



18-Feb-2019

Eric Petterson
SGM Inc.
118 W. 6th Street
Suite 200
Glenwood Springs, CO 81601

Re: **Mustang Resources**

Work Order: **1902396**

Dear Eric,

ALS Environmental received 3 samples on 08-Feb-2019 01:30 PM 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 26.

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,

A handwritten signature in black ink, appearing to read "Chad Whelton".

Electronically approved by: Chad Whelton

Chad Whelton
Project Manager

Report of Laboratory Analysis

Certificate No: MN 026-999-449

ALS GROUP USA, CORP Part of the ALS Laboratory Group A Campbell Brothers Limited Company

Environmental 

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

Client: SGM Inc.
Project: Mustang Resources
Work Order: 1902396

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1902396-01	Site 5	Soil		2/6/2019 14:45	2/8/2019 13:30	<input type="checkbox"/>
1902396-02	Site 6	Soil		2/6/2019 15:00	2/8/2019 13:30	<input type="checkbox"/>
1902396-03	Site 7	Soil		2/6/2019 15:10	2/8/2019 13:30	<input type="checkbox"/>

Client: SGM Inc.
Project: Mustang Resources
Work Order: 1902396

Case Narrative

Batch 131754, Method GRO_8015_S, Sample 1902396-03A: GRO surrogate recovery high due to matrix interference.

Batch 131871, Method SVO_8270_S, Sample 1902396-03A: One or more base/neutral surrogate recoveries were below the lower control limits. The base/neutral sample results may be biased low.

Batch 131896, Method CR6_7196_S, Sample 1902396-01A MS/MSD: The MS/MSD recovery was below the lower control limit for Hexavalent Chromium. The corresponding result in the parent sample may be biased low.

Batch 131918, Method ICP_6010_S, Sample 1902396-01A MS/MSD: The MS/MSD recovery was below the lower control limit for Lead. The corresponding result in the parent sample may be biased low.

Batch 131918, Method ICP_6010_S, Sample 1902396-01A MS/MSD: The MS/MSD recovery was above the upper control limit for Chromium. The corresponding result in the parent sample may be biased high.

Batch 131918, Method ICP_6010_S, Sample 1902396-01A MSD: The MSD recoveries were outside of the control limits for Barium and Zinc; however, the results in the parent sample are greater than 4x the spike amount. No qualification is required.

<u>Qualifier</u>	<u>Description</u>
*	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.

<u>Acronym</u>	<u>Description</u>
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

<u>Units Reported</u>	<u>Description</u>
% of sample	Percent of Sample
µg/Kg-dry	Micrograms per Kilogram Dry Weight
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: 18-Feb-19

Client: SGM Inc.
Project: Mustang Resources
Sample ID: Site 5
Collection Date: 2/6/2019 02:45 PM

Work Order: 1902396
Lab ID: 1902396-01
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID							
			Method: SW8015M		Prep: SW3546 / 2/13/19		Analyst: RP
DRO (C10-C28)	U		3.0	5.3	mg/Kg-dry	1	2/14/2019 05:56
Surr: 4-Terphenyl-d14	81.8			33-111	%REC	1	2/14/2019 05:56
GASOLINE RANGE ORGANICS BY GC-FID							
			Method: SW8015D		Prep: SW5035 / 2/11/19		Analyst: RP
GRO (C6-C10)	U		2.4	5.9	mg/Kg	1	2/14/2019 20:33
Surr: Toluene-d8	110			71-123	%REC	1	2/14/2019 20:33
MERCURY BY CVAA							
			Method: SW7471B		Prep: SW7471 / 2/13/19		Analyst: RSH
Mercury	0.016	J	0.0021	0.021	mg/Kg-dry	1	2/13/2019 16:33
METALS ANALYSIS BY ICP							
			Method: SW846 6010C		Prep: SW3050B / 2/14/19		Analyst: ABL
Arsenic	6.1		0.11	0.43	mg/Kg-dry	1	2/14/2019 14:55
Barium	190		0.17	0.43	mg/Kg-dry	1	2/14/2019 14:55
Boron	22		0.43	1.7	mg/Kg-dry	1	2/14/2019 14:55
Cadmium	0.50	J	0.041	0.86	mg/Kg-dry	1	2/14/2019 14:55
Chromium	11		0.024	0.43	mg/Kg-dry	1	2/14/2019 14:55
Copper	15		0.19	0.86	mg/Kg-dry	1	2/14/2019 14:55
Lead	9.0		0.091	0.43	mg/Kg-dry	1	2/15/2019 16:35
Nickel	14		0.17	0.43	mg/Kg-dry	1	2/14/2019 14:55
Selenium	0.54	J	0.24	0.86	mg/Kg-dry	1	2/14/2019 14:55
Silver	U		0.053	0.43	mg/Kg-dry	1	2/14/2019 14:55
Zinc	56		0.069	0.86	mg/Kg-dry	1	2/14/2019 14:55
SOLUBLE CATIONS FOR SAR							
			Method: SW6020A		Prep: USDA Method 20B / 2/13/19		Analyst: STP
Calcium	27		0.86	5.0	mg/L	10	2/13/2019 13:56
Magnesium	11		0.068	2.0	mg/L	10	2/13/2019 13:56
Sodium	130		0.34	2.0	mg/L	10	2/13/2019 13:56
SODIUM ADSORPTION RATIO							
			Method: USDA H60 METHOD 2		Prep: USDA Method 20B / 2/13/19		Analyst: STP
Sodium Adsorption Ratio	5.2		0.010	0.010	none	1	2/13/2019
SEMI-VOLATILE ORGANIC COMPOUNDS							
			Method: SW846 8270D		Prep: SW3546 / 2/13/19		Analyst: EE
Acenaphthene	U		5.2	7.1	µg/Kg-dry	1	2/14/2019 21:56
Anthracene	U		5.0	7.1	µg/Kg-dry	1	2/14/2019 21:56
Benzo(a)anthracene	U		6.2	7.1	µg/Kg-dry	1	2/14/2019 21:56
Benzo(a)pyrene	U		4.4	7.1	µg/Kg-dry	1	2/14/2019 21:56
Benzo(b)fluoranthene	U		5.3	7.1	µg/Kg-dry	1	2/14/2019 21:56
Benzo(k)fluoranthene	U		5.4	7.1	µg/Kg-dry	1	2/14/2019 21:56
Chrysene	U		5.8	7.1	µg/Kg-dry	1	2/14/2019 21:56
Dibenzo(a,h)anthracene	U		3.9	7.1	µg/Kg-dry	1	2/14/2019 21:56

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

ALS Group, USA

Date: 18-Feb-19

Client: SGM Inc.
Project: Mustang Resources
Sample ID: Site 5
Collection Date: 2/6/2019 02:45 PM

