Nitrobenzene-d5	*2638*	0	*3312*	0	*79.7*	*28-140*	0			

MSD Sample ID: **19100395-01C MSD** Units: **µg/Kg** Analysis Date: **10/11/2019 12:28 P**

Client ID: Run ID: **SVMS6_191011A** SeqNo: **5986127** Prep Date: **10/10/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1226	4.1	1316	0	93.1	40-140	1230	0.354	30	
Anthracene	2051	4.1	1316	0	156	40-140	1305	44.5	30	SR
Benzo(a)anthracene	1526	4.1	1316	27.09	114	40-140	1476	3.3	30	
Benzo(a)pyrene	1414	4.1	1316	13.04	106	40-140	1445	2.18	30	
Benzo(b)fluoranthene	1511	4.1	1316	17.6	113	40-140	1429	5.57	30	
Benzo(k)fluoranthene	1141	4.1	1316	7.087	86.2	40-140	1284	11.7	30	
Chrysene	1144	4.1	1316	30.95	84.5	40-140	1195	4.37	30	
Dibenzo(a,h)anthracene	1440	4.1	1316	5.424	109	40-140	1467	1.88	30	
Fluoranthene	1505	4.1	1316	0	114	40-140	1539	2.28	30	
Fluorene	1403	4.1	1316	0	107	40-140	1338	4.75	30	
Indeno(1,2,3-cd)pyrene	1585	4.1	1316	9.428	120	40-140	1602	1.05	30	
Naphthalene	1228	4.1	1316	0	93.3	40-140	1249	1.68	30	
Pyrene	1349	4.1	1316	0	102	40-140	1451	7.29	30	
Surr: 2-Fluorobiphenyl	*2948*	0	*3292*	0	*89.6*	*20-140*	2985	*1.25*	*0*	
Surr: 4-Terphenyl-d14	*2312*	0	*3292*	0	*70.2*	*22-172*	2370	*2.47*	*0*	
Surr: Nitrobenzene-d5	*2405*	0	*3292*	0	*73.1*	*28-140*	2638	*9.26*	*0*	

The following samples were analyzed in this batch: 19100773-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: LT Environmental, Inc
Work Order: 19100773
Project: Kowach 1-9

QC BATCH REPORT

Batch ID: **143824** Instrument ID **VMS11** Method: **SW8260C**

MBLK Sample ID: **MBLK-143824-143824** Units: **µg/Kg-dry** Analysis Date: **10/12/2019 02:25 A**
Client ID: Run ID: **VMS11_191011B** SeqNo: **5984584** Prep Date: **10/10/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	30								
Ethylbenzene	ND	30								
m,p-Xylene	ND	60								
o-Xylene	ND	30								
Toluene	ND	30								
Xylenes, Total	ND	90								
Surr: 1,2-Dichloroethane-d4	*945.5*	0	*1000*	0	*94.6*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*973*	0	*1000*	0	*97.3*	*70-130*	0			
Surr: Dibromofluoromethane	*902.5*	0	*1000*	0	*90.2*	*70-130*	0			
Surr: Toluene-d8	*983*	0	*1000*	0	*98.3*	*70-130*	0			

LCS Sample ID: **LCS-143824-143824** Units: **µg/Kg-dry** Analysis Date: **10/12/2019 01:19 A**
Client ID: Run ID: **VMS11_191011B** SeqNo: **5984583** Prep Date: **10/10/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1068	30	1000	0	107	75-125	0			
Ethylbenzene	1123	30	1000	0	112	75-125	0			
m,p-Xylene	2284	60	2000	0	114	80-125	0			
o-Xylene	1154	30	1000	0	115	75-125	0			
Toluene	1082	30	1000	0	108	70-125	0			
Xylenes, Total	3438	90	3000	0	115	75-125	0			
Surr: 1,2-Dichloroethane-d4	*925.5*	0	*1000*	0	*92.6*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*993.5*	0	*1000*	0	*99.4*	*70-130*	0			
Surr: Dibromofluoromethane	*972.5*	0	*1000*	0	*97.2*	*70-130*	0			
Surr: Toluene-d8	*977*	0	*1000*	0	*97.7*	*70-130*	0			

