

ASBESTOS MATERIALS SURVEY

Report Date: August 27, 2013

Client: Ann Arbor Housing Commission

Site Address: 3565-3585 Oakwood
Ann Arbor, Michigan

AKT Peerless Project #: 8356e-1-190

SECTION I - ASBESTOS INSPECTION

AKT Peerless conducted field sampling for suspect asbestos containing materials on August 19, 2013. The following suspect materials were identified at the site:

SUSPECT MATERIALS SUMMARY (ASBESTOS MATERIALS IN BOLD CAPS)

Material Description	Material Classification	Function Space (FS) Location	HA No.	Approximate Quantity	EPA Category	Asbestos Content
3565 OAKWOOD						
DRYWALL AND MUD	MM	THROUGHOUT	HA-01	10,000 SF	C2	CHR 3%
12" Floor Tile Brown Stick On	MM	Kitchen	HA-02	215 SF	C1	ND
12" Floor Tile White w/ Blue	MM	Throughout	HA-03	NE	C1	ND
ROOFING MATERIAL	MM	EXTERIOR	HA-04	NE	C2	ASSUMED ACM
3575 OAKWOOD						
DRYWALL AND MUD	MM	THROUGHOUT	HA-01	10,000 SF	C2	CHR 1.5% BY POINT COUNT
Sheet Linoleum	MM	Bathroom	HA-02	50 SF	C2	ND
12" White Floor Tile	MM	Throughout	HA-03	NE	C1	ND
Textured Ceiling	MM	Living Room	HA-04	NE	C2	ND
ROOFING MATERIAL	MM	EXTERIOR	HA-05	NE	C2	ASSUMED ACM
3585 OAKWOOD						
Drywall and Mud	MM	Throughout	HA-01	10,000 SF	C2	ND
12" Floor Tile Dark Brown Stick On	MM	Kitchen, Living Room, Closet, Stairwell	HA-02	NE	C1	ND
12" Floor Tile White w/ Blue	MM	Throughout	HA-03	NE	C1	ND
ROOFING MATERIAL	MM	EXTERIOR	HA-04	NE	C2	ASSUMED ACM

Key: F = Friable; NF = Non-friable; FS = Functional Space; ND = No Asbestos Detected; CHR = Chrysotile; AMO = Amosite; SF = Square Feet; LF = Linear Feet; CF = Cubic Feet; MF = Mud Fittings; Classification:

SM = Surfacing Material; TSI = Thermal System Insulation; MM = Miscellaneous Material; EPA Material Categories: FR = Friable Regulated; C2 = Category II Non-friable; C1 = Category I Non-friable; NE = Not Estimated

Recommendations:

1. Non-friable roofing materials are assumed to contain asbestos and do not require removal ahead of renovation or demolition activities, unless building materials will be recycled or the roofing will be made friable.
2. Drywall mud compound was identified as ACM in units 3565 and 3575. Unit 3565 is vacant and must be abated by a licensed asbestos abatement contractor as part of the interior renovation. Unit 3575 is currently occupied. Some damage was observed in high traffic areas. These areas should be repaired or abated by a licensed abatement contractor.

Samples were collected by a State of Michigan Department of Licensing and Regulatory Affairs (LARA) Michigan Occupational Safety & Health Administration (MIOSHA) -Asbestos Program accredited Asbestos Inspector.

Laboratory results are included in Attachment 1. The methodology followed to complete the asbestos survey is included in Attachment 2.

LIMITATIONS

The information and opinions obtained in this report are for the exclusive use of the Ann Arbor Housing Commission. AKT Peerless will not distribute this report without Client's written consent or as required by law or by a Court order. Report contents must be reviewed and relied upon only in conjunction with the terms and conditions expressly agreed upon by the parties and as limited therein.

Quantities of identified asbestos containing and other hazardous materials reported are provided for reference only.