Work Order: 1902396
Lab ID: 1902396-01
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Fluoranthene	11		3.4	7.1	µg/Kg-dry	1	2/14/2019 21:56
Fluorene	U		5.2	7.1	µg/Kg-dry	1	2/14/2019 21:56
Indeno(1,2,3-cd)pyrene	U		5.0	7.1	µg/Kg-dry	1	2/14/2019 21:56
Naphthalene	U		4.6	7.1	µg/Kg-dry	1	2/14/2019 21:56
Pyrene	7.8		1.3	7.1	µg/Kg-dry	1	2/14/2019 21:56
Surr: 2-Fluorobiphenyl	56.7			44-107	%REC	1	2/14/2019 21:56
Surr: 4-Terphenyl-d14	69.2			52-123	%REC	1	2/14/2019 21:56
Surr: Nitrobenzene-d5	59.9			41-94	%REC	1	2/14/2019 21:56
VOLATILE ORGANIC COMPOUNDS			Method: SW8260C		Prep: SW5035 / 2/11/19		Analyst: WH
Benzene	U		0.0060	0.035	mg/Kg	1	2/11/2019 17:22
Ethylbenzene	0.0094	J	0.0074	0.035	mg/Kg	1	2/11/2019 17:22
m,p-Xylene	0.042	J	0.017	0.070	mg/Kg	1	2/11/2019 17:22
o-Xylene	0.018	J	0.014	0.035	mg/Kg	1	2/11/2019 17:22
Toluene	U		0.0096	0.035	mg/Kg	1	2/11/2019 17:22
Xylenes, Total	0.060	J	0.030	0.11	mg/Kg	1	2/11/2019 17:22
Surr: 1,2-Dichloroethane-d4	98.0			70-130	%REC	1	2/11/2019 17:22
Surr: 4-Bromofluorobenzene	97.5			70-130	%REC	1	2/11/2019 17:22
Surr: Dibromofluoromethane	97.8			70-130	%REC	1	2/11/2019 17:22
Surr: Toluene-d8	100			70-130	%REC	1	2/11/2019 17:22
ELECTRICAL CONDUCTIVITY (SAR)			Method: USDA H60 METHOD 2		Prep: USDA Method 20B / 2/13/19		Analyst: JEB
Electrical Conductivity @ Saturation	0.041		0.00055	0.0050	mmhos/cm @25°	20	2/13/2019 15:30
CHROMIUM, TRIVALENT			Method: CALCULATION				Analyst: JB
Chromium, Trivalent	11		0.34	1.1	mg/Kg-dry	1	2/18/2019 08:00
CHROMIUM, HEXAVALENT			Method: SW7196A		Prep: SW3060A / 2/12/19		Analyst: JEB
Chromium, Hexavalent	U		0.95	1.1	mg/Kg-dry	1	2/13/2019 11:55
MOISTURE			Method: SW3550C				Analyst: DTV
Moisture	8.1		0.10	0.10	% of sample	1	2/8/2019 15:25
PH			Method: SW9045D		Prep: EXTRACT / 2/11/19		Analyst: RZM
pH	8.66		0.10	0.100	s.u.	1	2/12/2019 09:52
Temperature	23.1		0.10	0.100	C	1	2/12/2019 09:52

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

ALS Group, USA

Date: 18-Feb-19

Client: SGM Inc.
Project: Mustang Resources
Sample ID: Site 6
Collection Date: 2/6/2019 03:00 PM

Work Order: 1902396
Lab ID: 1902396-02
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID							
			Method: SW8015M		Prep: SW3546 / 2/13/19		Analyst: RP
DRO (C10-C28)	U		3.2	5.6	mg/Kg-dry	1	2/14/2019 06:25
Surr: 4-Terphenyl-d14	74.0			33-111	%REC	1	2/14/2019 06:25
GASOLINE RANGE ORGANICS BY GC-FID							
			Method: SW8015D		Prep: SW5035 / 2/11/19		Analyst: RP
GRO (C6-C10)	U		2.7	6.5	mg/Kg	1	2/14/2019 21:02
Surr: Toluene-d8	113			71-123	%REC	1	2/14/2019 21:02
MERCURY BY CVAA							
			Method: SW7471B		Prep: SW7471 / 2/13/19		Analyst: RSH
Mercury	0.014	J	0.0020	0.020	mg/Kg-dry	1	2/13/2019 16:35
METALS ANALYSIS BY ICP							
			Method: SW846 6010C		Prep: SW3050B / 2/14/19		Analyst: ABL
Arsenic	5.5		0.098	0.38	mg/Kg-dry	1	2/14/2019 15:13
Barium	130		0.15	0.38	mg/Kg-dry	1	2/14/2019 15:13
Boron	20		0.38	1.5	mg/Kg-dry	1	2/14/2019 15:13
Cadmium	0.29	J	0.036	0.75	mg/Kg-dry	1	2/14/2019 15:13
Chromium	11		0.021	0.38	mg/Kg-dry	1	2/14/2019 15:13
Copper	12		0.17	0.75	mg/Kg-dry	1	2/14/2019 15:13
Lead	8.4		0.080	0.38	mg/Kg-dry	1	2/15/2019 17:23
Nickel	13		0.15	0.38	mg/Kg-dry	1	2/14/2019 15:13
Selenium	0.51	J	0.21	0.75	mg/Kg-dry	1	2/14/2019 15:13
Silver	U		0.047	0.38	mg/Kg-dry	1	2/14/2019 15:13
Zinc	51		0.060	0.75	mg/Kg-dry	1	2/14/2019 15:13
SOLUBLE CATIONS FOR SAR							
			Method: SW6020A		Prep: USDA Method 20B / 2/13/19		Analyst: STP
Calcium	33		0.86	5.0	mg/L	10	2/13/2019 13:59
Magnesium	13		0.068	2.0	mg/L	10	2/13/2019 13:59
Sodium	280		0.34	2.0	mg/L	10	2/13/2019 13:59
SODIUM ADSORPTION RATIO							
			Method: USDA H60 METHOD 2		Prep: USDA Method 20B / 2/13/19		Analyst: STP
Sodium Adsorption Ratio	11		0.010	0.010	none	1	2/13/2019
SEMI-VOLATILE ORGANIC COMPOUNDS							
			Method: SW846 8270D		Prep: SW3546 / 2/13/19		Analyst: EE
Acenaphthene	U		5.5	7.6	µg/Kg-dry	1	2/14/2019 22:18
Anthracene	U		5.4	7.6	µg/Kg-dry	1	2/14/2019 22:18
Benzo(a)anthracene	U		6.6	7.6	µg/Kg-dry	1	2/14/2019 22:18
Benzo(a)pyrene	U		4.7	7.6	µg/Kg-dry	1	2/14/2019 22:18
Benzo(b)fluoranthene	U		5.7	7.6	µg/Kg-dry	1	2/14/2019 22:18
Benzo(k)fluoranthene	U		5.8	7.6	µg/Kg-dry	1	2/14/2019 22:18
Chrysene	U		6.1	7.6	µg/Kg-dry	1	2/14/2019 22:18
Dibenzo(a,h)anthracene	U		4.1	7.6	µg/Kg-dry	1	2/14/2019 22:18

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

ALS Group, USA

Date: 18-Feb-19

Client: SGM Inc.
Project: Mustang Resources
Sample ID: Site 6
Collection Date: 2/6/2019 03:00 PM