MS Sample ID: **19100772-01A MS** Units: **µg/Kg-dry** Analysis Date: **10/12/2019 09:27 A**
Client ID: Run ID: **VMS11_191011B** SeqNo: **5984591** Prep Date: **10/10/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1513	44	1456	0	104	75-125	0			
Ethylbenzene	1583	44	1456	0	109	75-125	0			
m,p-Xylene	3865	87	2913	1310	87.7	80-125	0			
o-Xylene	2238	44	1456	1256	67.4	75-125	0			S
Toluene	1507	44	1456	23.94	102	70-125	0			
Xylenes, Total	6103	130	4369	2566	81	75-125	0			
Surr: 1,2-Dichloroethane-d4	*1334*	0	*1456*	0	*91.6*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*1555*	0	*1456*	0	*107*	*70-130*	0			
Surr: Dibromofluoromethane	*1354*	0	*1456*	0	*93*	*70-130*	0			
Surr: Toluene-d8	*1616*	0	*1456*	0	*111*	*70-130*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: LT Environmental, Inc
Work Order: 19100773
Project: Kowach 1-9

QC BATCH REPORT

Batch ID: **143824** Instrument ID **VMS11** Method: **SW8260C**

MSD Sample ID: **19100772-01A MSD** Units: **µg/Kg-dry** Analysis Date: **10/12/2019 09:49 A**

Client ID: Run ID: **VMS11_191011B** SeqNo: **5984592** Prep Date: **10/10/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1579	44	1473	0	107	75-125	1513	4.25	30	
Ethylbenzene	1665	44	1473	0	113	75-125	1583	5.05	30	
m,p-Xylene	4139	88	2946	1310	96	80-125	3865	6.84	30	
o-Xylene	2523	44	1473	1256	86.1	75-125	2238	12	30	
Toluene	1574	44	1473	23.94	105	70-125	1507	4.41	30	
Xylenes, Total	6662	130	4419	2566	92.7	75-125	6103	8.76	30	
Surr: 1,2-Dichloroethane-d4	*1380*	0	*1473*	0	*93.7*	*70-130*	1334	*3.39*	*30*	
Surr: 4-Bromofluorobenzene	*1601*	0	*1473*	0	*109*	*70-130*	1555	*2.89*	*30*	
Surr: Dibromofluoromethane	*1372*	0	*1473*	0	*93.2*	*70-130*	1354	*1.34*	*30*	
Surr: Toluene-d8	*1703*	0	*1473*	0	*116*	*70-130*	1616	*5.28*	*30*	

The following samples were analyzed in this batch: 19100773-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: LT Environmental, Inc
Work Order: 19100773
Project: Kowach 1-9

QC BATCH REPORT

Batch ID: **R272909c** Instrument ID **VMS11** Method: **SW8260C**

MBLK Sample ID: **VBLKW1-191015-R272909c** Units: **µg/L** Analysis Date: **10/15/2019 04:49 P**
Client ID: Run ID: **VMS11_191015A** SeqNo: **5991327** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	1.0								
Ethylbenzene	ND	1.0								
m,p-Xylene	ND	2.0								
o-Xylene	ND	1.0								
Toluene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 1,2-Dichloroethane-d4	*17.94*	0	*20*	0	*89.7*	*75-120*	0			
Surr: 4-Bromofluorobenzene	*19.48*	0	*20*	0	*97.4*	*80-110*	0			
Surr: Dibromofluoromethane	*18.74*	0	*20*	0	*93.7*	*85-115*	0			
Surr: Toluene-d8	*19.19*	0	*20*	0	*96*	*85-110*	0			

LCS Sample ID: **VLCSW1-191015-R272909c** Units: **µg/L** Analysis Date: **10/15/2019 03:23 P**
Client ID: Run ID: **VMS11_191015A** SeqNo: **5991326** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	20.96	1.0	20	0	105	70-130	0			
Ethylbenzene	20.28	1.0	20	0	101	76-123	0			
m,p-Xylene	41.17	2.0	40	0	103	75-130	0			
o-Xylene	21.08	1.0	20	0	105	76-127	0			
Toluene	19.37	1.0	20	0	96.8	76-125	0			
Xylenes, Total	62.25	3.0	60	0	104	76-127	0			
Surr: 1,2-Dichloroethane-d4	*19.54*	0	*20*	0	*97.7*	*75-120*	0			
Surr: 4-Bromofluorobenzene	*19.4*	0	*20*	0	*97*	*80-110*	0			
Surr: Dibromofluoromethane	*19.86*	0	*20*	0	*99.3*	*85-115*	0			
Surr: Toluene-d8	*18.89*	0	*20*	0	*94.4*	*85-110*	0			