Prepared by:

AKT PEERLESS ENVIRONMENTAL AND ENERGY SERVICES



Carl D. Rogers
Environmental Consultant
MIOSHA CSHD Asbestos Inspector
Accreditation Number: A36205

Reviewed by:



James C. Fox, RPIH
Sr. Project Manager
MIOSHA CSHD Asbestos Inspector, Management Planner, Project Designer
Accreditation Number: A3152

ATTACHMENT 1

Asbestos Laboratory Results and Chain of Custody

APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189. Phone: (734) 449-9990, Fax (734) 449-9991.
 Web Site: <http://apexresearch-inc.com>. Email: Bob.Letarte@apexresearchlab.com



AKTPEERLESS
 environmental services
 214 James Avenues
 Saginaw, MI 48607

Phone: 348-302-3571 Fax: _____

Turn Around Times: (Circle One)

Rush 24 hour **72 hour**
 48 hour **72 hour**
 Other: **TPP** yes / no (Test Till Positive)
Asbestos: Bulk Wipe _____ Point Count _____ PCM _____
 Lead: Bulk _____ Wipe _____ Air _____ Paint _____ Soil _____
 Mold: Bulk _____ Tape _____ Biosis _____ Other _____ Viable _____
 TEM: Bulk/NOP _____ AHERA _____ EPA Level II _____ Other _____

Date of Survey: 8/19/2013
 Project: WAHC Oakwood # 3565
 Project # 83566-6-190
 Contact Person: J. Fox
 Email: foxcj@aktpeerless.com
 ***Terms and conditions on the other side.

Lab Use Only
Log-In: _____
Report: _____
Fax: _____
Verbal: _____
Email: _____

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
1	3565-01-01	Drywall/mud			
2	3565-01-02	" "			
3	3565-01-03	" "			
4	3565-02-01	12" Floor Tile, Brown Stick-on			
5	3565-02-02	" " "			
6	3565-03-01	12" Floor Tile, White w/Blue			
7	3565-03-02	" " "			

Relinquished By: [Signature] Received By: [Signature]
 Date: 8/21/2013 Date: 8-21-13
 Revision Date: June/2011 8:05r

Relinquished By: _____ Date: _____
 Relinquished By: _____ Date: _____

APEX RESEARCH



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: AAHC Oakwood #3565
Project # 8356e-6-190

Report To:

Mr. Jim Fox
AKT Peerless
214 Janes Ave.
Saginaw, MI 48607

ARI Report # 13-47350
Date Collected: 08/19/13
Date Received: 08/21/13
Date Analyzed: 08/26/13
Date Reported: 08/26/13

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 47350 - 01 Cust. #: 3565-01-01 Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 47350 - 01a Cust. #: 3565-01-01 Material: Mud Location: Appearance: white, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO Chrysotile - <1%	Cellulose - 1% Other - 99%
Lab ID #: 47350 - 02 Cust. #: 3565-01-02 Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: AAHC Oakwood #3565
Project # 8356e-6-190

Report To:

Mr. Jim Fox
AKT Peerless
214 Janes Ave.
Saginaw, MI 48607

ARI Report # 13-47350
Date Collected: 08/19/13
Date Received: 08/21/13
Date Analyzed: 08/26/13
Date Reported: 08/26/13

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 47350 - 02a Cust. #: 3565-01-02 Material: Mud Location: Appearance: white, fibrous, homogenous Layer: 2 of 2	Asbestos Present: YES Chrysotile - 3%	Cellulose - 1% Other - 96%
Lab ID #: 47350 - 03 Cust. #: 3565-01-03 Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 47350 - 03a Cust. #: 3565-01-03 Material: Mud Location: Appearance: Layer: 2 of 2	Asbestos Present: NOT ANALYZED	

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: AAHC Oakwood #3565
Project # 8356e-6-190

Report To:

Mr. Jim Fox
AKT Peerless
214 Janes Ave.
Saginaw, MI 48607

ARI Report # 13-47350
Date Collected: 08/19/13
Date Received: 08/21/13
Date Analyzed: 08/26/13
Date Reported: 08/26/13

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 47350 - 04 Cust. #: 3565-02-01 Material: 12" Brown Floor Tile Location: Appearance: brown,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 47350 - 04a Cust. #: 3565-02-01 Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 47350 - 05 Cust. #: 3565-02-02 Material: 12" Brown Floor Tile Location: Appearance: brown,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: AAHC Oakwood #3565
Project # 8356e-6-190

Report To:

Mr. Jim Fox
AKT Peerless
214 Janes Ave.
Saginaw, MI 48607

ARI Report # 13-47350
Date Collected: 08/19/13
Date Received: 08/21/13
Date Analyzed: 08/26/13
Date Reported: 08/26/13