Work Order: 1902396
Lab ID: 1902396-02
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Fluoranthene	U		3.6	7.6	µg/Kg-dry	1	2/14/2019 22:18
Fluorene	U		5.5	7.6	µg/Kg-dry	1	2/14/2019 22:18
Indeno(1,2,3-cd)pyrene	U		5.3	7.6	µg/Kg-dry	1	2/14/2019 22:18
Naphthalene	U		4.9	7.6	µg/Kg-dry	1	2/14/2019 22:18
Pyrene	U		1.4	7.6	µg/Kg-dry	1	2/14/2019 22:18
Surr: 2-Fluorobiphenyl	52.9			44-107	%REC	1	2/14/2019 22:18
Surr: 4-Terphenyl-d14	60.7			52-123	%REC	1	2/14/2019 22:18
Surr: Nitrobenzene-d5	57.6			41-94	%REC	1	2/14/2019 22:18
VOLATILE ORGANIC COMPOUNDS			Method: SW8260C		Prep: SW5035 / 2/11/19		Analyst: WH
Benzene	U		0.0067	0.039	mg/Kg	1	2/12/2019 15:24
Ethylbenzene	0.021	J	0.0082	0.039	mg/Kg	1	2/12/2019 15:24
m,p-Xylene	0.17		0.019	0.078	mg/Kg	1	2/12/2019 15:24
o-Xylene	0.043		0.015	0.039	mg/Kg	1	2/12/2019 15:24
Toluene	0.069		0.011	0.039	mg/Kg	1	2/12/2019 15:24
Xylenes, Total	0.21		0.034	0.12	mg/Kg	1	2/12/2019 15:24
Surr: 1,2-Dichloroethane-d4	97.7			70-130	%REC	1	2/12/2019 15:24
Surr: 4-Bromofluorobenzene	97.4			70-130	%REC	1	2/12/2019 15:24
Surr: Dibromofluoromethane	96.4			70-130	%REC	1	2/12/2019 15:24
Surr: Toluene-d8	101			70-130	%REC	1	2/12/2019 15:24
ELECTRICAL CONDUCTIVITY (SAR)			Method: USDA H60 METHOD 2		Prep: USDA Method 20B / 2/13/19		Analyst: JEB
Electrical Conductivity @ Saturation	0.076		0.00055	0.0050	mmhos/cm @25°	20	2/13/2019 15:30
CHROMIUM, TRIVALENT			Method: CALCULATION				Analyst: JB
Chromium, Trivalent	11		0.36	1.2	mg/Kg-dry	1	2/18/2019 08:00
CHROMIUM, HEXAVALENT			Method: SW7196A		Prep: SW3060A / 2/12/19		Analyst: JEB
Chromium, Hexavalent	U		0.96	1.1	mg/Kg-dry	1	2/13/2019 11:55
MOISTURE			Method: SW3550C				Analyst: DTV
Moisture	13		0.10	0.10	% of sample	1	2/8/2019 15:25
PH			Method: SW9045D		Prep: EXTRACT / 2/11/19		Analyst: RZM
pH	9.50		0.10	0.100	s.u.	1	2/12/2019 09:52
Temperature	22.9		0.10	0.100	C	1	2/12/2019 09:52

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

ALS Group, USA

Date: 18-Feb-19

Client: SGM Inc.
Project: Mustang Resources
Sample ID: Site 7
Collection Date: 2/6/2019 03:10 PM

Work Order: 1902396
Lab ID: 1902396-03
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID							
			Method: SW8015M		Prep: SW3546 / 2/13/19		Analyst: RP
DRO (C10-C28)	31		2.8	4.9	mg/Kg-dry	1	2/14/2019 06:54
Surr: 4-Terphenyl-d14	69.8			33-111	%REC	1	2/14/2019 06:54
GASOLINE RANGE ORGANICS BY GC-FID							
			Method: SW8015D		Prep: SW5035 / 2/11/19		Analyst: RP
GRO (C6-C10)	6,300		21	51	mg/Kg	10	2/15/2019 20:50
Surr: Toluene-d8	252	S		71-123	%REC	10	2/15/2019 20:50
MERCURY BY CVAA							
			Method: SW7471B		Prep: SW7471 / 2/13/19		Analyst: RSH
Mercury	0.015	J	0.0019	0.019	mg/Kg-dry	1	2/13/2019 16:38
METALS ANALYSIS BY ICP							
			Method: SW846 6010C		Prep: SW3050B / 2/14/19		Analyst: ABL
Arsenic	6.0		0.11	0.41	mg/Kg-dry	1	2/14/2019 15:19
Barium	130		0.16	0.41	mg/Kg-dry	1	2/14/2019 15:19
Boron	21		0.41	1.6	mg/Kg-dry	1	2/14/2019 15:19
Cadmium	0.52	J	0.039	0.81	mg/Kg-dry	1	2/14/2019 15:19
Chromium	11		0.023	0.41	mg/Kg-dry	1	2/14/2019 15:19
Copper	15		0.18	0.81	mg/Kg-dry	1	2/14/2019 15:19
Lead	8.5		0.086	0.41	mg/Kg-dry	1	2/15/2019 17:29
Nickel	15		0.16	0.41	mg/Kg-dry	1	2/14/2019 15:19
Selenium	0.30	J	0.23	0.81	mg/Kg-dry	1	2/14/2019 15:19
Silver	U		0.050	0.41	mg/Kg-dry	1	2/14/2019 15:19
Zinc	59		0.065	0.81	mg/Kg-dry	1	2/14/2019 15:19
SOLUBLE CATIONS FOR SAR							
			Method: SW6020A		Prep: USDA Method 20B / 2/13/19		Analyst: STP
Calcium	43		0.86	5.0	mg/L	10	2/13/2019 14:01
Magnesium	18		0.068	2.0	mg/L	10	2/13/2019 14:01
Sodium	390		0.34	2.0	mg/L	10	2/13/2019 14:01
SODIUM ADSORPTION RATIO							
			Method: USDA H60 METHOD 2		Prep: USDA Method 20B / 2/13/19		Analyst: STP
Sodium Adsorption Ratio	13		0.010	0.010	none	1	2/13/2019
SEMI-VOLATILE ORGANIC COMPOUNDS							
			Method: SW846 8270D		Prep: SW3546 / 2/13/19		Analyst: EE
Acenaphthene	U		4.8	6.6	µg/Kg-dry	1	2/14/2019 22:41
Anthracene	U		4.7	6.6	µg/Kg-dry	1	2/14/2019 22:41
Benzo(a)anthracene	U		5.7	6.6	µg/Kg-dry	1	2/14/2019 22:41
Benzo(a)pyrene	U		4.1	6.6	µg/Kg-dry	1	2/14/2019 22:41
Benzo(b)fluoranthene	U		4.9	6.6	µg/Kg-dry	1	2/14/2019 22:41
Benzo(k)fluoranthene	U		5.0	6.6	µg/Kg-dry	1	2/14/2019 22:41
Chrysene	U		5.4	6.6	µg/Kg-dry	1	2/14/2019 22:41
Dibenzo(a,h)anthracene	U		3.6	6.6	µg/Kg-dry	1	2/14/2019 22:41

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

ALS Group, USA

Date: 18-Feb-19

Client: SGM Inc.
Project: Mustang Resources
Sample ID: Site 7
Collection Date: 2/6/2019 03:10 PM

Work Order: 1902396
Lab ID: 1902396-03
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Fluoranthene	U		3.2	6.6	µg/Kg-dry	1	2/14/2019 22:41
Fluorene	U		4.8	6.6	µg/Kg-dry	1	2/14/2019 22:41
Indeno(1,2,3-cd)pyrene	U		4.6	6.6	µg/Kg-dry	1	2/14/2019 22:41
Naphthalene	62		4.2	6.6	µg/Kg-dry	1	2/14/2019 22:41
Pyrene	U		1.2	6.6	µg/Kg-dry	1	2/14/2019 22:41
Surr: 2-Fluorobiphenyl	42.8	S		44-107	%REC	1	2/14/2019 22:41
Surr: 4-Terphenyl-d14	60.2			52-123	%REC	1	2/14/2019 22:41
Surr: Nitrobenzene-d5	51.4			41-94	%REC	1	2/14/2019 22:41
VOLATILE ORGANIC COMPOUNDS			Method: SW8260C		Prep: SW5035 / 2/11/19		Analyst: LSY
Benzene	98		0.26	1.5	mg/Kg	50	2/13/2019 18:47
Ethylbenzene	35		0.32	1.5	mg/Kg	50	2/13/2019 18:47
m,p-Xylene	390		0.73	3.1	mg/Kg	50	2/13/2019 18:47
o-Xylene	54		0.59	1.5	mg/Kg	50	2/13/2019 18:47
Toluene	400		1.7	6.1	mg/Kg	200	2/15/2019 16:33
Xylenes, Total	440		1.3	4.6	mg/Kg	50	2/13/2019 18:47
Surr: 1,2-Dichloroethane-d4	96.2			70-130	%REC	50	2/13/2019 18:47
Surr: 1,2-Dichloroethane-d4	92.2			70-130	%REC	200	2/15/2019 16:33
Surr: 4-Bromofluorobenzene	99.2			70-130	%REC	50	2/13/2019 18:47
Surr: 4-Bromofluorobenzene	94.4			70-130	%REC	200	2/15/2019 16:33
Surr: Dibromofluoromethane	94.4			70-130	%REC	50	2/13/2019 18:47
Surr: Dibromofluoromethane	94.0			70-130	%REC	200	2/15/2019 16:33
Surr: Toluene-d8	103			70-130	%REC	50	2/13/2019 18:47
Surr: Toluene-d8	98.0			70-130	%REC	200	2/15/2019 16:33
ELECTRICAL CONDUCTIVITY (SAR)			Method: USDA H60 METHOD 2		Prep: USDA Method 20B / 2/13/19		Analyst: JEB
Electrical Conductivity @ Saturation	0.11		0.00055	0.0050	mmhos/cm @25°	20	2/13/2019 15:30
CHROMIUM, TRIVALENT			Method: CALCULATION				Analyst: JB
Chromium, Trivalent	11		0.31	1.0	mg/Kg-dry	1	2/18/2019 08:00
CHROMIUM, HEXAVALENT			Method: SW7196A		Prep: SW3060A / 2/12/19		Analyst: JEB
Chromium, Hexavalent	U		0.89	1.1	mg/Kg-dry	1	2/13/2019 11:55
MOISTURE			Method: SW3550C				Analyst: DTV
Moisture	1.1		0.10	0.10	% of sample	1	2/8/2019 15:25
PH			Method: SW9045D		Prep: EXTRACT / 2/11/19		Analyst: RZM
pH	8.41		0.10	0.100	s.u.	1	2/12/2019 09:52
Temperature	22.9		0.10	0.100	C	1	2/12/2019 09:52

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

Client: SGM Inc.
 Work Order: 1902396
 Project: Mustang Resources

QC BATCH REPORT

Batch ID: **131880** Instrument ID **GC8** Method: **SW8015M**

MBLK		Sample ID: DBLKS1-131880-131880				Units: mg/Kg		Analysis Date: 2/14/2019 03:59 AM		
Client ID:		Run ID: GC8_190213C				SeqNo: 5521319		Prep Date: 2/13/2019		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	U	5.0								
Surr: 4-Terphenyl-d14	3.222	0	3.33	0	96.8	33-111	0			

LCS		Sample ID: DLCSS1-131880-131880				Units: mg/Kg		Analysis Date: 2/14/2019 04:29 AM		
Client ID:		Run ID: GC8_190213C				SeqNo: 5521320		Prep Date: 2/13/2019		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	339.2	5.0	333	0	102	58-111	0			
Surr: 4-Terphenyl-d14	3.396	0	3.33	0	102	33-111	0			

MS		Sample ID: 1902396-01A MS				Units: mg/Kg		Analysis Date: 2/14/2019 04:58 AM		
Client ID: Site 5		Run ID: GC8_190213C				SeqNo: 5521321		Prep Date: 2/13/2019		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	271.4	5.0	332	0	81.7	58-111	0			
Surr: 4-Terphenyl-d14	2.542	0	3.32	0	76.6	33-111	0			

MSD		Sample ID: 1902396-01A MSD				Units: mg/Kg		Analysis Date: 2/14/2019 05:27 AM		
Client ID: Site 5		Run ID: GC8_190213C				SeqNo: 5521322		Prep Date: 2/13/2019		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	264.2	4.9	327.8	0	80.6	58-111	271.4	2.69	30	
Surr: 4-Terphenyl-d14	2.489	0	3.278	0	75.9	33-111	2.542	2.09	30	

The following samples were analyzed in this batch:

1902396-01A	1902396-02A	1902396-03A
-------------	-------------	-------------

Client: SGM Inc.
 Work Order: 1902396
 Project: Mustang Resources

QC BATCH REPORT

Batch ID: **131754** Instrument ID **GC10** Method: **SW8015D**

MBLK		Sample ID: MBLK-131754-131754				Units: µg/Kg-dry		Analysis Date: 2/14/2019 08:04 PM		
Client ID:		Run ID: GC10_190214A				SeqNo: 5523502		Prep Date: 2/11/2019		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	U	5,000								
Surr: Toluene-d8	5564	0	5000	0	111	71-123	0			

LCS		Sample ID: LCS-131754-131754				Units: µg/Kg-dry		Analysis Date: 2/14/2019 07:05 PM		
Client ID:		Run ID: GC10_190214A				SeqNo: 5523501		Prep Date: 2/11/2019		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	437500	5,000	500000	0	87.5	71-123	0			
Surr: Toluene-d8	5594	0	5000	0	112	71-123	0			

MS		Sample ID: 1902396-01A MS				Units: µg/Kg-dry		Analysis Date: 2/14/2019 10:59 PM		
Client ID: Site 5		Run ID: GC10_190214A				SeqNo: 5523508		Prep Date: 2/11/2019		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	660900	5,900	588100	0	112	71-123	0			
Surr: Toluene-d8	6554	0	5881	0	111	71-123	0			

MSD		Sample ID: 1902396-01A MSD				Units: µg/Kg-dry		Analysis Date: 2/14/2019 11:28 PM		
Client ID: Site 5		Run ID: GC10_190214A				SeqNo: 5523509		Prep Date: 2/11/2019		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	626700	5,900	588100	0	107	71-123	660900	5.31	30	
Surr: Toluene-d8	6592	0	5881	0	112	71-123	6554	0.582	30	

The following samples were analyzed in this batch:

1902396-01A	1902396-02A	1902396-03A
-------------	-------------	-------------

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

Client: SGM Inc.
 Work Order: 1902396
 Project: Mustang Resources

QC BATCH REPORT

Batch ID: **131882** Instrument ID **HG4** Method: **SW7471B**

MBLK		Sample ID: MBLK-131882-131882				Units: mg/Kg		Analysis Date: 2/13/2019 01:43 PM		
Client ID:		Run ID: HG4_190213A				SeqNo: 5519301		Prep Date: 2/13/2019		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury U 0.020

LCS		Sample ID: LCS-131882-131882				Units: mg/Kg		Analysis Date: 2/13/2019 01:46 PM		
Client ID:		Run ID: HG4_190213A				SeqNo: 5519302		Prep Date: 2/13/2019		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.1831 0.020 0.1665 0 110 80-120 0

MS		Sample ID: 1902550-02A MS				Units: mg/Kg		Analysis Date: 2/13/2019 01:53 PM		
Client ID:			Run ID: HG4_190213A			SeqNo: 5519305		Prep Date: 2/13/2019		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.1603 0.018 0.1535 0.007727 99.4 75-125 0

MSD		Sample ID: 1902550-02A MSD				Units: mg/Kg		Analysis Date: 2/13/2019 01:55 PM		
Client ID:			Run ID: HG4_190213A			SeqNo: 5519306		Prep Date: 2/13/2019		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.1635 0.018 0.1496 0.007727 104 75-125 0.1603 1.97 35

The following samples were analyzed in this batch:

1902396-01A	1902396-02A	1902396-03A
-------------	-------------	-------------

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

Client: SGM Inc.
 Work Order: 1902396
 Project: Mustang Resources

QC BATCH REPORT

Batch ID: 131918 Instrument ID ICP2 Method: SW846 6010C

MBLK		Sample ID: MBLK-131918-131918				Units: mg/Kg		Analysis Date: 2/14/2019 02:24 PM		
Client ID:		Run ID: ICP2_190214A				SeqNo: 5522637		Prep Date: 2/14/2019		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	U	0.25								
Barium	U	0.25								
Boron	0.3538	0.98								J
Cadmium	U	0.49								
Chromium	0.0374	0.25								J
Copper	U	0.49								
Lead	U	0.25								
Nickel	U	0.25								
Selenium	U	0.49								
Silver	U	0.25								
Zinc	U	0.49								

LCS		Sample ID: LCS-131918-131918				Units: mg/Kg		Analysis Date: 2/14/2019 02:31 PM		
Client ID:		Run ID: ICP2_190214A				SeqNo: 5522638		Prep Date: 2/14/2019		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.668	0.24	4.739	0	98.5	80-120	0			
Barium	5.051	0.24	4.739	0	107	80-120	0			
Boron	24.27	0.95	23.7	0	102	80-120	0			
Cadmium	4.946	0.47	4.739	0	104	80-120	0			
Chromium	5.146	0.24	4.739	0	109	80-120	0			
Copper	5.016	0.47	4.739	0	106	80-120	0			
Nickel	5.047	0.24	4.739	0	106	80-120	0			
Selenium	4.578	0.47	4.739	0	96.6	80-120	0			
Silver	4.869	0.24	4.739	0	103	80-120	0			
Zinc	5.478	0.47	4.739	0	116	80-120	0			

LCS		Sample ID: LCS-131918-131918				Units: mg/Kg		Analysis Date: 2/15/2019 02:07 PM		
Client ID:		Run ID: ICP2_190215A				SeqNo: 5524081		Prep Date: 2/14/2019		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Lead	4.46	0.24	4.739	0	94.1	80-120	0			

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

Client: SGM Inc.
 Work Order: 1902396
 Project: Mustang Resources

QC BATCH REPORT

Batch ID: 131918 Instrument ID ICP2 Method: SW846 6010C

MS				Sample ID: 1902396-01AMS			Units: mg/Kg		Analysis Date: 2/14/2019 03:01 PM	
Client ID: Site 5				Run ID: ICP2_190214A			SeqNo: 5522643		Prep Date: 2/14/2019	
							DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	12.61	0.39	7.837	5.634	89	75-125	0			
Barium	180.1	0.39	7.837	173.6	82.5	75-125	0			O
Boron	57.63	1.6	39.18	20.23	95.5	75-125	0			
Cadmium	7.658	0.78	7.837	0.458	91.9	75-125	0			
Chromium	21.66	0.39	7.837	10.3	145	75-125	0			S
Copper	21	0.78	7.837	13.5	95.7	75-125	0			
Nickel	19.48	0.39	7.837	12.86	84.5	75-125	0			
Selenium	7.061	0.78	7.837	0.5008	83.7	75-125	0			
Silver	7.875	0.39	7.837	-0.2488	104	75-125	0			
Zinc	61.14	0.78	7.837	51.77	120	75-125	0			O

MS				Sample ID: 1902396-01AMS			Units: mg/Kg		Analysis Date: 2/15/2019 04:41 PM	
Client ID: Site 5				Run ID: ICP2_190215A			SeqNo: 5524602		Prep Date: 2/14/2019	
							DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Lead	13.42	0.39	7.837	8.237	66.2	75-125	0			S

MSD				Sample ID: 1902396-01AMSD			Units: mg/Kg		Analysis Date: 2/14/2019 03:07 PM	
Client ID: Site 5				Run ID: ICP2_190214A			SeqNo: 5522644		Prep Date: 2/14/2019	
							DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	11.87	0.34	6.84	5.634	91.1	75-125	12.61	6.04	20	
Barium	186.1	0.34	6.84	173.6	183	75-125	180.1	3.3	20	SO
Boron	52.53	1.4	34.2	20.23	94.5	75-125	57.63	9.26	20	
Cadmium	6.717	0.68	6.84	0.458	91.5	75-125	7.658	13.1	20	
Chromium	20.59	0.34	6.84	10.3	150	75-125	21.66	5.09	20	S
Copper	20.66	0.68	6.84	13.5	105	75-125	21	1.65	20	
Nickel	18.97	0.34	6.84	12.86	89.4	75-125	19.48	2.65	20	
Selenium	6.094	0.68	6.84	0.5008	81.8	75-125	7.061	14.7	20	
Silver	6.885	0.34	6.84	-0.2488	104	75-125	7.875	13.4	20	
Zinc	60.5	0.68	6.84	51.77	128	75-125	61.14	1.05	20	SO

MSD				Sample ID: 1902396-01AMSD			Units: mg/Kg		Analysis Date: 2/15/2019 04:47 PM	
Client ID: Site 5				Run ID: ICP2_190215A			SeqNo: 5524603		Prep Date: 2/14/2019	
							DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Lead	12.88	0.34	6.84	8.237	67.9	75-125	13.42	4.09	20	S

The following samples were analyzed in this batch:

1902396-01A 1902396-02A 1902396-03A

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

Client: SGM Inc.
Work Order: 1902396
Project: Mustang Resources

QC BATCH REPORT

Batch ID: **131891** Instrument ID **ICPMS3** Method: **SW6020A**

DUP		Sample ID: 1902396-01B DUP				Units: mg/L		Analysis Date: 2/13/2019 01:57 PM		
Client ID: Site 5		Run ID: ICPMS3_190213A				SeqNo: 5519187		Prep Date: 2/13/2019		DF: 10
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	34.86	5.0	0	0	0	0-0	27.01	25.4		
Magnesium	14.49	2.0	0	0	0	0-0	10.88	28.4		
Sodium	157.8	2.0	0	0	0	0-0	126	22.4		

The following samples were analyzed in this batch:

1902396-01B 1902396-02B 1902396-03B

Batch ID: **131891** Instrument ID **SAR** Method: **USDA H60 Metho**

DUP		Sample ID: 1902396-01B DUP				Units: none		Analysis Date: 2/13/2019		
Client ID: Site 5		Run ID: SAR_190213A				SeqNo: 5519352		Prep Date: 2/13/2019		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium Adsorption Ratio	5.669	0.010	0	0	0		5.173	9.15	50	

The following samples were analyzed in this batch:

1902396-01B 1902396-02B 1902396-03B

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

Client: SGM Inc.
 Work Order: 1902396
 Project: Mustang Resources

QC BATCH REPORT

Batch ID: 131871 Instrument ID SVMS9 Method: SW846 8270D

MBLK				Sample ID: SBLKS1-131871-131871				Units: µg/Kg			Analysis Date: 2/14/2019 12:23 PM		
Client ID:			Run ID: SVMS9_190214A				SeqNo: 5521746		Prep Date: 2/13/2019		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
Acenaphthene	U	6.7											
Anthracene	U	6.7											
Benzo(a)anthracene	U	6.7											
Benzo(a)pyrene	U	6.7											
Benzo(b)fluoranthene	U	6.7											
Benzo(k)fluoranthene	U	6.7											
Chrysene	U	6.7											
Dibenzo(a,h)anthracene	U	6.7											
Fluoranthene	U	6.7											
Fluorene	U	6.7											
Indeno(1,2,3-cd)pyrene	U	6.7											
Naphthalene	U	6.7											
Pyrene	U	6.7											
Surr: 2-Fluorobiphenyl	2119	0	3333	0	63.6	44-107	0						
Surr: 4-Terphenyl-d14	2801	0	3333	0	84	52-123	0						
Surr: Nitrobenzene-d5	2091	0	3333	0	62.7	41-94	0						

LCS				Sample ID: SLCSS1-131871-131871				Units: µg/Kg		Analysis Date: 2/14/2019 12:45 PM	
Client ID:			Run ID: SVMS9_190214A			SeqNo: 5521750		Prep Date: 2/13/2019		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Acenaphthene	947.3	6.7	1333	0	71.1	55-101	0				
Anthracene	1135	6.7	1333	0	85.1	67-105	0				
Benzo(a)anthracene	1149	6.7	1333	0	86.2	68-105	0				
Benzo(a)pyrene	1223	6.7	1333	0	91.8	68-110	0				
Benzo(b)fluoranthene	1209	6.7	1333	0	90.7	65-110	0				
Benzo(k)fluoranthene	1255	6.7	1333	0	94.1	66-113	0				
Chrysene	1221	6.7	1333	0	91.6	68-108	0				
Dibenzo(a,h)anthracene	1121	6.7	1333	0	84.1	62-119	0				
Fluoranthene	1190	6.7	1333	0	89.3	67-106	0				
Fluorene	960.7	6.7	1333	0	72.1	59-107	0				
Indeno(1,2,3-cd)pyrene	1067	6.7	1333	0	80	56-120	0				
Naphthalene	957.3	6.7	1333	0	71.8	46-98	0				
Pyrene	1239	6.7	1333	0	93	60-119	0				
Surr: 2-Fluorobiphenyl	2335	0	3333	0	70.1	44-107	0				
Surr: 4-Terphenyl-d14	3036	0	3333	0	91.1	52-123	0				
Surr: Nitrobenzene-d5	2463	0	3333	0	73.9	41-94	0				

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

Client: SGM Inc.
 Work Order: 1902396
 Project: Mustang Resources

QC BATCH REPORT

Batch ID: 131871 Instrument ID SVMS9 Method: SW846 8270D

MS				Sample ID: 1902445-04B MS				Units: µg/Kg			Analysis Date: 2/14/2019 02:37 PM		
Client ID:			Run ID: SVMS9_190214A			SeqNo: 5524142		Prep Date: 2/13/2019		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
Acenaphthene	935.4	6.4	1285	0	72.8	55-101	0						
Anthracene	1108	6.4	1285	0	86.2	67-105	0						
Benzo(a)anthracene	1057	6.4	1285	0	82.3	68-105	0						
Benzo(a)pyrene	1090	6.4	1285	0	84.9	68-110	0						
Benzo(b)fluoranthene	1115	6.4	1285	0	86.8	65-110	0						
Benzo(k)fluoranthene	1099	6.4	1285	0	85.6	66-113	0						
Chrysene	1108	6.4	1285	0	86.2	68-108	0						
Dibenzo(a,h)anthracene	1048	6.4	1285	0	81.6	62-119	0						
Fluoranthene	1081	6.4	1285	0	84.1	67-106	0						
Fluorene	927.7	6.4	1285	0	72.2	59-107	0						
Indeno(1,2,3-cd)pyrene	1115	6.4	1285	0	86.8	56-120	0						
Naphthalene	981	6.4	1285	0	76.4	46-98	0						
Pyrene	1159	6.4	1285	0	90.2	60-119	0						
Surr: 2-Fluorobiphenyl	2380	0	3212	0	74.1	44-107	0						
Surr: 4-Terphenyl-d14	2834	0	3212	0	88.2	52-123	0						
Surr: Nitrobenzene-d5	2477	0	3212	0	77.1	41-94	0						

MSD				Sample ID: 1902445-04B MSD				Units: µg/Kg		Analysis Date: 2/14/2019 02:59 PM	
Client ID:			Run ID: SVMS9_190214A			SeqNo: 5524143		Prep Date: 2/13/2019		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Acenaphthene	852.1	6.4	1275	0	66.8	55-101	935.4	9.32	30		
Anthracene	1059	6.4	1275	0	83	67-105	1108	4.51	30		
Benzo(a)anthracene	1057	6.4	1275	0	82.9	68-105	1057	0.0638	30		
Benzo(a)pyrene	1086	6.4	1275	0	85.1	68-110	1090	0.429	30		
Benzo(b)fluoranthene	1091	6.4	1275	0	85.6	65-110	1115	2.12	30		
Benzo(k)fluoranthene	1089	6.4	1275	0	85.4	66-113	1099	0.899	30		
Chrysene	1040	6.4	1275	0	81.6	68-108	1108	6.27	30		
Dibenzo(a,h)anthracene	982.8	6.4	1275	0	77.1	62-119	1048	6.46	30		
Fluoranthene	1119	6.4	1275	0	87.7	67-106	1081	3.47	30		
Fluorene	883.3	6.4	1275	0	69.3	59-107	927.7	4.89	30		
Indeno(1,2,3-cd)pyrene	1031	6.4	1275	0	80.8	56-120	1115	7.82	30		
Naphthalene	890.4	6.4	1275	0	69.8	46-98	981	9.69	30		
Pyrene	1081	6.4	1275	0	84.8	60-119	1159	6.95	30		
Surr: 2-Fluorobiphenyl	2131	0	3189	0	66.8	44-107	2380	11.1	40		
Surr: 4-Terphenyl-d14	2574	0	3189	0	80.7	52-123	2834	9.63	40		
Surr: Nitrobenzene-d5	2272	0	3189	0	71.2	41-94	2477	8.65	40		

The following samples were analyzed in this batch:

1902396-01A 1902396-02A 1902396-03A

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

Client: SGM Inc.
 Work Order: 1902396
 Project: Mustang Resources

QC BATCH REPORT

Batch ID: **131750** Instrument ID **VMS7** Method: **SW8260C**

MBLK				Sample ID: MBLK-131750-131750				Units: µg/Kg-dry			Analysis Date: 2/11/2019 02:56 PM			
Client ID:				Run ID: VMS7_190211A				SeqNo: 5516550			Prep Date: 2/11/2019		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual				
Benzene	U	30												
Ethylbenzene	U	30												
m,p-Xylene	16.5	60								J				
o-Xylene	U	30												
Toluene	U	30												
Xylenes, Total	U	90												
Surr: 1,2-Dichloroethane-d4	973.5	0	1000	0	97.4	70-130	0							
Surr: 4-Bromofluorobenzene	955	0	1000	0	95.5	70-130	0							
Surr: Dibromofluoromethane	959.5	0	1000	0	96	70-130	0							
Surr: Toluene-d8	976.5	0	1000	0	97.6	70-130	0							

LCS				Sample ID: LCS-131750-131750				Units: µg/Kg-dry			Analysis Date: 2/11/2019 02:10 PM			
Client ID:				Run ID: VMS7_190211A				SeqNo: 5516549			Prep Date: 2/11/2019		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual				
Benzene	1117	30	1000	0	112	75-125	0							
Ethylbenzene	1051	30	1000	0	105	75-125	0							
m,p-Xylene	2096	60	2000	0	105	80-125	0							
o-Xylene	1056	30	1000	0	106	75-125	0							
Toluene	1114	30	1000	0	111	70-125	0							
Xylenes, Total	3151	90	3000	0	105	75-125	0							
Surr: 1,2-Dichloroethane-d4	964	0	1000	0	96.4	70-130	0							
Surr: 4-Bromofluorobenzene	1022	0	1000	0	102	70-130	0							
Surr: Dibromofluoromethane	1011	0	1000	0	101	70-130	0							
Surr: Toluene-d8	997.5	0	1000	0	99.8	70-130	0							

MS				Sample ID: 1902396-01A MS			Units: µg/Kg-dry		Analysis Date: 2/11/2019 09:14 PM		
Client ID: Site 5			Run ID: VMS7_190211A		SeqNo: 5516574		Prep Date: 2/11/2019		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	1256	35	1176	0	107	75-125	0				
Ethylbenzene	1155	35	1176	9.367	97.4	75-125	0				
m,p-Xylene	2378	71	2353	42.15	99.3	80-125	0				
o-Xylene	1156	35	1176	17.56	96.8	75-125	0				
Toluene	1313	35	1176	0	112	70-125	0				
Xylenes, Total	3534	110	3529	60	98.4	75-125	0				
Surr: 1,2-Dichloroethane-d4	1160	0	1176	0	98.6	70-130	0				
Surr: 4-Bromofluorobenzene	1142	0	1176	0	97	70-130	0				
Surr: Dibromofluoromethane	1201	0	1176	0	102	70-130	0				
Surr: Toluene-d8	1168	0	1176	0	99.3	70-130	0				

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

Client: SGM Inc.
 Work Order: 1902396
 Project: Mustang Resources

QC BATCH REPORT

Batch ID: 131750 Instrument ID VMS7 Method: SW8260C

MSD				Sample ID: 1902396-01A MSD			Units: µg/Kg-dry		Analysis Date: 2/11/2019 09:29 PM	
Client ID: Site 5				Run ID: VMS7_190211A			SeqNo: 5516575		Prep Date: 2/11/2019	
							DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1266	35	1176	0	108	75-125	1256	0.84	30	
Ethylbenzene	1171	35	1176	9.367	98.8	75-125	1155	1.37	30	
m,p-Xylene	2406	71	2353	42.15	100	80-125	2378	1.18	30	
o-Xylene	1185	35	1176	17.56	99.3	75-125	1156	2.51	30	
Toluene	1277	35	1176	0	109	70-125	1313	2.77	30	
Xylenes, Total	3591	110	3529	60	100	75-125	3534	1.62	30	
Surr: 1,2-Dichloroethane-d4	1153	0	1176	0	98	70-130	1160	0.559	30	
Surr: 4-Bromofluorobenzene	1177	0	1176	0	100	70-130	1142	3.04	30	
Surr: Dibromofluoromethane	1167	0	1176	0	99.2	70-130	1201	2.83	30	
Surr: Toluene-d8	1157	0	1176	0	98.4	70-130	1168	0.91	30	

The following samples were analyzed in this batch:

1902396-01A	1902396-02A	1902396-03A
-------------	-------------	-------------

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

Client: SGM Inc.
Work Order: 1902396
Project: Mustang Resources

QC BATCH REPORT

Batch ID: **131763** Instrument ID **WETCHEM** Method: **SW9045D**

LCS				Sample ID: LCS-131763-131763				Units: s.u.			Analysis Date: 2/12/2019 09:52 AM		
Client ID:				Run ID: WETCHEM_190212C				SeqNo: 5516611		Prep Date: 2/11/2019		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
pH	3.92	0.10	4	0	98	90-110	0						

DUP				Sample ID: 1902396-01A DUP				Units: s.u.			Analysis Date: 2/12/2019 09:52 AM			
Client ID: Site 5				Run ID: WETCHEM_190212C				SeqNo: 5516616			Prep Date: 2/11/2019		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
pH		8.61	0.10	0	0	0	0-0	8.66	0.579	20				
Temperature		22.9	0.10	0	0	0		23.1	0.87					

The following samples were analyzed in this batch:

