



Mr. Dale Phelps  
Utilities Manager  
**City of Gatlinburg**  
PO Box 5  
405 Reagan Drive; Suite 1  
Gatlinburg, TN 37738  
865.436.4681  
[dphelps@gatlinburgtn.gov](mailto:dphelps@gatlinburgtn.gov)

October 2, 2015

**Report of Asbestos and Lead Surveys  
Gatlinburg Water Treatment Facility  
Site at 916 River Road  
Gatlinburg, Tennessee  
PC&D Project PA-015-042**

Dear Mr. Phelps:

Professional Consulting & Development, Inc., (PC&D) has completed an asbestos and lead survey at the subject site. This survey was conducted at your request and in general accordance with our Proposal PA-015-042 dated August 19, 2015. The purpose of the services was to identify, sample, and assess friable and non-friable asbestos containing materials (ACM) and lead paint in the roofing materials on the filter building on site.

**Building Description**

The building on the subject site is currently being used as a water filtration facility and was reportedly constructed in 1950 according to the Sevier County Property Assessor. Building plans were not available for our review prior to the survey.

The building is of stone and masonry construction, with wood-framed windows, and aluminum framed doors. The roofs sampled during this survey were of slate and composite asphalt shingle construction. Other roofs observed in the facility were a built-up and a white EPDM rubber membrane. These portions of the roof were not included in our survey.

## **Asbestos and Lead Surveys**

The asbestos and lead surveys were conducted by Mr. Eduardo J. Padron on September 16, 2015. Mr. Padron is a State of Tennessee Accredited Asbestos Management Planner. The bulk sample collection for the asbestos and lead surveys was conducted in general accordance with current industry and regulatory accepted protocols.

### Asbestos

The survey approach included a visual assessment of roof to locate, as far as practicable, suspect ACM. Suspect materials were divided into Homogeneous Areas (HA), i.e., building materials which were determined by the inspector to be homogeneous based on their color, texture, and age. A representative number of samples were collected for each HA.

Five (5) homogeneous areas were identified and ten (10) bulk material samples were collected, placed in plastic bags and sealed for transport to the laboratory. Samples were express mailed under chain-of-custody protocol to Arrowhead Technologies, LLC, located in Clearwater, Florida for laboratory analysis. Material identification was performed using Polarized Light Microscopy with Dispersion Staining (PLM/DS) in accordance with the Environmental Protection Agency "Method for the Determination of Asbestos in Bulk Building Materials" (EPA/600/R-93/116). No resinously bound materials were sampled during our survey that would require additional laboratory analysis. Arrowhead Technologies participates in the National Voluntary Laboratory Accreditation Program (NVLAP) as administered by the National Institute of Standards and Technology (NIST). PC&D is a State of Tennessee Accredited Asbestos Firm. Accreditation certificates for Arrowhead Technologies, LLC, and PC&D are provided in Appendix B.

### Lead

Two (2) samples were collected and expressed mailed under chain-of-custody protocol to Accurate Analytical Testing, LLC located in Romulus, Michigan for laboratory analysis. Accurate Analytical is accredited by the Environmental Lead Laboratory Accreditation Program (ELLAP). The samples obtained were submitted for testing to determine if the paint coatings were lead-based paint (LBP). The samples were analyzed to determine LBP using flame atomic absorption spectrometry (AAS) by EPA Method SW 846, 7420 and 3050B.

## Findings

Asbestos - Based on the laboratory data, no asbestos was detected in the material bulk samples analyzed. Details regarding the location of each bulk sample collected during the asbestos survey are presented in the Asbestos Chain of Custody and PLM report summaries included in Appendix A.

Lead- Based on the analytical data from the samples collected, no LBP was identified associated with the two bulk paint chip samples collected from the building. LBP is defined by the EPA (40 CFR Part 745) and HUD (24 CFR Part 35) as paint containing greater than 0.5% lead by weight as confirmed by paint chip laboratory analysis. Details regarding the location of each sample collected are provided in the Lead Chain of Custody and Certificate of Analysis report included in Appendix A.