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 47350 - 05a Cust. #: 3565-02-02 Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 47350 - 06 Cust. #: 3565-03-01 Material: 12" White/Blue Floor Tile Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 47350 - 06a Cust. #: 3565-03-01 Material: Glue Location: Appearance: yellow,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: AAHC Oakwood #3565
Project # 8356e-6-190

Report To:
Mr. Jim Fox
AKT Peerless
214 Janes Ave.
Saginaw, MI 48607

ARI Report # 13-47350
Date Collected: 08/19/13
Date Received: 08/21/13
Date Analyzed: 08/26/13
Date Reported: 08/26/13

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 47350 - 07 Cust. #: 3565-03-02 Material: 12" White/Blue Floor Tile Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 47350 - 07a Cust. #: 3565-03-02 Material: Glue Location: Appearance: yellow, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0

47352

APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189. Phone: (734) 449-9990, Fax (734) 449-9991.

exresearch-inc.com Email: BobJ.entrace@apexresearchlab.com



Customer N°:

AKTPEERLESS
environmental services

Address: 214 James Avenue
Saginaw, MI 48607

City, St., Zip

Phone: 848-348-3571 / Fax:

Date of Survey: 8/19/2013

Project: AARL Catwood # 3575

Project # 83562-6-190

Contact Person: J. Fox

Email: foxej@aktpeerless.com

***Terms and conditions on the other side.

Turn Around Times: (Circle One)

Rush 24 hour

48 hour 72 hour

Other: TTP yes / no (Test TTP Positive)

Asbestos:

Bulk

Wipe

Point Count

PCM

Lead: Bulk

Bulk

Wipe

Air

Paint

Soil

Mold: Bulk

Bulk

Tape

Biosis

Other

Viabile

TEM: Bulk/NOP

AHERA

EPA Level II

Other

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
1	3575-01-01	Drywall & mud			
2	3575-01-02	" "			
3	3575-01-03	" "			
4	3575-02-01	Sheet linoleum, brown & green			
5	3575-02-02	" "			
6	3575-03-01	12" Floor Tile, white w/ blue			
7	3575-03-02	" "			
8	3575-04-01	Texture Ceiling			
9	3575-04-02	" "			
10	3575-04-03	" "			

RECEIVED

Lab Use Only

Log-In: _____

Report: _____

Fax: _____

Verbal: _____

Email: _____

Relinquished By: [Signature]
Date: 8/21/2013

Received By: [Signature]
Date: 8-21-13 8:05 a

Relinquished By: [Signature]
Date: _____

Relinquished By: _____
Date: _____



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: AAHC - Oakwood #3575
Project # 8356a-6-190

Report To:
Mr. Jim Fox
AKT Peerless
214 Janes Ave.
Saginaw, MI 48607

ARI Report # 13-47352
Date Collected: 08/19/13
Date Received: 08/21/13
Date Analyzed: 08/26/13
Date Reported: 08/26/13

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 47352 - 01 Cust. #: 3575-01-01 Material: Drywall Location: Appearance: white, fibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 47352 - 01a Cust. #: 3575-01-01 Material: Mud Location: Appearance: white, fibrous, homogenous Layer: 2 of 2	Asbestos Present: YES Chrysotile - 1.5% POINT COUNT RESULT	Other - 98.5%
Lab ID #: 47352 - 02 Cust. #: 3575-01-02 Material: Drywall Location: Appearance: white, fibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Other - 50%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: AAHC - Oakwood #3575
Project # 8356a-6-190

Report To:

Mr. Jim Fox
AKT Peerless
214 Janes Ave.
Saginaw, MI 48607

ARI Report # 13-47352
Date Collected: 08/19/13
Date Received: 08/21/13
Date Analyzed: 08/26/13
Date Reported: 08/26/13

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 47352 - 02a Cust. #: 3575-01-02 Material: Mud Location: Appearance: Layer: 2 of 2	Asbestos Present: NOT ANALYZED	
Lab ID #: 47352 - 03 Cust. #: 3575-01-03 Material: Mud Location: Appearance: Layer: of	Asbestos Present: NOT ANALYZED	
Lab ID #: 47352 - 04 Cust. #: 3575-02-01 Material: Brown/Green Sheet Linoleum Location: Appearance: green, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Fiberglass - 2% Other - 98%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: AAHC - Oakwood #3575
Project # 8356a-6-190

Report To:

Mr. Jim Fox
AKT Peerless
214 Janes Ave.
Saginaw, MI 48607

ARI Report # 13-47352
Date Collected: 08/19/13
Date Received: 08/21/13
Date Analyzed: 08/26/13
Date Reported: 08/26/13

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 47352 - 05 Cust. #: 3575-02-02 Material: Brown/Green Sheet Linoleum Location: Appearance: green, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Fiberglass - 2% Other - 98%
Lab ID #: 47352 - 06 Cust. #: 3575-03-01 Material: 12" White w/Blue Floor Tile Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 47352 - 07 Cust. #: 3575-03-02 Material: 12" White w/Blue Floor Tile Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: AAHC - Oakwood #3575
Project # 8356a-6-190

Report To:

Mr. Jim Fox
AKT Peerless
214 Janes Ave.
Saginaw, MI 48607

ARI Report # 13-47352
Date Collected: 08/19/13
Date Received: 08/21/13
Date Analyzed: 08/26/13
Date Reported: 08/26/13

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 47352 - 08 Cust. #: 3575-04-01 Material: Textured Ceiling Location: Appearance: white, fibrous, homogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 2%	Other - 98%
Lab ID #: 47352 - 09 Cust. #: 3575-04-02 Material: Textured Ceiling Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 47352 - 10 Cust. #: 3575-04-03 Material: Textured Ceiling Location: Appearance: white, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO Chrysotile - 1.0% POINT COUNT RESULT	Other - 99.0%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0

APEX Research, Inc.

11054 Hi-Tech Drive, Whitmore Lake, MI 48189. Phone: (734) 449-9990, Fax (734) 449-9991.
 exresearch-inc.com. Email: Bob.Lentate@apexresearchlab.com



Customer N#

AKTPEERLESS
 environmental services

Address: 214 James Avenue
 Saginaw, MI 48607

City, St., Zip

Phone: 248-302-3571

Fax:

Date of Survey: 8/19/2013

Project: *AYHE Oakwood # 3585*

Project # 8356-6-190

Contact Person: J. Fox

Email: foxj@aktpeerless.com

***Terms and conditions on the other side.

Turn Around Times: (Circle One)

Rush 24 hour

48 hour 72 hour

Other: TTP yes / no (Test Till Positive)

Asbestos

Lead:

Mold:

TEM:

Bulk

Bulk

Bulk

Bulk/NOP

Wipe

Wipe

Tape

AHERA

Point Count

Air

BioslS

EPA Level II

PCM

Paint

Other

Other

Lab Use Only
Log-In: _____
Report: _____
Fax: _____
Verbal: _____
Email: _____

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
1	3585-01-01	<i>drywall & mud</i>			
2	3585-01-02	"			
3	3585-01-03	"			
4	3585-02-01	<i>12" Floor Tile, Dark Brown Strickon</i>			
5	3585-02-02	"			
6	3585-03-01	<i>12" Floor Tile, white w/blue</i>			
7	3585-03-02	"			

Relinquished By: *[Signature]*
 Date: 8/21/2013
 Received By: *[Signature]*
 Date: 8-21-13
 8:05 a

Relinquished By: **RECEIVED**
 Date: AUG 21 2013
 Relinquished By: _____
 Date: _____



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: AAHC Oakwood #3585
Project # 8356e-6-190

Report To:

Mr. Jim Fox
AKT Peerless
214 Janes Ave.
Saginaw, MI 48607

ARI Report # 13-47351
Date Collected: 08/19/13
Date Received: 08/21/13
Date Analyzed: 08/26/13
Date Reported: 08/26/13

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 47351 - 01 Cust. #: 3585-01-01 Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 47351 - 01a Cust. #: 3585-01-01 Material: Mud Location: Appearance: white, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 47351 - 02 Cust. #: 3585-01-02 Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: AAHC Oakwood #3585
Project # 8356e-6-190

Report To:

Mr. Jim Fox
AKT Peerless
214 Janes Ave.
Saginaw, MI 48607

ARI Report # 13-47351
Date Collected: 08/19/13
Date Received: 08/21/13
Date Analyzed: 08/26/13
Date Reported: 08/26/13

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 47351 - 02a Cust. #: 3585-01-02 Material: Mud Location: Appearance: white, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO Chrysotile - < 1%	Cellulose - 2% Other - 98%
Lab ID #: 47351 - 03 Cust. #: 3585-01-03 Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 47351 - 03a Cust. #: 3585-01-03 Material: Mud Location: Appearance: white, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO Chrysotile - < 1%	Cellulose - 1% Other - 99%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: AAHC Oakwood #3585
Project # 8356e-6-190

Report To:

Mr. Jim Fox
AKT Peerless
214 Janes Ave.
Saginaw, MI 48607

ARI Report # 13-47351
Date Collected: 08/19/13
Date Received: 08/21/13
Date Analyzed: 08/26/13
Date Reported: 08/26/13

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 47351 - 04 Cust. #: 3585-02-01 Material: 12" Dark Brown Floor Tile (Stick-On) Location: Appearance: brown,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 47351 - 04a Cust. #: 3585-02-01 Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 47351 - 05 Cust. #: 3585-02-02 Material: 12" Dark Brown Floor Tile (Stick-On) Location: Appearance: brown,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: AAHC Oakwood #3585
Project # 8356e-6-190

Report To:

Mr. Jim Fox
AKT Peerless
214 Janes Ave.
Saginaw, MI 48607

ARI Report # 13-47351
Date Collected: 08/19/13
Date Received: 08/21/13
Date Analyzed: 08/26/13
Date Reported: 08/26/13

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 47351 - 05a Cust. #: 3585-02-2 Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 47351 - 06 Cust. #: 3585-03-01 Material: 12" White w/Blue Floor Tile Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 47351 - 06a Cust. #: 3585-03-01 Material: Mastic Location: Appearance: yellow,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: AAHC Oakwood #3585
Project # 8356e-6-190

Report To:

Mr. Jim Fox
AKT Peerless
214 Janes Ave.
Saginaw, MI 48607

ARI Report # 13-47351
Date Collected: 08/19/13
Date Received: 08/21/13
Date Analyzed: 08/26/13
Date Reported: 08/26/13

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 47351 - 07 Cust. #: 3585-03-02 Material: 12" White w/Blue Floor Tile Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 47351 - 07a Cust. #: 3585-03-02 Material: Mastic Location: Appearance: yellow,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0

ATTACHMENT 2

Asbestos Survey Methodology

ASBESTOS SURVEY METHODOLOGY

The asbestos survey was performed according to the following methodology:

1. Numerical functional space (FS) designations were assigned to each space in the structure. In general, an FS is defined as a spatially distinct room or area within the building. Functional Spaces also include attics, closets and basements. For clarification, functional space designations were field marked in each space.

2. Suspect Homogeneous Areas (HA) i.e., materials, were inventoried by type based on appearance and other characteristics. Building materials suspect for asbestos content were described based on one of three material classifications:

Surfacing Materials (SM): Sprayed-on, troweled-on, or otherwise applied to surfaces, such as friable acoustical plaster on ceilings and fireproofing materials on structural members, or other materials on surfaces for acoustical, fireproofing, or other purposes.

Thermal System Insulation (TSI): Material that is applied to pipes, fittings, boilers, breeching, tanks, ducts, or other interior structural components to prevent heat lost or gain, or water condensation, or for other purposes.

Miscellaneous Materials (MM): A building material on structural components, structural members, or fixtures, such as non-friable hard-wall and ceiling plaster, floor and ceiling tiles, and does not include surfacing material or thermal system insulation.

3. When a material is determined to be asbestos-containing either through sampling and laboratory analysis or by assumption, the material is grouped into one of three categories: 1) friable regulated asbestos 2) Category II non-friable asbestos or 3) Category I nonfriable asbestos. All friable regulated materials and Category II non-friable materials that will become friable during demolition were sampled. Category I non-friable materials were not sampled but were assumed asbestos-containing. Category I non-friable materials do not become friable during demolition and do not require removal unless the substrate will be recycled.

4. All samples collected were submitted with chain-of-custody documentation to an analytical laboratory that participates in the National Voluntary Laboratory Accreditation Program (NVLAP). All samples were analyzed using polarized light microscopy (PLM) with dispersion staining following United States Environmental Protection Agency (USEPA) Test Method (EPA-600/M4-82-020) and the National Institute of Standards and Technology (NIST) Bulk Asbestos Handbook.

5. A Test-Till-Positive (TTP) approach to laboratory analysis was utilized for the samples. TTP involves analyzing samples by homogeneous area groupings. Laboratory analyses were performed sample by sample within each homogeneous area grouping until a sample was determined to be asbestos containing, then no additional samples in that grouping were analyzed.