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ANALYTICAL SUMMARY REPORT

August 02, 2018

Adamas Construction
16550 Cottontail Trail
Shepherd, MT 59079-3008

Work Order: B18072386

Project Name: Lame Deer Lagoon Sludge Remove

Energy Laboratories Inc Billings MT received the following 2 samples for Adamas Construction on 7/26/2018 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
B18072386-001	Soil Sample	07/26/18 11:32	07/26/18	Soil	Moisture Nitrate as N, KCL Extract pH, Saturated Paste Phosphorus-Olsen Saturated Paste Extraction ASA
B18072386-002	Sludge Sample	07/26/18 14:45	07/26/18	Sludge	Metals by ICP/ICPMS, Total or Soluble Bacteria, Fecal Coliform - MPN Mercury in Solid By CVAA Moisture Ammonia as N, KCL Extract Nitrate as N, KCL Extract Total Kjeldahl Nitrogen Percent Moisture Total Metals Digestion by SW3050B Mercury Digestion by SW7471B Solids Content

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:


Technical Data Reviewer

Digitally signed by
Jillian B. Miller
Date: 2018.08.02 17:14:23 -06:00



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LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Adamas Construction
Project: Lame Deer Lagoon Sludge Remove
Lab ID: B18072386-001
Client Sample ID: Soil Sample

Report Date: 08/02/18
Collection Date: 07/26/18 11:32
Date Received: 07/26/18
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture (As Received)	10.4	wt%		0.2		D2974	07/30/18 07:41 / srm
SATURATED PASTE EXTRACT							
pH, sat. paste	7.3	s.u.		0.1		ASA10-3	07/31/18 08:17 / srm
CHEMICAL CHARACTERISTICS							
Phosphorus, Olsen	8	mg/kg		1		ASA24-5	08/01/18 08:36 / srm
Nitrate as N, KCL Extract	6	mg/kg		1		ASA33-8	08/01/18 09:52 / srm

Report
Definitions: RL - Analyte reporting limit.
QCL - Quality control limit.

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



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LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Adamas Construction
Project: Lame Deer Lagoon Sludge Remove
Lab ID: B18072386-002
Client Sample ID: Sludge Sample

Report Date: 08/02/18
Collection Date: 07/26/18 14:45
Date Received: 07/26/18
Matrix: Sludge

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MICROBIOLOGICAL							
Bacteria, Fecal Coliform, as Received	1100	mpn/g		2		A9221 E	07/26/18 16:54 / jh
Bacteria, Fecal Coliform, Dry Basis	28000	mpn/g		2		A9221 E	07/26/18 16:54 / jh
PHYSICAL CHARACTERISTICS							
Moisture	96.0	wt%		0.20		A2540 G	07/31/18 11:24 / ptz
Solids, Total	3.96	wt%		0.01		A2540 G	07/31/18 11:24 / ptz
CHEMICAL CHARACTERISTICS							
Ammonia as N, KCL Extract	1950	mg/kg-dry		200		ASA33-7	08/01/18 09:56 / srm
Nitrate as N, KCL Extract	ND	mg/kg-dry		30		ASA33-8	08/01/18 09:58 / srm
Total Kjeldahl Nitrogen	19800	mg/kg-dry		300		ASA31-3	08/01/18 14:04 / srm
METALS, TOTAL - EPA SW846							
Arsenic	ND	mg/kg-dry		6		SW6020	07/30/18 22:31 / car
Cadmium	1.4	mg/kg-dry		0.5		SW6020	07/30/18 22:31 / car
Chromium	25	mg/kg-dry		20		SW6020	07/30/18 22:31 / car
Copper	334	mg/kg-dry		3		SW6020	07/30/18 22:31 / car
Lead	29	mg/kg-dry		4		SW6020	07/30/18 22:31 / car
Mercury	7.2	mg/kg-dry		0.2		SW7471B	08/02/18 15:37 / jag
Molybdenum	16.1	mg/kg-dry		0.5		SW6020	07/30/18 22:31 / car
Nickel	18	mg/kg-dry		3		SW6020	07/30/18 22:31 / car
Selenium	13	mg/kg-dry		10		SW6020	07/30/18 22:31 / car
Zinc	592	mg/kg-dry		6		SW6020	07/30/18 22:31 / car

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QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Adamas Construction

Report Date: 08/02/18

Project: Lame Deer Lagoon Sludge Remove

Work Order: B18072386

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 G										Batch: R304812
Lab ID: B18071962-001A DUP	Sample Duplicate					Run: BAL HZW1_180731C				07/31/18 11:24
Moisture		2.62	wt%	0.20						
Lab ID: B18071962-001A DUP	Sample Duplicate					Run: BAL HZW1_180731C				07/31/18 11:24
Solids, Total		97.4	wt%	0.01				0.2	10	
Lab ID: B18072636-001A DUP	Sample Duplicate					Run: BAL HZW1_180731C				07/31/18 11:24
Solids, Total		86.2	wt%	0.01				0.1	10	
Lab ID: MBLK_MOISTHZW18	Method Blank					Run: BAL HZW1_180731C				07/31/18 11:24
Solids, Total		0.02	wt%	0.01						

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QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Adamas Construction

Report Date: 08/02/18

Project: Lame Deer Lagoon Sludge Remove

Work Order: B18072386

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW6020						Analytical Run: ICPMS207-B_180730B				
Lab ID: ICSA	9	Interference Check Sample A								07/30/18 17:55
Arsenic		-0.000109	mg/L	0.0010						
Cadmium		0.0000586	mg/L	0.0010						
Chromium		0.00102	mg/L	0.0010						
Copper		0.000137	mg/L	0.0010						
Lead		0.0000250	mg/L	0.0010						
Molybdenum		0.778	mg/L	0.0010	97	80	120			
Nickel		0.0000331	mg/L	0.0010						
Selenium		0.000294	mg/L	0.0010						
Zinc		0.000294	mg/L	0.0027						
Lab ID: ICSAB	9	Interference Check Sample AB								07/30/18 17:59
Arsenic		0.00990	mg/L	0.0010	99	70	130			
Cadmium		0.00979	mg/L	0.0010	98	70	130			
Chromium		0.0203	mg/L	0.0010	102	70	130			
Copper		0.0193	mg/L	0.0010	96	70	130			
Lead		0.000224	mg/L	0.0010						
Molybdenum		0.803	mg/L	0.0010	100	70	130			
Nickel		0.0200	mg/L	0.0010	100	70	130			
Selenium		0.0101	mg/L	0.0010	101	70	130			
Zinc		0.0105	mg/L	0.0027	105	70	130			
Lab ID: QCS	9	Initial Calibration Verification Standard								07/30/18 17:17
Arsenic		0.0510	mg/L	0.0010	102	90	110			
Cadmium		0.0253	mg/L	0.0010	101	90	110			
Chromium		0.0500	mg/L	0.0010	100	90	110			
Copper		0.0513	mg/L	0.0010	103	90	110			
Lead		0.0502	mg/L	0.0010	100	90	110			
Molybdenum		0.0494	mg/L	0.0010	99	90	110			
Nickel		0.0509	mg/L	0.0010	102	90	110			
Selenium		0.0494	mg/L	0.0010	99	90	110			
Zinc		0.0512	mg/L	0.0027	102	90	110			
Method: SW6020						Batch: 123858				
Lab ID: MB-123858	9	Method Blank								07/30/18 21:31
Run: ICPMS207-B_180730B										
Arsenic		ND	mg/kg	0.3						
Cadmium		ND	mg/kg	0.01						
Chromium		ND	mg/kg	0.10						
Copper		ND	mg/kg	0.2						
Lead		ND	mg/kg	0.2						
Molybdenum		0.05	mg/kg	0.02						
Nickel		ND	mg/kg	0.2						
Selenium		ND	mg/kg	0.5						
Zinc		0.3	mg/kg	0.3						