## Recommendations

If other suspect materials that are not referenced in this report are discovered or identified during renovation or demolition activities, PC&D recommends that the materials be sampled and analyzed to confirm the absence, presence and quantity of asbestos and/or lead prior to their disturbance. No further bulk sampling is recommended at this time for asbestos-containing materials or lead-based paint.

===

We appreciate the opportunity to have provided this service. If you have any questions relative to this report please contact Mr. Padron at 239.825.0044.

Sincerely,

### Professional Consulting & Development, Inc.



Eduardo J. Padron  
TN Accredited Asbestos Management Planner



Kenneth E. Johnson, Jr., P.G.  
Principal

Attachments

## **Appendix A**



3151 San Bernadino St.  
Clearwater, Florida 33759  
813-679-0720 / mhall005@tampabay.rr.com

NVLAP Lab Code 200703-0

Client :	PCD, INC	Lab Set No. :	004299
Project :	Water Treatment Plant, Filter Bldg., Gatlinburg	AT Job No. :	15-4299
Client Project No.:	PA-015-042	Report Date :	9/22/2015
Identification :	Asbestos, Bulk Sample Analysis	Sample Date :	9/16/2015
Test Method :	Polarized Light Microscopy / Dispersion Staining (PLM/DS) EPA Method 600/R-93/116 / EPA Method 600/M4-82-020		Page 1 of 2

On 9/18/2015, ten (10) bulk material samples were submitted by Eduardo Padron for asbestos analysis by PLM/DS. Copies of Bulk Sample Analysis sheets are attached; additional information may be found therein. The results are summarized below:

Lab Sample No.	Sample Description / Location	Asbestos Content
004299-001	Roofing Felt -New HA-1A	None Detected-Black Roofing Felt
004299-002	Roofing Felt -New HA-1B	None Detected-Black Roofing Felt
004299-003	Roofing Felt -Old HA-2A	None Detected-Black Roof Membrane
004299-004	Roofing Felt -Old HA-2B	None Detected-Black Roof Membrane
004299-005	Composite Shingles -Old HA-3A	None Detected-Black Roofing Shingle
004299-006	Composite Shingles -Old HA-3B	None Detected-Black Roofing Shingle
004299-007	EIFS HA-4A	None Detected-Eifis Coating w/ Pt.
004299-008	EIFS HA-4B	None Detected-Eifis Coating w/ Pt.
004299-009	Roof Sealant HA-5A	None Detected-Clear Roof Sealant
004299-010	Roof Sealant HA-5B	None Detected-Clear Roof Sealant

These samples were analyzed by layers. Specific layer or component asbestos content is indicated when relevant. The EPA considers a material to be asbestos containing only if it contains more than one percent asbestos by Calibrated Visual Area Estimation (CVAE). EPA regulations also indicate that Regulated Asbestos Containing Materials (RACM) -- materials which are friable or may become friable -- be further analyzed by point counting when the results indicate less than ten percent asbestos by CVAE. Arrowhead utilizes CVAE on a routine basis and does not include point counting unless specifically requested. The results may not be reproduced except in full.



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Client Project No.:	PA-015-042	Report Date :	9/22/2015
Identification :	Asbestos, Bulk Sample Analysis	Sample Date :	9/16/2015
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Page 2 of 2

### SCOPE OF THIS REPORT

These samples were obtained as a part of a building survey; this report is only intended to be used as a part of the survey report issued by the surveyor. This report explains the laboratory analysis and results. The surveyor's report explains the sampling protocol used, when the samples were obtained, the location(s) of the samples, where the materials were observed in the building, quantities of materials observed, condition of the materials and the extent of his/her survey. Sample locations and material descriptions are given by the surveyor on the chain of custody but included here (possibly abbreviated) only as a convenience for the reader.

This report may not be reproduced without written permission of Arrowhead and must be reproduced in full.

### STATEMENT OF LABORATORY ACCREDITATION

The samples were analyzed in general accordance with the procedures outlined in the Method for the Determination of Asbestos in Bulk Building Materials, EPA/600/R-93/116, and the Interim Method for the Determination of Asbestos in Bulk Insulation Samples, EPA 600/M4-82-020. The results of each bulk sample relate only to the material tested and the results shall not be used to claim product endorsement by NVLAP or any agency of the U.S. Government.

Floor tile and other resinously bound materials, when analyzed by the EPA method, may yield false negative results because of limitations in separating closely bound fibers and in detecting fibers of small length and diameter. When a definitive result is required, Arrowhead recommends utilizing alternative methods of identification, including Transmission Electron Microscopy.

Specific questions concerning bulk sample results shall be directed to the Laboratory Director.

Analyst : Monte Hall, P.G.

Laboratory Director : Monte Hall, P.G.  
Florida Registration No. 1658

Approved Signatory :

# ASBESTOS BULK SAMPLE CHAIN OF CUSTODY

**PCD, Inc.**  
 PO Box 52131  
 Knoxville, TN 37950-2131  
 865.207.3825

LAB 4299

Project/Task Number: PA-015-042  
 Client Name: City of Gatlinburg  
 Project Name: Water Treatment Plant  
 Building: Filter Building  
 Inspector(s): Eduardo J. Padron  
 Date of Sample: 9-16-2015


TAT  
 STD

Sample ID Number	Location	Source Description	Comments (Condition, Quantity)	Lab ID Number	Friable?
1A	Under Slate Roof	Roofing Felt - New	Good, 90ft <sup>2</sup>		N
1B	"	"			
2A	Under Slate Roof	Roofing Felt - Old	Good,		N
2B	"	"			
3A	Top Roof	Composite Shingles	Good,		N
3B	"	"			
4A	2nd Story Back Wall	EIFS	Good, 350ft <sup>2</sup>		N
4B	"	"			
5A	Slate Roof Sealant	Sealant	Good, 20lnft		N
5B	"	"			


Shipped Via: **FedEx** unless other noted (other: UPS, US Mail, etc.) **7745 26964950**

Lab Shipped to: **Arrowhead Laboratories, LLC**

1<sup>st</sup> Transfer Facility: \_\_\_\_\_ 2<sup>nd</sup> Transfer Facility: \_\_\_\_\_

Field Collection By: 

Name: **Monte Hall**

Signature: 

Date: **9-16-15**

Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: **9-18-15**

**Certificate of Analysis: Lead In Paint by EPA SW-846 7420 and 3050B Method**

**Client :** PC&D  
PO Box 52131  
KNOXVILLE, TN 37950

**Attn :** Ed Padron                      **Email :** ejpadron@gmail.com  
**Phone :** 239.825.0044                **Fax :**

**Client Project :** PA-015-042  
**Project Location :** 916 RIVER ROAD GATLINBURG TN

**AAT Project :** 249652  
**Sampling Date :** 09/15/2015  
**Date Received :** 09/18/2015  
**Date Analyzed :** 09/22/2015  
**Date Reported :** 9/22/2015 12:56:42PM  
**Analyst :** Andrew Theys

Lab Sample ID	Client Code	Sample Description	PPM	Result Lead (% by weight)	Calculated R L (% by weight)
2391978	L1A	STUCCO 2ND FL WALL	<98	<0.0098	0.0098
2391979	L2A	STUCCO 2ND FL WALL TRIM	<92	<0.0092	0.0092



Analyst Signature

RL= Reporting Limit \* For true values assume (2) significant figures. The method and batch QC is acceptable unless otherwise stated. Current EPA/HUD Interim Standard for lead in paint samples is: 5000 PPM (parts per million) or ug/g which is equivalent to 0.5% by weight. AAT internal SOP S203. The laboratory operates in accord with ISO 17025 guidelines and holds limited scopes of accreditation under AIHA and NY State DOH ELAP programs. These results are submitted pursuant to AAT LLC current terms and conditions of sale, including the company's standard warranty and limitation of liability provisions. Analytical results relate to the samples as received by the lab. AAT will not assume any liability or responsibility for the manner in which the results are used or interpreted. Reproduction of this document other than in its entirety is not permitted. All Quality control requirements for the samples this report contains have been met.

