

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Canton

4101 Shuffel Street NW

North Canton, OH 44720

Tel: (330)497-9396

TestAmerica Job ID: 240-40204-1

Client Project/Site: Abandoned Mining Waste Torch Lake

For:

Michigan Dept of Environmental Quality

Constitution Hall

525 W. Allegan Street

Lansing, Michigan 48909

Attn: Amy Keranen



Authorized for release by:

8/8/2014 5:16:40 PM

Kris Brooks, Project Manager II

(330)966-9790

kris.brooks@testamericainc.com

LINKS

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www.testamericainc.com

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: Michigan Dept of Environmental Quality
Project/Site: Abandoned Mining Waste Torch Lake

TestAmerica Job ID: 240-40204-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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: Michigan Dept of Environmental Quality
Project/Site: Abandoned Mining Waste Torch Lake

TestAmerica Job ID: 240-40204-1

Job ID: 240-40204-1

Laboratory: TestAmerica Canton

Narrative

Job Narrative
240-40204-1

Comments

The Asbestos analysis was performed at the EMLab P&K Irvine laboratory.

Receipt

The samples were received on 8/1/2014 10:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 20.6° C.

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



Method Summary

Client: Michigan Dept of Environmental Quality
Project/Site: Abandoned Mining Waste Torch Lake

TestAmerica Job ID: 240-40204-1

Method	Method Description	Protocol	Laboratory
Local Method	General Sub Contract Method	NONE	EMLab

Protocol References:

NONE = NONE

Laboratory References:

EMLab = EMLab - Irvine, Bascom Airport Executive Suites, 17461 Derian Ave, Suite 100, Irvine, CA 92614

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Sample Summary

Client: Michigan Dept of Environmental Quality
Project/Site: Abandoned Mining Waste Torch Lake

TestAmerica Job ID: 240-40204-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-40204-1	CHLL-ASBBLK01-073114	Solid	07/31/14 13:15	08/01/14 10:30
240-40204-2	CHLL-ASBBLK02-073114	Solid	07/31/14 13:20	08/01/14 10:30
240-40204-3	CHLL-ASBBLK03-073114	Solid	07/31/14 13:25	08/01/14 10:30
240-40204-4	CHLL-ASBBLK04-073114	Solid	07/31/14 13:30	08/01/14 10:30
240-40204-5	CHLL-ASBBLK05-073114	Solid	07/31/14 13:35	08/01/14 10:30
240-40204-6	CHLL-ASBBLK06-073114	Solid	07/31/14 13:40	08/01/14 10:30

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Certification Summary

Client: Michigan Dept of Environmental Quality
 Project/Site: Abandoned Mining Waste Torch Lake

TestAmerica Job ID: 240-40204-1

Laboratory: TestAmerica Canton

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	NELAP	9	01144CA	06-30-14 *
California	State Program	9	2927	04-30-15
Connecticut	State Program	1	PH-0590	12-31-14
Florida	NELAP	4	E87225	06-30-15
Georgia	State Program	4	N/A	06-30-15
Illinois	NELAP	5	200004	07-31-15
Kansas	NELAP	7	E-10336	01-31-15
Kentucky (UST)	State Program	4	58	06-30-15
L-A-B	DoD ELAP		L2315	07-18-16
Minnesota	NELAP	5	039-999-348	12-31-14
Nevada	State Program	9	OH-000482008A	07-31-15
New Jersey	NELAP	2	OH001	06-30-15
New York	NELAP	2	10975	03-31-15
Ohio VAP	State Program	5	CL0024	10-31-15
Pennsylvania	NELAP	3	68-00340	08-31-14 *
Texas	NELAP	6		08-31-14 *
USDA	Federal		P330-13-00319	11-26-16
Virginia	NELAP	3	460175	09-14-14 *
Washington	State Program	10	C971	01-12-15
West Virginia DEP	State Program	3	210	12-31-14
Wisconsin	State Program	5	999518190	08-31-14 *

* Certification renewal pending - certification considered valid.



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Report for:

Ms. Kris Brooks
TestAmerica-Canton
4101 Shuffel Dr. NW
North Canton, OH 44720

Regarding: Project: 240-40204-1
EML ID: 1242717

Approved by:

Dates of Analysis:
Asbestos-EPA Method 600/R-93/116: 08-05-2014

Approved Signatory
Miguel Ines

Service SOPs: Asbestos-EPA Method 600/R-93/116 (EPA-600/M4-82-020 (SOP 01267))

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. The results relate only to the items tested. The results include an inherent uncertainty of measurement associated with estimating percentages by polarized light microscopy. Measurement uncertainty data for sample results with >1% asbestos concentration can be provided when requested.

EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

Client: TestAmerica-Canton
 C/O: Ms. Kris Brooks
 Re: 240-40204-1

Date of Sampling: 07-31-2014
 Date of Receipt: 08-05-2014
 Date of Report: 08-08-2014

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Total Samples Submitted: 6

Total Samples Analysed: 6

Total Samples with Layer Asbestos Content > 1%: 2

Location: CHLL-ASBBLK01-073114 (240-40204-1)

Lab ID-Version‡: 5654801-1

Sample Layers	Asbestos Content
Black Tar and Felt	ND
Black Tar and Felt	ND
Composite Non-Asbestos Content:	20% Cellulose 20% Glass Fibers
Sample Composite Homogeneity:	Good

Location: CHLL-ASBBLK02-073114 (240-40204-2)

Lab ID-Version‡: 5654802-1

Sample Layers	Asbestos Content
Black Roofing Shingle with Gray Stones	ND
Black Roofing Felt	ND
Black Roofing Felt	ND
Composite Non-Asbestos Content:	60% Cellulose
Sample Composite Homogeneity:	Good

Location: CHLL-ASBBLK03-073114 (240-40204-3)

Lab ID-Version‡: 5654803-1

Sample Layers	Asbestos Content
Black Tar and Felt	ND
Composite Non-Asbestos Content:	80% Cellulose
Sample Composite Homogeneity:	Good

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Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed. Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.

‡ A "Version" indicated by "-x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

Client: TestAmerica-Canton
 C/O: Ms. Kris Brooks
 Re: 240-40204-1

Date of Sampling: 07-31-2014
 Date of Receipt: 08-05-2014
 Date of Report: 08-08-2014

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: CHLL-ASBBLK04-073114 (240-40204-4)

Lab ID-Version‡: 5654804-1

Sample Layers	Asbestos Content
White Cementitious Material	ND
Sample Composite Homogeneity: Good	

Location: CHLL-ASBBLK05-073114 (240-40204-5)

Lab ID-Version‡: 5654805-1

Sample Layers	Asbestos Content
Gray Transite	15% Chrysotile
Sample Composite Homogeneity: Good	

Location: CHLL-ASBBLK06-073114 (240-40204-6)

Lab ID-Version‡: 5654806-1

Sample Layers	Asbestos Content
Black/White Tar Felt	70% Chrysotile
Sample Composite Homogeneity: Good	

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Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed. Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.

‡ A "Version" indicated by "-x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

CHAIN OF CUSTODY AND RECEIVING DOCUMENTS



240-40204 Chain of Custody

Canton Facility

Client Weston Site Name Torch Lane

Cooler unpacked by: [Signature]

Cooler Received on 8/1/14 Opened on 8/1/14

FedEx: 1st Grd Exp UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____

TestAmerica Cooler # _____ Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

- Cooler temperature upon receipt

IR GUN# A (CF +2 °C)	Observed Cooler Temp. _____ °C	Corrected Cooler Temp. _____ °C	
IR GUN# 4 (CF -2 °C)	Observed Cooler Temp. _____ °C	Corrected Cooler Temp. _____ °C	<input type="checkbox"/> See Multiple Cooler Form
IR GUN# 5 (CF 0 °C)	Observed Cooler Temp. _____ °C	Corrected Cooler Temp. _____ °C	
IR GUN# 8 (CF 0 °C)	Observed Cooler Temp. <u>20.6</u> °C	Corrected Cooler Temp. <u>20.6</u> °C	
- Were custody seals on the outside of the cooler(s)? If Yes Quantity _____ Yes No
 - Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA
 - Were custody seals on the bottle(s)? Yes No
- Shippers' packing slip attached to the cooler(s)? Yes No
- Did custody papers accompany the sample(s)? Yes No
- Were the custody papers relinquished & signed in the appropriate place? Yes No
- Did all bottles arrive in good condition (Unbroken)? Yes No
- Could all bottle labels be reconciled with the COC? Yes No
- Were correct bottle(s) used for the test(s) indicated? Yes No
- Sufficient quantity received to perform indicated analyses? Yes No
- Were sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC412469
- Were VOAs on the COC? Yes No
- Were air bubbles >6 mm in any VOA vials? Yes No NA
- Was a trip blank present in the cooler(s)? Yes No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____

Concerning _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by: [Signature]

No date on COC. Will log per bags as 7/31/14.

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

TestAmerica Canton
 4101 Sheffield Street NW
 North Canton, OH 44720
 Phone: (330) 497-9398 Fax: (330) 497-0772

Chain of Custody Record

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab) Client Contact: [Blank] Shipping/Receiving Company: [Blank]		Last Pk: Brooks, Kds M E-Mail: kds.brooks@testamerica.com		Sample: [Blank] Page: 1 of 1	
EW Lab Pk Address: Resobox Airport Executive Suites, 17461 Denham Ave, Suite [Blank] City: Irvington, CA, 92614 State: CA, 92614 Phone: [Blank] Email: [Blank]		Date Requested: 7/31/2014 Time Requested: 13:30		Analysis Requested: [Blank]	
Project Name: Abandoned Mining Waste Trench Lake Site: [Blank]		Sample Date: 7/31/14 Sample Time: 13:30		Matrix: Solid Sample Type (Container): [Blank]	
Sample Identification - Client ID (Lab ID): CHL-ASBBLK01-073114 (240-40204-1) CHL-ASBBLK02-073114 (240-40204-2) CHL-ASBBLK03-073114 (240-40204-3) CHL-ASBBLK04-073114 (240-40204-4) CHL-ASBBLK05-073114 (240-40204-5) CHL-ASBBLK06-073114 (240-40204-6)		Sample Date: 7/31/14 Sample Time: 13:30 13:30 13:50 13:50		Matrix: Solid Solid Solid Solid Solid Solid	
Possible Hazard Identification: [Blank]		Unconfirmed: [Blank]		Desirable Requested: I, II, III, IV, Other (specify): [Blank]	
Empty TG Returned by: [Blank]		Date: 8-4-14 1330		Received by: [Blank]	
Returned by: [Blank]		Date Time: [Blank]		Company: TAC	
Returned by: [Blank]		Date Time: [Blank]		Company: [Blank]	
Custody Seal No.: [Blank]		Date Time: [Blank]		Company: [Blank]	
Yes / No: [Blank]		Date Time: [Blank]		Company: [Blank]	