MS Sample ID: **19100952-01B MS** Units: **µg/L** Analysis Date: **10/16/2019 01:02 A**
Client ID: Run ID: **VMS11_191015A** SeqNo: **5991329** Prep Date: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1220	10	200	1073	73.6	70-130	0			EO
Ethylbenzene	258.4	10	200	26.3	116	76-123	0			
m,p-Xylene	508.4	20	400	35.8	118	75-130	0			
o-Xylene	257.4	10	200	17.7	120	76-127	0			
Toluene	244.6	10	200	25.5	110	76-125	0			
Xylenes, Total	765.8	30	600	53.5	119	76-127	0			
Surr: 1,2-Dichloroethane-d4	*197.5*	0	*200*	0	*98.8*	*75-120*	0			
Surr: 4-Bromofluorobenzene	*207.7*	0	*200*	0	*104*	*80-110*	0			
Surr: Dibromofluoromethane	*181.9*	0	*200*	0	*91*	*85-115*	0			
Surr: Toluene-d8	*192.4*	0	*200*	0	*96.2*	*85-110*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: LT Environmental, Inc
Work Order: 19100773
Project: Kowach 1-9

QC BATCH REPORT

Batch ID: **R272909c** Instrument ID **VMS11** Method: **SW8260C**

MSD Sample ID: **19100952-01B MSD** Units: **µg/L** Analysis Date: **10/16/2019 01:25 A**

Client ID: Run ID: **VMS11_191015A** SeqNo: **5991330** Prep Date: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1225	10	200	1073	76.1	70-130	1220	0.401	30	EO
Ethylbenzene	253.2	10	200	26.3	113	76-123	258.4	2.03	30	
m,p-Xylene	497.2	20	400	35.8	115	75-130	508.4	2.23	30	
o-Xylene	252	10	200	17.7	117	76-127	257.4	2.12	30	
Toluene	242.9	10	200	25.5	109	76-125	244.6	0.697	30	
Xylenes, Total	749.2	30	600	53.5	116	76-127	765.8	2.19	30	
Surr: 1,2-Dichloroethane-d4	*194.7*	0	*200*	0	*97.4*	*75-120*	197.5	*1.43*	*30*	
Surr: 4-Bromofluorobenzene	*209.8*	0	*200*	0	*105*	*80-110*	207.7	*1.01*	*30*	
Surr: Dibromofluoromethane	*182*	0	*200*	0	*91*	*85-115*	181.9	*0.055*	*30*	
Surr: Toluene-d8	*198.2*	0	*200*	0	*99.1*	*85-110*	192.4	*2.97*	*30*	

The following samples were analyzed in this batch: 19100773-02A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: LT Environmental, Inc
Work Order: 19100773
Project: Kowach 1-9

QC BATCH REPORT

Batch ID: **143815** Instrument ID **WETCHEM** Method: **SW9045D**

LCS Sample ID: **LCS-143815-143815** Units: **s.u.** Analysis Date: **10/11/2019 10:45 A**

Client ID: Run ID: **WETCHEM_191011F** SeqNo: **5982756** Prep Date: **10/10/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	3.97	0.10	4	0	99.2	90-110	0			

DUP Sample ID: **19100824-23B DUP** Units: **s.u.** Analysis Date: **10/11/2019 10:45 A**

Client ID: Run ID: **WETCHEM_191011F** SeqNo: **5982762** Prep Date: **10/10/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	7.54	0.10	0	0	0	0-0	7.44	1.34	20	
Temperature	21.7	0.10	0	0	0		21.7	0		

The following samples were analyzed in this batch: 19100773-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: LT Environmental, Inc
Work Order: 19100773
Project: Kowach 1-9

QC BATCH REPORT

Batch ID: **144016** Instrument ID **WETCHEM** Method: **SW7196A**

MBLK Sample ID: **MBLK-144016-144016** Units: **mg/Kg** Analysis Date: **10/15/2019 03:35 P**
Client ID: Run ID: **WETCHEM_191015N** SeqNo: **5990208** Prep Date: **10/15/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	ND	1.0								

LCS Sample ID: **LCS-144016-144016** Units: **mg/Kg** Analysis Date: **10/15/2019 03:35 P**
Client ID: Run ID: **WETCHEM_191015N** SeqNo: **5990209** Prep Date: **10/15/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	4.54	1.0	5	0	90.8	80-120	0			

MS Sample ID: **19101042-02A MS** Units: **mg/Kg** Analysis Date: **10/15/2019 03:35 P**
Client ID: Run ID: **WETCHEM_191015N** SeqNo: **5990213** Prep Date: **10/15/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	ND	1.0	5	0.42	-8.4	75-125	0			S

MS Sample ID: **19101042-02A MSI** Units: **mg/Kg** Analysis Date: **10/15/2019 03:35 P**
Client ID: Run ID: **WETCHEM_191015N** SeqNo: **5990215** Prep Date: **10/15/2019** DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	1573	100	2140	0.42	73.5	75-125	0			S