AIHA ELLAP- Lab ID #100986, NY State DOH ELAP -Lab ID #11864, State of Ohio- Lab ID # 10042

Date Printed: 09/22/2015 12:58PM

AAT Project: 249652





To : PC&D  
PO Box 52131  
KNOXVILLE, TN 37950

Attn : Ed Padron

Email : ejpadron@gmail.com

Phone : 239.825.0044

Project Location : 916 RIVER ROAD GATLINBURG TN

AAT Project : 249652

Client Project : PA-015-042

Date Reported : 9/22/2015 12:56:42PM

Sample	Client Code	Analysis Requested	Completed
2391978	L1A	Lead Paint	09/22/2015
2391979	L2A	Lead Paint	09/22/2015



Reviewed By

Quality Assurance Coordinator - Robert A Theys

This report is intended for use solely by the individual or entity to which it is addressed. It may contain information that is privileged, confidential and otherwise exempt by law from disclosure. If the reader of this information is not the intended recipient or an employee of its intended recipient, you are herewith notified that any dissemination, distribution or copying of this information is strictly prohibited. If you have received this information in error, please notify AAT immediately. Thank you.

AIHA ELLAP - Lab ID #100986, NY State DOH ELAP -Lab ID #11864, State of Ohio - Lab ID # 10042

Date Printed: 09/22/2015 12:58PM

AAT Project: 249652





30105 BEVERLY RD.  
ROMULUS MI 48174  
(734) 699-LABS (5227)  
FAX: (734) 699-8407  
www.accurate-test.biz



LAB #110028

PROJECT NUMBER: **PA-015-042**    SAMPLING DATE: **9/15/2015**  
 PROJECT ADDRESS: **916 River Road, Gatlinburg, TN**  
 SAMPLE START TIME: \_\_\_\_\_    SAMPLE END TIME: \_\_\_\_\_

**SUBMITTING COMPANY**

**PC&D, Inc**  
 PO Box 52131  
 Knoxville, TN 37950-2131

**PO #**

REQUESTED ANALYSIS

LEAD	SINGLE WIPE DUST ( )	COMPOSITE SOIL ( )	% By Wt. ( )	mg/cm <sup>2</sup> ( )
<b>PAINT CHIP</b>				

**CONTACT INFORMATION**

**Eduardo J. Padron**  
 Office:  
 Fax: **239.825.0044**  
 Cell: **239.825.0044**  
 Email: **ede.padron.com**

**RISK ASSESOR**

LAB ID: **2391978**  
**JA**

CLIENT SAMPLE ID: **L2A**  
**L2A**

DESCRIPTION: **STEEL 201 FL Wall**  
**11 11 11 Tim**

WS, WT, F: \_\_\_\_\_

WIPED AREA (e.g. 12in X 12in): **X**  
**X**  
**X**  
**X**  
**X**  
**X**  
**X**  
**X**  
**X**  
**X**  
**X**  
**X**

Request Turnaround time (please check one)  
 SAME DAY ( ) 24 Hour ( )  
 48 Hour ( ) 72 hours ( **X** )  
 If no indicated, default is 72 hours

CLIENT COMMENTS  
 Collected by: **Ed Padron**  
 Risk Assessor: \_\_\_\_\_  
 Samples shipped **Fed Ex**

SEALS INTACT: Y N  
 PRESERVATIVES: Y N  
 CONTAINERS LABELED: Y N  
 LAB REMARKS:   
**2192**  
**249652**  
 LAB PROJECT NUMBER: \_\_\_\_\_

SAMPLES RELINQUISHED BY		SAMPLES RECEIVED BY		Date	TIME
<b>E. Padron</b>	<b>9-16-2015</b>			<b>9-18-15 8:26</b>	<b>AM</b>
				<b>AM</b>	<b>PM</b>
				<b>AM</b>	<b>PM</b>

By submitting samples to AAT, the client agrees to AAT's terms and conditions.

## **Appendix B**

**THE STATE OF TENNESSEE**

Department of Environment and Conservation  
Division of Solid Waste Management  
Toxic Substances Program



**Eduardo J. Padron**

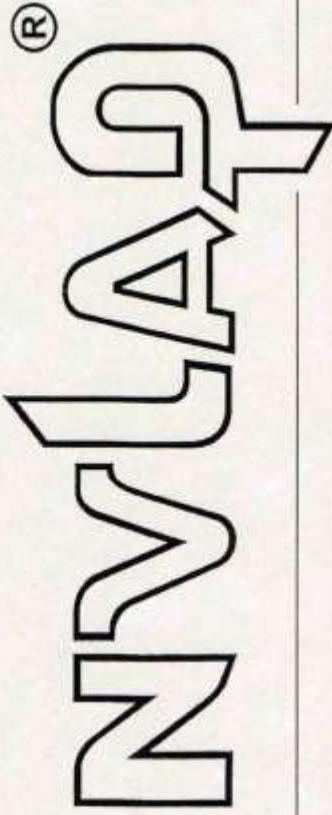
DOB	Sex	HGT	WGT
05-May-1963	M	6'1"	187

Discipline	Accreditation	Expiration
Management Planner	A-MP-44271-43043	Aug 31, 2016
Project Monitor	A-PM-44271-43344	Aug 31, 2016

Re-Accreditation

**Asbestos Accreditation**

United States Department of Commerce  
National Institute of Standards and Technology



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## Certificate of Accreditation to ISO/IEC 17025:2005

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NVLAP LAB CODE: 200703-0

**Arrowhead Technologies, L.L.C.**  
Clearwater, FL

is accredited by the National Voluntary Laboratory Accreditation Program for specific services,  
listed on the Scope of Accreditation, for:

### **BULK ASBESTOS FIBER ANALYSIS**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005.  
This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality  
management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).



2015-01-01 through 2015-12-31

Effective dates

A handwritten signature in black ink, appearing to read "William R. M. L. D.".

For the National Institute of Standards and Technology





## THE STATE OF TENNESSEE

Department of Environment and Conservation Division of Solid Waste Management  
Toxic Substances Program  
William R. Snodgrass Tennessee Tower  
312 Rosa L. Parks Avenue, 14th Floor Nashville TN 37243

By virtue of the authority vested by the Division of Solid Waste Management, the Company named below is hereby accredited to offer and/or conduct Asbestos activities pursuant to Rule 1200-01-20:

### Professional Consulting & Development, Inc

5990 Westmore Dr Knoxville TN, 37909

to conduct ASBESTOS ACTIVITIES in schools or public and commercial buildings in Tennessee. This firm is responsible for compliance with the applicable requirements of Rule 1200-01-20.

Discipline	Type	Accreditation Number	Effective Date	Expiration Date
Accreditation	Re-Accreditation	A-F-2886-41234	March 01, 2015	March 31, 2016



Given under the Seal of the State of Tennessee in Nashville.

This 3rd Day of June 2015

Division of Solid Waste Management  
Toxic Substance Program

CN-1324 (Rev 6/13)

RDA-3020





## AIHA Laboratory Accreditation Programs, LLC

*acknowledges that*

### Accurate Analytical Testing, LLC

30105 Beverly Road, Romulus, MI 48174

Laboratory ID: 100986

along with all premises from which key activities are performed, as listed above, has fulfilled the requirements of the AIHA Laboratory Accreditation Programs (AIHA-LAP), LLC accreditation to the ISO/IEC 17025:2005 international standard, *General Requirements for the Competence of Testing and Calibration Laboratories* in the following:

#### LABORATORY ACCREDITATION PROGRAMS

- INDUSTRIAL HYGIENE
- ENVIRONMENTAL LEAD
- ENVIRONMENTAL MICROBIOLOGY
- FOOD
- UNIQUE SCOPES

- Accreditation Expires: 07/01/2015
- Accreditation Expires: 07/01/2015
- Accreditation Expires: 07/01/2015
- Accreditation Expires: 07/01/2015

Specific Field(s) of Testing (FoT)/Method(s) within each Accreditation Program for which the above named laboratory maintains accreditation is outlined on the attached **Scope of Accreditation**. Continued accreditation is contingent upon successful on-going compliance with ISO/IEC 17025:2005 and AIHA-LAP, LLC requirements. This certificate is not valid without the attached **Scope of Accreditation**. Please review the AIHA-LAP, LLC website ([www.aihaaccreditedlabs.org](http://www.aihaaccreditedlabs.org)) for the most current Scope.

*Gerald R Schultz*

Gerald Schultz, CIH  
Chairperson, Analytical Accreditation Board

Revision 14: 03/26/2014

*Cheryl O. Morton*

Cheryl O. Morton  
Managing Director, AIHA Laboratory Accreditation Programs, LLC

Date Issued: 12/09/2014



## AIHA Laboratory Accreditation Programs, LLC SCOPE OF ACCREDITATION

### Accurate Analytical Testing, LLC

30105 Beverly Road, Romulus , MI 48174

Laboratory ID: **100986**

Issue Date: 12/09/2014

The laboratory is approved for those specific field(s) of testing/methods listed in the table below. Clients are urged to verify the laboratory's current accreditation status for the particular field(s) of testing/Methods, since these can change due to proficiency status, suspension and/or withdrawal of accreditation.

The EPA recognizes the AIHA-LAP, LLC ELLAP program as meeting the requirements of the National Lead Laboratory Accreditation Program (NLLAP) established under Title X of the Residential Lead-Based Paint Hazard Reduction Act of 1992 and includes paint, soil and dust wipe analysis. Air analysis is not included as part of the NLLAP.

### Environmental Lead Laboratory Accreditation Program (ELLAP)

**Initial Accreditation Date: 02/01/2004**

Field of Testing (FoT)	Method	Method Description <i>(for internal methods only)</i>
<b>Paint</b>	EPA SW-846 3050	
	EPA SW-846 3051	
	EPA SW-846 7420	
<b>Soil</b>	EPA SW-846 3050	
	EPA SW-846 3051	
	EPA SW-846 7420	
<b>Settled Dust by Wipe</b>	NIOSH 7082	
<b>Airborne Dust</b>	NIOSH 7082	

A complete listing of currently accredited Environmental Lead laboratories is available on the AIHA-LAP, LLC website at: <http://www.aihaaccreditedlabs.org>





## AIHA Laboratory Accreditation Programs, LLC SCOPE OF ACCREDITATION

### **Accurate Analytical Testing, LLC**

30105 Beverly Road, Romulus, MI 48174

Laboratory ID: **100986**

Issue Date: 12/09/2014

The laboratory is approved for those specific field(s) of testing/methods listed in the table below. Clients are urged to verify the laboratory's current accreditation status for the particular field(s) of testing/Methods, since these can change due to proficiency status, suspension and/or withdrawal of accreditation.

### **Unique Scopes Laboratory Accreditation Program (Unique Scopes)**

**Initial Accreditation Date: 06/01/2013**

<b>Unique Scope Category</b>	<b>Field of Testing (FoT)</b>	<b>Method</b>	<b>Method Description</b> <i>(for internal methods only)</i>
<b>Consumer Product Testing</b>	Lead in Paint and Other Similar Surface Coatings	CPSC-CH-E1003-09	

A complete listing of currently accredited Unique Scope laboratories is available on the AIHA-LAP, LLC website at: <http://www.aihaaccreditedlabs.org>