



# ANALYTICAL SUMMARY REPORT

April 13, 2017

MT Sulphur and Chemical  
PO Box 31118  
Billings, MT 59107

Work Order: B17032155

Project Name: Certificate of Analysis

Energy Laboratories Inc Billings MT received the following 3 samples for MT Sulphur and Chemical on 3/28/2017 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
B17032155-001	HP Prill	03/28/17 11:08	03/28/17	Solid	Metals by ICP/ICPMS, Total Metals by ICP/ICPMS, Total or Soluble Acidity Ash, Percent Total Carbon Mercury in Solid By CVAA Anions, Water Extractable Total Kjeldahl Nitrogen Digestion, Total Metals DI Water Soil Extract HF Digestion, Total Metals Digestion, Mercury by CVAA TKN prep Sulfur content
B17032155-002	Disintegrating	03/28/17 11:12	03/28/17	Solid	Same As Above
B17032155-003	HP Sugar House Flake	03/28/17 11:15	03/28/17	Solid	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 1120 S 27th St., Billings, MT 59101, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:



### LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

**Client:** MT Sulphur and Chemical  
**Project:** Certificate of Analysis  
**Lab ID:** B17032155-003  
**Client Sample ID:** HP Sugar House Flake

**Report Date:** 04/13/17  
**Collection Date:** 03/28/17 11:15  
**Date Received:** 03/28/17  
**Matrix:** Solid

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>PHYSICAL CHARACTERISTICS</b>							
Ash	ND	wt%		0.01		D2974	04/03/17 11:15 / jmg
<b>WATER EXTRACTABLE CONSTITUENTS</b>							
Chloride, 1:2	ND	mg/kg		1		E300.0	04/04/17 23:07 / cjm
<b>CHEMICAL CHARACTERISTICS</b>							
Carbon, Total	ND	wt%		0.01		Leco	04/03/17 15:37 / srm
Acidity, 1:2	3	mg/kg		1		E305.1	04/06/17 15:37 / bas
Total Kjeldahl Nitrogen	56	mg/kg	D	10		ASA31-3	04/05/17 16:20 / ajm
<b>INORGANICS</b>							
Sulfur, by loss on ignition	100	wt%		0.100		Calculation	04/03/17 11:15 / jmg
<b>METALS, TOTAL HF DIGESTION</b>							
Silicon	ND	wt%		1		SW6010B	04/12/17 01:54 / rlh
<b>METALS, TOTAL - EPA SW846</b>							
Aluminum	1.8	mg/kg	D	0.7		SW6020	04/01/17 06:00 / mas
Antimony	0.06	mg/kg		0.02		SW6020	03/30/17 19:04 / mas
Arsenic	ND	mg/kg		0.2		SW6020	03/30/17 19:04 / mas
Barium	ND	mg/kg		0.05		SW6010B	03/31/17 03:25 / rlh
Beryllium	ND	mg/kg		0.05		SW6010B	03/31/17 03:25 / rlh
Boron	ND	mg/kg	D	0.4		SW6010B	03/31/17 03:25 / rlh
Cadmium	ND	mg/kg		0.05		SW6020	03/30/17 19:04 / mas
Calcium	7	mg/kg	D	3		SW6010B	03/31/17 03:25 / rlh
Chromium	ND	mg/kg		0.1		SW6020	04/01/17 06:00 / mas
Cobalt	ND	mg/kg		0.05		SW6020	03/30/17 19:04 / mas
Copper	ND	mg/kg		0.5		SW6020	03/30/17 19:04 / mas
Iron	ND	mg/kg	D	4		SW6010B	03/31/17 03:25 / rlh
Lead	ND	mg/kg		0.05		SW6020	03/30/17 19:04 / mas
Lithium	ND	mg/kg	D	0.3		SW6010B	03/31/17 03:25 / rlh
Magnesium	1	mg/kg		1		SW6010B	03/31/17 03:25 / rlh
Manganese	ND	mg/kg	D	0.2		SW6010B	03/31/17 03:25 / rlh
Molybdenum	ND	mg/kg		0.05		SW6020	03/30/17 19:04 / mas
Nickel	ND	mg/kg		0.05		SW6020	03/30/17 19:04 / mas
Phosphorus	1	mg/kg	D	1		SW6010B	03/31/17 03:25 / rlh
Potassium	ND	mg/kg	D	10		SW6010B	03/31/17 03:25 / rlh
Selenium	ND	mg/kg		0.2		SW6020	04/01/17 06:00 / mas
Silver	ND	mg/kg		0.05		SW6020	03/30/17 19:04 / mas
Sodium	5	mg/kg	D	4		SW6010B	03/31/17 03:25 / rlh
Tellurium	ND	mg/kg		5		SW6010B	03/31/17 03:25 / rlh
Thallium	ND	mg/kg		0.05		SW6020	03/30/17 19:04 / mas
Tin	0.9	mg/kg	D	0.6		SW6020	03/30/17 19:04 / mas
Titanium	ND	mg/kg		0.05		SW6020	04/01/17 06:00 / mas

**Report Definitions:**  
RL - Analyte reporting limit.  
QCL - Quality control limit.  
D - RL increased due to sample matrix.

MCL - Maximum contaminant level.  
ND - Not detected at the reporting limit.



### LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

**Client:** MT Sulphur and Chemical  
**Project:** Certificate of Analysis  
**Lab ID:** B17032155-003  
**Client Sample ID:** HP Sugar House Flake

**Report Date:** 04/13/17  
**Collection Date:** 03/28/17 11:15  
**DateReceived:** 03/28/17  
**Matrix:** Solid

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>METALS, TOTAL - EPA SW846</b>							
Vanadium	ND	mg/kg		0.1		SW6020	04/01/17 06:00 / mas
Zinc	ND	mg/kg		1		SW6020	03/30/17 19:04 / mas
Mercury	ND	mg/kg		0.06		SW7471B	03/30/17 14:41 / jh

**Report Definitions:** RL - Analyte reporting limit.  
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MCL - Maximum contaminant level.  
ND - Not detected at the reporting limit.