MSD Sample ID: **19101042-02A MSD** Units: **mg/Kg** Analysis Date: **10/15/2019 03:35 P**
Client ID: Run ID: **WETCHEM_191015N** SeqNo: **5990214** Prep Date: **10/15/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	ND	1.0	5	0.42	-8.4	75-125	0.3	0	20	S

The following samples were analyzed in this batch: 19100773-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: LT Environmental, Inc
Work Order: 19100773
Project: Kowach 1-9

QC BATCH REPORT

Batch ID: **R272735** Instrument ID **MOIST** Method: **SW3550C**

MBLK Sample ID: **WBLKS-R272735** Units: **% of sample** Analysis Date: **10/11/2019 01:17 P**
Client ID: Run ID: **MOIST_191011C** SeqNo: **5985514** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	ND	0.10								

LCS Sample ID: **LCS-R272735** Units: **% of sample** Analysis Date: **10/11/2019 01:17 P**
Client ID: Run ID: **MOIST_191011C** SeqNo: **5985513** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	100	0.10	100	0	100	98-102	0			

DUP Sample ID: **19100379-02A DUP** Units: **% of sample** Analysis Date: **10/11/2019 01:17 P**
Client ID: Run ID: **MOIST_191011C** SeqNo: **5985474** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	10.53	0.10	0	0	0	0-0	11.48	8.63	10	

DUP Sample ID: **19100395-01D DUP** Units: **% of sample** Analysis Date: **10/11/2019 01:17 P**
Client ID: Run ID: **MOIST_191011C** SeqNo: **5985502** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	24	0.10	0	0	0	0-0	23.94	0.25	10	

The following samples were analyzed in this batch: 19100773-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

☐ ALS Environmental
10450 Stancliff Rd. #210
Houston, Texas 77099
(Tel) 281.530.5656
(Fax) 281.530.5887

Chain of Custody Form

Page 1 of 1

☐ ALS Environmental
3352 128th Avenue
Holland, Michigan 49424
(Tel) 616.399.6070
(Fax) 616.399.6185

ALS Project Manager: | ALS Work Order #: 1900773

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	Kowach 1-9	A	BTEX
Work Order		Project Number	047819002	B	TPH (DRO/GRO)
Company Name	LT Environmental	Bill To Company	LT Environmental	C	EC/SAR/PH
Send Report To	cmckisson@ltenv.com, bcocina@ltenv.com	Invoice Attn.	Brittany Cocina	D	Table 910 PAHs
Address	820 Megan Ave. Unit B	Address	same as previous	E	Table 910 Metals
City/State/Zip	Rifle/CO/81650	City/State/Zip		F	
Phone	970-285-9985	Phone		G	
Fax		Fax		H	
e-Mail Address				I	
				J	

No.	Sample Description	Date	Time	Matrix	Pres. Key Numbers	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	SS-01	10/7/19	0939	S		3	X	X	X	X	X						
2	GW-01	10/7/19	0930	GW		3	X										
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s): Please Print & Sign: BRITTANY COCINA Britt Cocina

Shipment Method:

Required Turnaround Time: (Check Box) ☐ ~~10 Wk Days~~ ☐ 5 Wk Days ☐ 3 Wk Days ☐ 2 Wk Days ☐ 24 Hour ☒ Other STD TAT

Results Due Date:

Relinquished by:	Date:	Time:	Received by:	Date:	Time:	Notes:
Brittany Cocina	10/7/19	1700	N.M	10-8-19	1630	
Relinquished by:	Date:	Time:	Received by (Laboratory):	Date:	Time:	
	10-8-19	1830		10/9/19	0930	
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):			
DFS	10/9/19	1610	C			

ALS Cooler ID	Cooler Temp
SR2	4.4°C

QC Package: (Check Box Below)
☐ Level II: Standard QC ☐ Level III: Raw Data
☐ TRRP LRC ☐ TRRP Level IV
☐ Level IV: SW846 Methods/CLP like
☐ Other: _____

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C

Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS.

ALS Group, USA

Sample Receipt Checklist

Client Name: **LTENV** Date/Time Received: **09-Oct-19 09:30**

Work Order: **19100773** Received by: **DS**

Checklist completed by Diane Shaw (eSignature) 09-Oct-19 (Date) Reviewed by: Chad Whelton (eSignature) 09-Oct-19 (Date)

Matrices: Soil, Groundwater

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	4.4/4.4 c	SR2	
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	10/9/2019 4:24:32 PM		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:	-		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction: