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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 **Report Date:** 04/13/17 Project: Certificate of Analysis **Collection Date:** 03/28/17 11:12 Lab ID: B17032155-002 DateReceived: 03/28/17 Client Sample ID: Disintegrating Matrix: Solid

WATER EXTRACTABLE CONSTITUENTS	Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
### WATER EXTRACTABLE CONSTITUENTS Chloride, 1:2 3 mg/kg 1 E300.0 04/04/17 22:47 / c/m ### CHEMICAL CHARACTERISTICS Carbon, Total 0.04 wt% 0.0.01 Leco 04/03/17 15:31 / srm Acidity, 1:2 9 mg/kg 1 E305.1 04/06/17 15:30 / bas Total Kjeldahl Nitrogen 56 mg/kg D 10 A\$A31-3 04/05/17 16:20 / ajm ### INORGANICS ### Sulfur, by loss on ignition 90.8 wt% 0.100 Calculation 04/03/17 11:15 / jmg ### METALS, TOTAL HF DIGESTION ### Silicon 3 wt% 1 SW6010B 04/12/17 01:50 / rlh ### METALS, TOTAL - EPA SW846 ### Aluminum 609 mg/kg D 1 SW6010B 03/31/17 03:22 / rlh ### Aluminum 6.98 mg/kg 0.02 SW6020 03/30/17 19:02 / mas ### Barium 6.98 mg/kg 0.05 SW6020 03/30/17 19:02 / mas ### Barium 6.98 mg/kg 0.05 SW6020 03/30/17 19:02 / mas ### Beryllium 0.09 mg/kg 0.06 SW6010B 03/31/17 03:22 / rlh ### Damping 0.05 SW6020 03/30/17 19:02 / mas ### Damping 0.0	PHYSICAL CHARACTERISTICS							
Chloride, 1:2 3 mg/kg 1 E300.0 04/04/17 22:47 / cjm CHEMICAL CHARACTERISTICS Carbon, Total 0.04 wt% 0.01 Leco 04/03/17 15:31 / srm Addity, 1:2 9 mg/kg 1 E305.1 04/06/17 15:30 / bas Total Kjeldahl Nitrogen 56 mg/kg D 10 ASA31-3 04/05/17 16:20 / ajm INORGANICS Sulfur, by loss on ignition 90.8 wt% 0.100 Calculation 04/03/17 11:15 / jmg METALS, TOTAL HF DIGESTION Silicon 3 wt% 1 SW6010B 04/12/17 01:50 / rlh METALS, TOTAL - EPA SW846 Aluminum 609 mg/kg D 1 SW6010B 03/31/17 03:22 / rlh Antimorpy 0.09 mg/kg 0.02 SW6020 03/30/17 19:02 / mas Barlum 6.98 mg/kg 0.05 SW6020 03/30/17 19:02 / mas Barlum 6.98 mg/kg 0.05 SW6020 03/30/17 19:02 / mas Beryllium 0.09 mg/kg 0.05 SW6010B 03/31/17 03:22 / rlh Cadmium ND mg/kg 0.05 SW6010B 03/31/17 03:22 / rlh Cadmium A42 mg/kg D 0.4 SW6010B 03/31/17 03:22 / rlh Cadmium 0.1 mg/kg 0.05 SW6020 03/30/17 19:02 / mas Calcium 442 mg/kg D 0.4 SW6010B 03/31/17 03:22 / rlh Chromium 0.1 mg/kg 0.05 SW6020 03/30/17 19:02 / mas Calcium 42 mg/kg D 0.5 SW6010B 03/31/17 03:22 / rlh Chromium 0.1 mg/kg 0.05 SW6020 03/30/17 19:02 / mas Capper 0.9 mg/kg 0.05 SW6020 03/30/17 19:02 / mas Copper 0.9 mg/kg 0.05 SW6020 03/30/17 19:02 / mas Copper 0.9 mg/kg 0.05 SW6020 03/30/17 19:02 / mas Copper 0.9 mg/kg 0.05 SW6020 03/30/17 19:02 / mas Copper 0.9 mg/kg 0.05 SW6020 03/30/17 19:02 / mas Copper 0.9 mg/kg 0.05 SW6020 03/30/17 19:02 / mas Copper 0.9 mg/kg 0.05 SW6020 03/30/17 19:02 / mas Copper 0.9 mg/kg 0.05 SW6020 03/30/17 19:02 / mas Copper 0.9 mg/kg 0.05 SW6020 03/30/17 19:02 / mas Copper 0.9 mg/kg 0.05 SW6020 03/30/17 19:02 / mas Copper 0.9 mg/kg 0.05 SW6020 03/30/17 19:02 / mas Copper 0.9 mg/kg 0.05 SW6020 03/30/17 19:02 / mas Copper 0.9 mg/kg 0.05 SW6020 03/30/17 19:02 / mas Copper 0.9 mg/kg 0.05 SW6020 03/30/17 19:02 / mas Copper 0.9 mg/kg 0.05 SW6020 03/30/17 19:02 / mas Copper 0.9 mg/kg 0.05 SW6020 03/30/17 19:02 / mas Copper 0.9 mg/kg 0.05 SW6020 03/30/17 19:02 / mas Copper 0.9 mg/kg 0.05 SW6020 03/30/17 19:02 / mas Copper 0.9 mg/kg 0.05 SW6020 03/30/17 19:02 / m	Ash	9.21	wt%		0.01		D2974	04/03/17 11:15 / jmg
Chloride, 1:2 3 mg/kg 1 E300.0 04/04/17 22:47 / cjm CHEMICAL CHARACTERISTICS Carbon, Total 0.04 wt% 0.01 Leco 04/03/17 15:31 / srm Addity, 1:2 9 mg/kg 1 E305.1 04/06/17 15:30 / bas Total Kjeldahl Nitrogen 56 mg/kg D 10 ASA31-3 04/05/17 16:20 / ajm INORGANICS Sulfur, by loss on ignition 90.8 wt% 0.100 Calculation 04/03/17 11:15 / jmg METALS, TOTAL HF DIGESTION Silicon 3 wt% 1 SW6010B 04/12/17 01:50 / rlh METALS, TOTAL - EPA SW846 Aluminum 609 mg/kg D 1 SW6010B 03/31/17 03:22 / rlh Antimorpy 0.09 mg/kg 0.02 SW6020 03/30/17 19:02 / mas Barlum 6.98 mg/kg 0.05 SW6020 03/30/17 19:02 / mas Barlum 6.98 mg/kg 0.05 SW6020 03/30/17 19:02 / mas Beryllium 0.09 mg/kg 0.05 SW6010B 03/31/17 03:22 / rlh Cadmium ND mg/kg 0.05 SW6010B 03/31/17 03:22 / rlh Cadmium A42 mg/kg D 0.4 SW6010B 03/31/17 03:22 / rlh Cadmium 0.1 mg/kg 0.05 SW6020 03/30/17 19:02 / mas Calcium 442 mg/kg D 0.4 SW6010B 03/31/17 03:22 / rlh Chromium 0.1 mg/kg 0.05 SW6020 03/30/17 19:02 / mas Calcium 42 mg/kg D 0.5 SW6010B 03/31/17 03:22 / rlh Chromium 0.1 mg/kg 0.05 SW6020 03/30/17 19:02 / mas Capper 0.9 mg/kg 0.05 SW6020 03/30/17 19:02 / mas Copper 0.9 mg/kg 0.05 SW6020 03/30/17 19:02 / mas Copper 0.9 mg/kg 0.05 SW6020 03/30/17 19:02 / mas Copper 0.9 mg/kg 0.05 SW6020 03/30/17 19:02 / mas Copper 0.9 mg/kg 0.05 SW6020 03/30/17 19:02 / mas Copper 0.9 mg/kg 0.05 SW6020 03/30/17 19:02 / mas Copper 0.9 mg/kg 0.05 SW6020 03/30/17 19:02 / mas Copper 0.9 mg/kg 0.05 SW6020 03/30/17 19:02 / mas Copper 0.9 mg/kg 0.05 SW6020 03/30/17 19:02 / mas Copper 0.9 mg/kg 0.05 SW6020 03/30/17 19:02 / mas Copper 0.9 mg/kg 0.05 SW6020 03/30/17 19:02 / mas Copper 0.9 mg/kg 0.05 SW6020 03/30/17 19:02 / mas Copper 0.9 mg/kg 0.05 SW6020 03/30/17 19:02 / mas Copper 0.9 mg/kg 0.05 SW6020 03/30/17 19:02 / mas Copper 0.9 mg/kg 0.05 SW6020 03/30/17 19:02 / mas Copper 0.9 mg/kg 0.05 SW6020 03/30/17 19:02 / mas Copper 0.9 mg/kg 0.05 SW6020 03/30/17 19:02 / mas Copper 0.9 mg/kg 0.05 SW6020 03/30/17 19:02 / mas Copper 0.9 mg/kg 0.05 SW6020 03/30/17 19:02 / m	WATER EXTRACTABLE CONSTITUENTS							
Carbon, Total 0.04 wt% 0.01 Leco 04/03/17 15:31 / srm Acidity, 1:2 9 mg/kg 1 E305.1 04/06/17 15:30 / bas Total Kjeldahl Nitrogen 56 mg/kg D 10 ASA31-3 04/05/17 16:20 / ajm INORGANICS Sulfur, by loss on ignition 90.8 wt% 0.100 Calculation 04/03/17 11:15 / jmg METALS, TOTAL HF DIGESTION Silicon 3 wt% 1 SW6010B 04/12/17 01:50 / rlh METALS, TOTAL - EPA SW846 Alluminum 609 mg/kg D 1 SW6010B 03/31/17 03:22 / rlh Alluminum 609 mg/kg 0.02 SW6020 03/30/17 19:02 / mas Arsenic ND mg/kg 0.02 SW6020 03/30/17 19:02 / mas Barium 6.98 mg/kg 0.05 SW6020 03/30/17 19:02 / mas Beryllium 0.09 mg/kg 0.05 SW6020 03/31/17 03:22 / rlh Cadmium ND	Chloride, 1:2	3	mg/kg		1		E300.0	04/04/17 22:47 / cjm
Acidity, 1:2 9 mg/kg 1 E305.1 04/06/17 15:30 / bas Total Kjeldahl Nitrogen 56 mg/kg D 10 ASA31-3 04/06/17 16:20 / ajm NINORGANICS SUlfur, by loss on ignition 90.8 wf% 0.100 Calculation 04/03/17 11:15 / jmg METALS, TOTAL HF DIGESTION Silicon 3 wf% 1 SW6010B 04/12/17 01:50 / rlh METALS, TOTAL - EPA SW846 Aluminum 609 mg/kg D 1 SW6010B 03/31/17 03:22 / rlh Antimony 0.09 mg/kg 0.02 SW6020 03/30/17 19:02 / mas Arsenic ND mg/kg 0.05 SW6020 03/30/17 19:02 / mas Barium 6.98 mg/kg 0.05 SW6020 03/30/17 19:02 / mas Beryllium 0.09 mg/kg 0.05 SW6020 03/30/17 19:02 / rlh Seryllium 0.09 mg/kg 0.05 SW6020 03/30/17 19:02 / rlh Seryllium 0.10 mg/kg 0.05 SW6020 03/30/17 19:02 / rlh Seryllium 0.10 mg/kg 0.05 SW6020 03/30/17 19:02 / rlh Seryllium 0.10 mg/kg 0.05 SW6020 03/30/17 19:02 / rlh Seryllium 0.10 mg/kg 0.05 SW6020 03/30/17 19:02 / rlh Seryllium 0.10 mg/kg 0.05 SW6020 03/30/17 19:02 / rlh Seryllium 0.10 mg/kg 0.05 SW6020 03/30/17 19:02 / rlh Seryllium 0.10 mg/kg 0.05 SW6020 03/30/17 19:02 / rlh Seryllium 0.11 mg/kg 0.05 SW6020 03/30/17 19:02 / rlh Seryllium 0.11 mg/kg 0.05 SW6020 03/30/17 19:02 / rlh Seryllium 0.11 mg/kg 0.05 SW6020 03/30/17 19:02 / rlh Seryllium 0.11 mg/kg 0.05 SW6020 03/30/17 19:02 / rlh Seryllium 0.11 mg/kg 0.05 SW6020 03/30/17 19:02 / rlh Seryllium 0.11 mg/kg 0.05 SW6020 03/30/17 19:02 / rlh Seryllium 0.11 mg/kg 0.05 SW6020 03/30/17 19:02 / rlh Seryllium 0.12 mg/kg 0.05 SW6020 03/30/17 19:02 / rlh Seryllium 0.12 mg/kg 0.05 SW6020 03/30/17 19:02 / rlh Seryllium 0.12 mg/kg 0.05 SW6020 03/30/17 19:02 / rlh Seryllium 0.12 mg/kg 0.05 SW6020 03/30/17 19:02 / rlh Seryllium 0.12 mg/kg 0.05 SW6020 03/30/17 19:02 / rlh Seryllium 0.12 mg/kg 0.05 SW6020 03/30/17 19:02 / rlh Seryllium 0.12 mg/kg 0.05 SW6020 03/30/17 19:02 / rlh Seryllium 0.12 mg/kg 0.05 SW6020 03/30/17 19:02 / rlh Seryllium 0.12 mg/kg 0.05 SW6020 03/30/17 19:02 / rlh Seryllium 0.12 mg/kg 0.05 SW6020 03/30/17 19:02 / rlh Seryllium 0.12 mg/kg 0.05 SW6020 03/30/17 19:02 / rlh Seryllium 0.12 mg/kg 0.05 SW6020 03/30/17 19:02 / rlh Seryllium 0.12 mg/kg 0.	CHEMICAL CHARACTERISTICS							
NORGANICS Sulfur, by loss on ignition 90.8 wf% 0.100 Calculation 04/03/17 11:15 / jmg METALS, TOTAL HF DIGESTION 3 wf% 1 SW6010B 04/12/17 01:50 / rlh METALS, TOTAL - EPA SW846	Carbon, Total	0.04	wt%		0.01		Leco	04/03/17 15:31 / srm
NORGANICS Sulfur, by loss on ignition 90.8 wt% 0.100 Calculation 0.4/03/17 11:15 / jmg METALS, TOTAL HF DIGESTION Silicon 3 wt% 1 SW6010B 0.4/12/17 01:50 / rlh METALS, TOTAL - EPA SW846 Aluminum 609 mg/kg D 1 SW6010B 0.3/31/17 03:22 / rlh Antimony 0.09 mg/kg 0.02 SW6020 0.3/30/17 19:02 / mas Arsenic ND mg/kg 0.02 SW6020 0.3/30/17 19:02 / mas Arsenic ND mg/kg 0.05 SW6020 0.3/30/17 19:02 / mas Surjum	Acidity, 1:2	9	mg/kg		1		E305.1	04/06/17 15:30 / bas
Sulfur, by loss on ignition 90.8 wt% 0.100 Calculation 04/03/17 11:15 / jmg	Total Kjeldahl Nitrogen	56	mg/kg	D	10		ASA31-3	04/05/17 16:20 / ajm
METALS, TOTAL HF DIGESTION Silicon 3 wt% 1 SW6010B 04/12/17 01:50 / rlh METALS, TOTAL - EPA SW846 Aluminum 609 mg/kg D 1 SW6010B 03/31/17 03:22 / rlh Antimony 0.09 mg/kg 0.02 SW6020 03/30/17 19:02 / mas Baryllium 0.09 mg/kg 0.05 SW6010B 03/31/17 03:22 / rlh Boryllium 0.09 mg/kg 0.05 SW6010B 03/31/17 03:22 / rlh Boryllium N mg/kg 0 0.4 SW6010B 03/31/17 03:22 / rlh Boryllium N mg/kg 0 0 0 0 0 0 0 0 0 0 0 0 0 0								

Report RL - Analyte reporting limit. **Definitions:** 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 ChemicalReport Date:04/13/17Project:Certificate of AnalysisCollection Date:03/28/17 11:12Lab ID:B17032155-002DateReceived:03/28/17Client Sample ID:DisintegratingMatrix:Solid

Analyses	Result Units	Qualifiers RL	MCL/ QCL Method	Analysis Date / By
METALS, TOTAL - EPA SW846				
Vanadium	0.2 mg/kg	0.1	SW6020	04/01/17 05:56 / mas
Zinc	3 mg/kg	1	SW6020	03/30/17 19:02 / mas
Mercury	ND mg/kg	0.06	SW7471B	03/30/17 14:39 / jh

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.