1902396-01A	1902396-02A	1902396-03A
-------------	-------------	-------------

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

Client: SGM Inc.
 Work Order: 1902396
 Project: Mustang Resources

QC BATCH REPORT

Batch ID: **131896** Instrument ID **WETCHEM** Method: **SW7196A**

MBLK		Sample ID: MBLK-131896-131896				Units: mg/Kg		Analysis Date: 2/13/2019 11:55 AM		
Client ID:		Run ID: WETCHEM_190213I		SeqNo: 5519068		Prep Date: 2/12/2019		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent U 1.0

LCS		Sample ID: LCS-131896-131896				Units: mg/Kg		Analysis Date: 2/13/2019 11:55 AM		
Client ID:		Run ID: WETCHEM_190213I		SeqNo: 5519069		Prep Date: 2/12/2019		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 4.28 1.0 5 0 85.6 80-120 0

MS		Sample ID: 1902396-01A MS				Units: mg/Kg		Analysis Date: 2/13/2019 11:55 AM		
Client ID: Site 5		Run ID: WETCHEM_190213I		SeqNo: 5519072		Prep Date: 2/12/2019		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 1.728 0.97 4.854 0.4124 27.1 75-125 0 S

MS		Sample ID: 1902396-01A MSI				Units: mg/Kg		Analysis Date: 2/13/2019 11:55 AM		
Client ID: Site 5		Run ID: WETCHEM_190213I		SeqNo: 5519074		Prep Date: 2/12/2019		DF: 200		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 3329 190 3404 0.4124 97.8 75-125 0

MSD		Sample ID: 1902396-01A MSD				Units: mg/Kg		Analysis Date: 2/13/2019 11:55 AM		
Client ID: Site 5		Run ID: WETCHEM_190213I		SeqNo: 5519073		Prep Date: 2/12/2019		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 2.01 0.99 4.95 0.4124 32.3 75-125 1.728 15.1 20 S

The following samples were analyzed in this batch:

1902396-01A 1902396-02A 1902396-03A

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

Client: SGM Inc.
 Work Order: 1902396
 Project: Mustang Resources

QC BATCH REPORT

Batch ID: **R254626** Instrument ID **MOIST** Method: **SW3550C**

MBLK		Sample ID: WBLKS-R254626					Units: % of sample		Analysis Date: 2/8/2019 03:25 PM		
Client ID:		Run ID: MOIST_190208B					SeqNo: 5514771		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

Moisture U 0.10

LCS		Sample ID: LCS-R254626				Units: % of sample		Analysis Date: 2/8/2019 03:25 PM		
Client ID:		Run ID: MOIST_190208B				SeqNo: 5514770		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 99.98 0.10 100 0 100 98-102 0

DUP				Sample ID: 1902380-03A DUP				Units: % of sample			Analysis Date: 2/8/2019 03:25 PM			
Client ID:				Run ID: MOIST_190208B				SeqNo: 5514766			Prep Date:		DF: 1	
Analyte				Result		PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 12.85 0.10 0 0 0 0-0 16.76 26.4 10 R

The following samples were analyzed in this batch:

1902396-01A 1902396-02A 1902396-03A

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 #: <u>1902396</u>															
Customer Information				Project Information				Parameter/Method Request for Analysis													
Purchase Order				Project Name		Mustang Resources		A		910-1											
Work Order				Project Number		2019-123.001		B													
Company Name		SGM		Bill To Company		SGM		C													
Send Report To		Eric Petterson / Rachel Kattning		Invoice Attn.		Keely Camilletti		D													
Address		118 W. 6th St. Suite 200		Address		118 W. 6th St. Suite 200		E													
								F													
City/State/Zip		Glenwood Springs, CO 81601		City/State/Zip		Glenwood Springs, CO 81601		G													
Phone		970-945-1004		Phone		970-384-9047		H													
Fax		970-945-5948		Fax		970-945-5948		I													
e-Mail Address		ericp@sgm-inc.com / rachelk@sgm-inc.com		e-Mail Address		keelyc@sgm-inc.com		J													
No.	Sample Description			Date	Time	Matrix	Pres. Key Numbers	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold		
1	Site 5			2/6/19	2:45pm	S	8	3	X												
2	Site 6			2/6/19	3pm	S	8	3	X												
3	Site 7			2/6/19	3:10pm	S	8	3	X												
4						S	8	3													
5						S	8	3													
6						S	8	3													
7						S	8	3													
8						S	8	3													
9						S	8	3													
10						S	8	3													
Sampler(s): Please Print & Sign <u>Rachel Kattning</u>				Shipment Method:		Turnaround Time in Business Days (BD):				<input checked="" type="checkbox"/> Other <u>see 7</u>				Results Due Date: <u>2/19/2019</u>							
						<input type="checkbox"/> 10 BD <input checked="" type="checkbox"/> 5 BD <input type="checkbox"/> 3 BD <input type="checkbox"/> 2 BD <input type="checkbox"/> 1 BD															
Relinquished by:		Date:		Time:		Received by:		Date:		Time:		Notes:									
<u>Rachel Kattning</u>		<u>2/6/19</u>		<u>3:50pm</u>		<u>MR</u>		<u>2-6-19</u>		<u>3:50</u>											
Relinquished by:		Date:		Time:		Received by (Laboratory):		Date:		Time:		QC Package: (Check Box Below)									
<u>W</u>		<u>2-6-19</u>		<u>1:30</u>		<u>Q22</u>		<u>2/8/19</u>		<u>1330</u>		ALS Cooler ID		Cooler Temp		<input type="checkbox"/> Level II: Standard QC <input type="checkbox"/> Level III: Raw Data					
Logged by (Laboratory):		Date:		Time:		Checked by (Laboratory):						<u>SR2</u>		<u>2.6°C</u>		<input type="checkbox"/> TRRP LRC <input type="checkbox"/> TRRP Level IV					
<u>DFS</u>		<u>2/8/19</u>		<u>1500</u>		<u>C</u>										<input type="checkbox"/> Level IV: SW846 Methods/CLP like					
																<input type="checkbox"/> Other: _____					

Preservative Key: 1-HCl 2-HNO₃ 3-H₂SO₄ 4-NaOH 5-Na₂S₂O₃ 6-NaHSO₄ 7-Other 8-None/4°C

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

Sample Receipt Checklist

Client Name: **SGM**

Date/Time Received: **08-Feb-19 13:30**

Work Order: **1902396**

Received by: **DS**

Checklist completed by Diane Shaw
eSignature

08-Feb-19
Date

Reviewed by: Chad Whelton
eSignature

08-Feb-19
Date

Matrices: **Soil**

Carrier name: **FedEx**

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature in compliance?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample(s) received on ice?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temperature(s)/Thermometer(s):	<u>2.6/2.6 c</u>		<u>SR2</u>
Cooler(s)/Kit(s):	<u></u>		
Date/Time sample(s) sent to storage:	<u>2/8/2019 3:10:10 PM</u>		
Water - VOA vials have zero headspace?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted by:	<u>-</u>		

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction: