

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Phoenix

4625 East Cotton Ctr Blvd

Suite 189

Phoenix, AZ 85040

Tel: (602)437-3340

TestAmerica Job ID: 550-108258-1

Client Project/Site: Perlite Heavy Metals

For:

Wilkin Mining and Trucking Inc.

HC 34 Box 199

Panaca, Nevada 89042

Attn: Amy Sonnenberg



Authorized for release by:

8/30/2018 9:47:31 AM

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: Wilkin Mining and Trucking Inc.
Project/Site: Perlite Heavy Metals

TestAmerica Job ID: 550-108258-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Wilkin Mining and Trucking Inc.
Project/Site: Perlite Heavy Metals

TestAmerica Job ID: 550-108258-1

Job ID: 550-108258-1

Laboratory: TestAmerica Phoenix

Narrative

Job Narrative
550-108258-1

Comments

No additional comments.

Receipt

The sample was received on 8/20/2018 7:00 AM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 27.1° C.

Receipt Exceptions

The Chain-of-Custody (COC) was incomplete as received and did not list the required method.

Metals

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

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Sample Summary

Client: Wilkin Mining and Trucking Inc.
Project/Site: Perlite Heavy Metals

TestAmerica Job ID: 550-108258-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
550-108258-1	Expanded Perlite	Solid	08/16/18 08:00	08/20/18 07:00

- 1
- 2
- 3
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- 10
- 11
- 12
- 13
- 14

Detection Summary

Client: Wilkin Mining and Trucking Inc.
Project/Site: Perlite Heavy Metals

TestAmerica Job ID: 550-108258-1

Client Sample ID: Expanded Perlite

Lab Sample ID: 550-108258-1

No Detections.

- 1
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- 14

This Detection Summary does not include radiochemical test results.

TestAmerica Phoenix

Client Sample Results

Client: Wilkin Mining and Trucking Inc.
 Project/Site: Perlite Heavy Metals

TestAmerica Job ID: 550-108258-1

Client Sample ID: Expanded Perlite

Lab Sample ID: 550-108258-1

Date Collected: 08/16/18 08:00

Matrix: Solid

Date Received: 08/20/18 07:00

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		3.0		mg/Kg		08/21/18 09:13	08/23/18 04:33	1
Cadmium	ND		0.50		mg/Kg		08/21/18 09:13	08/23/18 04:33	1
Lead	ND		0.99		mg/Kg		08/21/18 09:13	08/23/18 04:33	1
Nickel	ND		2.0		mg/Kg		08/21/18 09:13	08/23/18 04:33	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.056		mg/Kg		08/25/18 11:38	08/27/18 12:13	1



QC Sample Results

Client: Wilkin Mining and Trucking Inc.
Project/Site: Perlite Heavy Metals

TestAmerica Job ID: 550-108258-1

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 550-154579/1-A
Matrix: Solid
Analysis Batch: 154783

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 154579

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		3.0		mg/Kg		08/21/18 09:13	08/22/18 21:00	1
Cadmium	ND		0.50		mg/Kg		08/21/18 09:13	08/22/18 21:00	1
Lead	ND		0.99		mg/Kg		08/21/18 09:13	08/22/18 21:00	1
Nickel	ND		2.0		mg/Kg		08/21/18 09:13	08/22/18 21:00	1

Lab Sample ID: LCS 550-154579/2-A
Matrix: Solid
Analysis Batch: 154783

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 154579

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	49.6	46.2		mg/Kg		93	77 - 105
Cadmium	49.6	47.3		mg/Kg		95	82 - 104
Lead	49.6	48.8		mg/Kg		98	83 - 108
Nickel	49.6	48.9		mg/Kg		99	83 - 112

Lab Sample ID: LCSD 550-154579/3-A
Matrix: Solid
Analysis Batch: 154783

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 154579

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Arsenic	49.5	46.0		mg/Kg		93	77 - 105	0	20
Cadmium	49.5	47.1		mg/Kg		95	82 - 104	0	20
Lead	49.5	48.5		mg/Kg		98	83 - 108	1	20
Nickel	49.5	48.8		mg/Kg		99	83 - 112	0	20

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 550-155004/1-A
Matrix: Solid
Analysis Batch: 155112

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 155004

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.058		mg/Kg		08/25/18 11:38	08/27/18 11:59	1

Lab Sample ID: LCS 550-155004/2-A
Matrix: Solid
Analysis Batch: 155112

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 155004

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.983	0.995		mg/Kg		101	80 - 120

Lab Sample ID: LCSD 550-155004/3-A
Matrix: Solid
Analysis Batch: 155112

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 155004

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Mercury	0.945	0.979		mg/Kg		104	80 - 120	2	20

TestAmerica Phoenix

QC Association Summary

Client: Wilkin Mining and Trucking Inc.
Project/Site: Perlite Heavy Metals

TestAmerica Job ID: 550-108258-1

Metals

Prep Batch: 154579

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-108258-1	Expanded Perlite	Total/NA	Solid	3050B	
MB 550-154579/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 550-154579/2-A	Lab Control Sample	Total/NA	Solid	3050B	
LCSD 550-154579/3-A	Lab Control Sample Dup	Total/NA	Solid	3050B	