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QA/QC Summary Report

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Client: Adamas Construction

Report Date: 08/02/18

Project: Lame Deer Lagoon Sludge Remove

Work Order: B18072386

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW6020										Batch: 123858
Lab ID: B18071109-023ADIL	9	Serial Dilution				Run: ICPMS207-B_180730B				07/30/18 22:39
Arsenic		20.0	mg/kg-dry	4.2					10	N
Cadmium		1.93	mg/kg-dry	1.0				3.1	10	
Chromium		4290	mg/kg-dry	1.3				13	10	R
Copper		89.5	mg/kg-dry	2.4				9.2	10	
Lead		1130	mg/kg-dry	2.9				0.5	10	
Molybdenum		10.9	mg/kg-dry	1.0				2.5	10	
Nickel		30.9	mg/kg-dry	2.1				7.4	10	
Selenium		29.4	mg/kg-dry	6.7					10	N
Zinc		199	mg/kg-dry	4.1				12	10	R
Lab ID: B18071109-023APDS1	9	Post Digestion/Distillation Spike				Run: ICPMS207-B_180730B				07/30/18 22:43
Arsenic		24.1	mg/kg-dry	1.0	82	75	125			
Cadmium		8.16	mg/kg-dry	1.0	93	75	125			
Chromium		3880	mg/kg-dry	1.0		75	125			A
Copper		82.9	mg/kg-dry	1.0		75	125			A
Lead		1120	mg/kg-dry	1.0		75	125			A
Molybdenum		17.7	mg/kg-dry	1.0	96	75	125			
Nickel		33.4	mg/kg-dry	1.0		75	125			A
Selenium		32.1	mg/kg-dry	1.4		75	125			A
Zinc		172	mg/kg-dry	1.0		75	125			A
Lab ID: B18071109-023AMS3	9	Sample Matrix Spike				Run: ICPMS207-B_180730B				07/30/18 22:47
Arsenic		141	mg/kg-dry	4.0	97	75	125			
Cadmium		59.2	mg/kg-dry	1.0	92	75	125			
Chromium		4190	mg/kg-dry	1.2		75	125			A
Copper		203	mg/kg-dry	2.3	97	75	125			
Lead		1220	mg/kg-dry	2.8		75	125			A
Molybdenum		123	mg/kg-dry	1.0	89	75	125			
Nickel		150	mg/kg-dry	2.0	97	75	125			
Selenium		147	mg/kg-dry	6.4	96	75	125			
Zinc		295	mg/kg-dry	3.9	94	75	125			
Lab ID: B18071109-023AMSD	9	Sample Matrix Spike Duplicate				Run: ICPMS207-B_180730B				07/30/18 22:51
Arsenic		149	mg/kg-dry	4.0	104	75	125	5.7	20	
Cadmium		63.7	mg/kg-dry	1.0	99	75	125	7.3	20	
Chromium		4390	mg/kg-dry	1.2		75	125	4.6	20	A
Copper		216	mg/kg-dry	2.3	107	75	125	6.0	20	
Lead		1280	mg/kg-dry	2.8		75	125	4.7	20	A
Molybdenum		132	mg/kg-dry	1.0	96	75	125	6.9	20	
Nickel		157	mg/kg-dry	2.0	102	75	125	4.2	20	
Selenium		154	mg/kg-dry	6.4	101	75	125	4.5	20	
Zinc		312	mg/kg-dry	3.9	108	75	125	5.6	20	
Lab ID: SRM3-123858	9	Standard Reference Material				Run: ICPMS207-B_180730B				07/30/18 22:55
Arsenic		184	mg/kg	1.6	94	71	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

N - The analyte concentration was not sufficiently high to calculate a RPD for the serial dilution test.



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QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Adamas Construction

Report Date: 08/02/18

Project: Lame Deer Lagoon Sludge Remove

Work Order: B18072386

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW6020										Batch: 123858
Lab ID: SRM3-123858										
	9	Standard Reference Material				Run: ICPMS207-B_180730B			07/30/18 22:55	
Cadmium		104	mg/kg	1.0	105	73.2	120			
Chromium		115	mg/kg	1.0	98	73	120			
Copper		139	mg/kg	1.0	101	76	120			
Lead		109	mg/kg	1.1	103	74	120			
Molybdenum		119	mg/kg	1.0	94	66	120			
Nickel		88.7	mg/kg	1.0	103	72	120			
Selenium		207	mg/kg	2.5	101	71	120			
Zinc		264	mg/kg	1.5	114	65	120			

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QA/QC Summary Report

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Client: Adamas Construction

Report Date: 08/02/18

Project: Lame Deer Lagoon Sludge Remove

Work Order: B18072386

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	SW7471B								Analytical Run: HGCV202-B_180802A		
Lab ID:	ICV	Initial Calibration Verification Standard								08/02/18 14:42	
Mercury		0.00200	mg/kg		1.0	100	90	110			
Method:	SW7471B								Batch: 123944		
Lab ID:	MB-123944	Method Blank					Run: HGCV202-B_180802A			08/02/18 14:47	
Mercury		ND	mg/kg		0.005						
Lab ID:	LCS3-123944	Laboratory Control Sample					Run: HGCV202-B_180802A			08/02/18 14:49	
Mercury		0.219	mg/kg		1.0	110	80	120			
Lab ID:	B18072618-001ADIL	Serial Dilution					Run: HGCV202-B_180802A			08/02/18 14:59	
Mercury		0.0759	mg/kg-dry		1.0					10	
Lab ID:	B18072618-001AMS3	Sample Matrix Spike					Run: HGCV202-B_180802A			08/02/18 15:01	
Mercury		0.297	mg/kg-dry		1.0	106	80	120			
Lab ID:	B18072618-001AMSD	Sample Matrix Spike Duplicate					Run: HGCV202-B_180802A			08/02/18 15:03	
Mercury		0.300	mg/kg-dry		1.0	106	80	120		20	

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QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Adamas Construction

Report Date: 08/01/18

Project: Lame Deer Lagoon Sludge Remove

Work Order: B18072386

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASA10-3									Batch: 123905
Lab ID: LCS-R304729	Laboratory Control Sample				Run: MISC-SOIL_180731A				07/31/18 08:17
pH, sat. paste	7.00	s.u.	0.10	93	90	110			
Lab ID: B18072386-001A DUP	Sample Duplicate				Run: MISC-SOIL_180731A				07/31/18 08:17
pH, sat. paste	7.40	s.u.	0.10				1.4	10	

Qualifiers:

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QA/QC Summary Report

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Client: Adamas Construction

Report Date: 08/01/18

Project: Lame Deer Lagoon Sludge Remove

Work Order: B18072386

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASA24-5							Batch: OM_8-1-2018_08-28-40AM		
Lab ID: LCS	Laboratory Control Sample				Run: FIA205-B_180801A			08/01/18 08:31	
Phosphorus, Olsen	46	mg/kg	1.0	104	70	130			
Lab ID: B18072386-001ADUP	Sample Duplicate				Run: FIA205-B_180801A			08/01/18 08:38	
Phosphorus, Olsen	7.3	mg/kg	1.0				4.5	30	
Lab ID: B18072386-001AMS	Sample Matrix Spike				Run: FIA205-B_180801A			08/01/18 08:40	
Phosphorus, Olsen	19	mg/kg	1.0	109	70	130			

Qualifiers:

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Project: Lame Deer Lagoon Sludge Remove

Work Order: B18072386

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASA31-3							Batch: R304872		
Lab ID: B18072386-002A DUP	Sample Duplicate				Run: MISC-SOIL_180801A		08/01/18 14:04		
Total Kjeldahl Nitrogen	21200	mg/kg-dry	250				6.9	30	
Lab ID: LCS-1808011404	Laboratory Control Sample				Run: MISC-SOIL_180801A		08/01/18 14:04		
Total Kjeldahl Nitrogen	504	mg/kg	10	86	50	150			
Lab ID: B18072386-002A MS	Sample Matrix Spike				Run: MISC-SOIL_180801A		08/01/18 14:07		
Total Kjeldahl Nitrogen	90500	mg/kg-dry	250	70	70	130			

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Report Date: 08/01/18

Project: Lame Deer Lagoon Sludge Remove

Work Order: B18072386

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASA33-7							Batch: OM_8-1-2018_09-47-55AM		
Lab ID: LCS	Laboratory Control Sample				Run: FIA205-B_180801A				08/01/18 09:49
Ammonia as N, KCL Extract	16.8	mg/kg	1.0	83	70	130			
Lab ID: B18072386-002ADUP	Sample Duplicate				Run: FIA205-B_180801A				08/01/18 09:56
Ammonia as N, KCL Extract	2000	mg/kg-dry	150				2.3	30	
Lab ID: B18072386-002AMS	Sample Matrix Spike				Run: FIA205-B_180801A				08/01/18 09:57
Ammonia as N, KCL Extract	3500	mg/kg-dry	160	97	70	130			

Qualifiers:

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QA/QC Summary Report

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Client: Adamas Construction

Report Date: 08/01/18

Project: Lame Deer Lagoon Sludge Remove

Work Order: B18072386

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASA33-8							Batch: OM_8-1-2018_09-47-55AM		
Lab ID: LCS	Laboratory Control Sample				Run: FIA205-B_180801A			08/01/18 09:49	
Nitrate as N, KCL Extract	10.7	mg/kg	1.0	98	70	130			
Lab ID: B18072386-002ADUP	Sample Duplicate				Run: FIA205-B_180801A			08/01/18 09:59	
Nitrate as N, KCL Extract	ND	mg/kg-dry	25					30	
Lab ID: B18072386-002AMS	Sample Matrix Spike				Run: FIA205-B_180801A			08/01/18 10:00	
Nitrate as N, KCL Extract	289	mg/kg-dry	26	109	70	130			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



Work Order Receipt Checklist

Adamas Construction

B18072386

Login completed by: Tabitha Edwards

Date Received: 7/26/2018

Reviewed by: BL2000\iraschim

Received by: snk

Reviewed Date: 7/31/2018

Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☒
Custody seals intact on all 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? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☒	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☐	No ☒	Not Applicable ☐
Container/Temp Blank temperature:	°C On Ice		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☒
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☒

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

The temperature of the sample(s) for shipping container 1 was 30.8°C and the Temperature Blank temperature for shipping container 2 was 1.0°C.



Trust our People. Trust our Data.

Chain of Custody & Analytical Request Record

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Page ____ of ____

Account Information (Billing information)

Company/Name <u>Adamas Construction</u>		
Contact <u>Nathan Pierce</u>		
Phone <u>406-697-3022</u>		
Mailing Address		
City, State, Zip		
Email <u>Adamas.MT.106@gmail.com</u>		
Receive Invoice ☐ Hard Copy ☒ Email	Receive Report ☐ Hard Copy ☒ Email	
Purchase Order	Quote	Bottle Order

Report Information (if different than Account Information)

Company/Name <u>Adamas Construction</u>		
Contact <u>Nathan Pierce</u>		
Phone <u>406-697-3022</u>		
Mailing Address		
City, State, Zip		
Email <u>Adamas.MT.106@gmail.com</u>		
Receive Report ☐ Hard Copy ☒ Email		
Special Report/Formats:		
☐ LEVEL IV ☐ NELAC ☐ EDD/EDT (contact laboratory) ☐ Other		

Comments

Project Information

Project Name, PWSID, Permit, etc. <u>Lame Deer Lagoon Sludge Removal</u>	
Sampler Name <u>LD Sludge Removal</u>	Sampler Phone <u>406-697-3022</u>
Sample Origin State <u>MT</u>	EPA/State Compliance ☒ Yes ☐ No
MINING CLIENTS, please indicate sample type. *If ore has been processed or refined, call before sending. ☐ Byproduct 11 (e)2 material ☐ Unprocessed ore (NOT ground or refined)*	

Matrix Codes

- A - Air
- W - Water
- S - Soils/Solids
- V - Vegetation
- B - Bioassay
- O - Other
- DW - Drinking Water

Analysis Requested

See Attached

All turnaround times are standard unless marked as RUSH.

Energy Laboratories MUST be contacted prior to RUSH sample submittal for charges and scheduling - See Instructions Page

Sample Identification (Name, Location, Interval, etc.)		Collection		Number of Containers	Matrix (See Codes Above)											See Attached	RUSH TAT	ELI LAB ID (Labatory Use Only)
		Date	Time															
1	Soil Sample	7/26/18	11:32am													X	X	818072386-001
2	Sludge Sample	7/26/18	2:45pm													X	X	002
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		

Custody Record MUST be signed	Relinquished by (print) <u>Nathan Pierce</u>	Date/Time <u>7/26 16:47</u>	Signature 	Received by (print)	Date/Time	Signature
	Relinquished by (print)	Date/Time	Signature	Received by Laboratory (print)	Date/Time <u>7-26-18 11:47</u>	Signature
LABORATORY USE ONLY						
Shipped By	Cooler ID(s)	Custody Seals Y N C B	Intact Y N	Receipt Temp °C	Temp Blank Y N	On Ice Y N
Payment Type CC Cash Check			Amount \$	Receipt Number (cash/check only)		

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All subcontracted data will be clearly notated on your analytical report.

ELI-COC-12/16 v.1



Bioscience Resource Project

800 735 4489 888 735 0515
866 586 1115 977 472 0711

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Indian Health Service
Project: Lame Deer Lagoon

Report Date: 06/16/17

Lab ID: B17060708-001
Client Sample ID: 1-Pivot

Collection Date: 06/06/17 14:00

Date Received: 06/07/17

Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture (As Received)	12.1	wt%		0.2		D2974	06/12/17 00:00 / srm
SATURATED PASTE EXTRACT							
pH, sat. paste	8.2	s.u.		0.1		ASA10-3	06/16/17 13:13 / srm
CHEMICAL CHARACTERISTICS							
Phosphorus, Olsen	2	mg/kg		1		ASA24-5	06/16/17 11:04 / srm
Nitrate as N, KCL Extract	9	mg/kg		t		ASA33-8	06/15/17 13:36 / srm

Lab ID: B17060708-002
Client Sample ID: 2-Field

Collection Date: 06/06/17 14:20

Date Received: 06/07/17

Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture (As Received)	9.2	wt%		0.2		D2974	06/12/17 00:00 / srm
SATURATED PASTE EXTRACT							
pH, sat. paste	8.3	s.u.		0.1		ASA10-3	06/16/17 13:13 / srm
CHEMICAL CHARACTERISTICS							
Phosphorus, Olsen	2	mg/kg		1		ASA24-5	06/16/17 11:06 / srm
Nitrate as N, KCL Extract	ND	mg/kg		1		ASA33-8	06/15/17 13:37 / srm

Lab ID: B17060708-003
Client Sample ID: 3-Field

Collection Date: 06/06/17 14:30

Date Received: 06/07/17

Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture (As Received)	13.6	wt%		0.2		D2974	06/12/17 00:00 / srm
SATURATED PASTE EXTRACT							
pH, sat. paste	8.4	s.u.		0.1		ASA10-3	06/16/17 13:13 / srm
CHEMICAL CHARACTERISTICS							
Phosphorus, Olsen	4	mg/kg		1		ASA24-5	06/16/17 11:08 / srm
Nitrate as N, KCL Extract	5	mg/kg		1		ASA33-8	06/15/17 13:37 / srm

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



LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Indian Health Service
 Project: Lame Deer Lagoon
 Lab ID: B17060160-008
 Client Sample ID: 503-1

Report Date: 06/13/17
 Collection Date: 06/01/17 15:00
 Date Received: 06/01/17
 Matrix: Sludge

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MICROBIOLOGICAL							
Bacteria, Fecal Coliform, as Received	260	mpn/g		2		A9221 E	06/02/17 09:58 / fap
Bacteria, Fecal Coliform, Dry Basis	4244	mpn/g		2		A9221 E	06/02/17 09:58 / fap
PHYSICAL CHARACTERISTICS							
Moisture	93.9	wt%		0.20		A2540 G	06/02/17 11:35 / dah
Solids, Total	6.13	wt%		0.01		A2540 G	06/02/17 11:35 / dah
CHEMICAL CHARACTERISTICS							
Ammonia as N, KCL Extract	1410	mg/kg-dry		20		ASA33-7	06/07/17 11:57 / srm
Nitrate as N, KCL Extract	ND	mg/kg-dry		20		ASA33-8	06/07/17 11:57 / srm
Total Kjeldahl Nitrogen	21000	mg/kg-dry		200		ASA31-3	06/07/17 13:52 / srm
METALS, TOTAL - EPA SW846							
Arsenic	5.0	mg/kg-dry		0.5		SW8020	06/12/17 01:36 / jpv
Cadmium	2.4	mg/kg-dry		0.5		SW6020	06/12/17 01:36 / jpv
Chromium	23	mg/kg-dry		1		SW6020	06/12/17 01:36 / jpv
Copper	325	mg/kg-dry		2		SW6020	06/12/17 01:36 / jpv
Lead	19	mg/kg-dry		2		SW6020	06/12/17 01:36 / jpv
Mercury	1.0	mg/kg-dry		0.2		SW7471B	06/09/17 11:21 / jh
Molybdenum	14.5	mg/kg-dry		0.5		SW6020	06/12/17 01:36 / jpv
Nickel	18	mg/kg-dry		1		SW6020	06/12/17 01:36 / jpv
Selenium	13.2	mg/kg-dry		0.6		SW6020	06/12/17 01:36 / jpv
Zinc	545	mg/kg-dry		4		SW6020	06/12/17 01:36 / jpv

Report Definitions: RL - Analyte reporting limit.
 QCL - Quality control limit.

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