Analysis Batch: 154783

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 550-154579/1-A	Method Blank	Total/NA	Solid	6010C	154579
LCS 550-154579/2-A	Lab Control Sample	Total/NA	Solid	6010C	154579
LCSD 550-154579/3-A	Lab Control Sample Dup	Total/NA	Solid	6010C	154579

Analysis Batch: 154805

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-108258-1	Expanded Perlite	Total/NA	Solid	6010C	154579

Prep Batch: 155004

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-108258-1	Expanded Perlite	Total/NA	Solid	7471B	
MB 550-155004/1-A	Method Blank	Total/NA	Solid	7471B	
LCS 550-155004/2-A	Lab Control Sample	Total/NA	Solid	7471B	
LCSD 550-155004/3-A	Lab Control Sample Dup	Total/NA	Solid	7471B	

Analysis Batch: 155112

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-108258-1	Expanded Perlite	Total/NA	Solid	7471B	155004
MB 550-155004/1-A	Method Blank	Total/NA	Solid	7471B	155004
LCS 550-155004/2-A	Lab Control Sample	Total/NA	Solid	7471B	155004
LCSD 550-155004/3-A	Lab Control Sample Dup	Total/NA	Solid	7471B	155004

Lab Chronicle

Client: Wilkin Mining and Trucking Inc.
Project/Site: Perlite Heavy Metals

TestAmerica Job ID: 550-108258-1

Client Sample ID: Expanded Perlite

Lab Sample ID: 550-108258-1

Date Collected: 08/16/18 08:00

Matrix: Solid

Date Received: 08/20/18 07:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			154579	08/21/18 09:13	SGO	TAL PHX
Total/NA	Analysis	6010C		1	154805	08/23/18 04:33	ARE	TAL PHX
Total/NA	Prep	7471B			155004	08/25/18 11:38	JTG	TAL PHX
Total/NA	Analysis	7471B		1	155112	08/27/18 12:13	JTG	TAL PHX

Laboratory References:

TAL PHX = TestAmerica Phoenix, 4625 East Cotton Ctr Blvd, Suite 189, Phoenix, AZ 85040, TEL (602)437-3340

Method Summary

Client: Wilkin Mining and Trucking Inc.
Project/Site: Perlite Heavy Metals

TestAmerica Job ID: 550-108258-1

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL PHX
7471B	Mercury (CVAA)	SW846	TAL PHX
3050B	Preparation, Metals	SW846	TAL PHX
7471B	Preparation, Mercury	SW846	TAL PHX

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PHX = TestAmerica Phoenix, 4625 East Cotton Ctr Blvd, Suite 189, Phoenix, AZ 85040, TEL (602)437-3340



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 Phoenix, AZ 85040
 Phone (602) 437-3340 Fax (602) 454-9303

Chain of Custody Record

108258

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 THE LEADER IN ENVIRONMENTAL TESTING

Client Information		Client Contact IDKIN Mining & Trucking Inc. Ashel Young Company D & Billonville Rd. # 829 City: <u>Parma</u> State Zip: <u>NY 89043</u>	Sampler Ashel Young Phone: <u>775-963-3805</u> (cell)	Lab PM:	Carrier Tracking No(s):	COC No:			
Due Date Requested:		TAT Requested (days):	E-Mail:	Analysis Requested					
PO #:		W/O #:	Job #:						
Project Name: <u>perlite Heavy Metals</u>		Project #:	Preservation Codes:						
Site:		SSOW#:	A - HCL B - NaOH C - Zn Acetate D - Nitric Acid NaHSO4 leOH methler sorbic Acid 1 Water CTA 2A						
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=soil, BI=tissue, A=air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Total Number of	Special Instructions/Note:
XXXXXXXXXXXXXXXXXXXX									The heavy metals test needs to include the following metals: Arsenic, Cadmium, Lead, Mercury, & Nickel Needs to be reported in PPM.
<u>Test # 200,8-200,7</u>									
<u>Expanded Perlite</u>		<u>8-16-18</u>	<u>8 Am</u>	<u>10grams</u>					
Possible Hazard Identification		Deliverable Requested: I, II, III, IV, Other (specify)		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months			
Empty Kit Relinquished by:		Date:	Special Instructions/OC Requirements:		Method of Shipment:				
Reinquired by: <u>Ashel Young</u>		Date/Time:	Received by: <u>Rickel G. S...</u>		Date/Time: <u>7:55 8/20/18</u>				
Reinquired by: <u>Ashel Young</u>		Date/Time:	Received by: <u>Ashel Young</u>		Date/Time: <u>8/20/18 7:00</u>				
Custody Seals Intact: <u>USMails</u>		Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:		Company: <u>USPS</u>				



Login Sample Receipt Checklist

Client: Wilkin Mining and Trucking Inc.

Job Number: 550-108258-1

Login Number: 108258

List Source: TestAmerica Phoenix

List Number: 1

Creator: Gravlin, Andrea

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	False	Thermal preservation not required.
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Refer to Job Narrative for details.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	False	Check done at department level as required.