

**June 8, 2017**  
**RFP 17- HHFDEMO1-2017**  
**Request for Qualifications and Cost Proposal**  
**Deconstruction and Demolition Services**  
**Muskegon County Land Bank / City of Muskegon Heights**

**Bidder's Name:** \_\_\_\_\_

**Address:** \_\_\_\_\_

**Telephone Number:** \_\_\_\_\_

**E-Mail:** \_\_\_\_\_

The Muskegon County Land Bank / City of Muskegon Heights invites all interested companies and individuals to submit qualifications and a cost proposal for the Hardest Hit Program. A set of conditions, specifications, and requirements are enclosed.

Sealed proposals clearly marked with "**RFP 17- HHFDEMO1-2017**" will be accepted at the **Muskegon County Land Bank**, 173 East Apple Avenue, Suite 104. Muskegon, Michigan 49442 until 3:00 p.m. June 23, 2017.

**No Late Bids will be accepted**

Document published by  
Christopher J. Dean Fire Chief  
City of Muskegon Heights

**RFP 16- HHFDEMO4-2016**  
**Request for Qualifications and Cost Proposal**

**This project is funded through the Michigan Hardest Hit Fund.**

**Project Purpose**

The Muskegon County Land Bank / City of Muskegon Heights is accepting qualifications and cost proposal for the site demolition and removal of four (4) residential structures located in Muskegon Heights, MI 49444

**Bid Packet**

Bid packets will be available starting June 8, 2017. The completed bid packet must be returned to the **Muskegon County Land Bank**, 173 East Apple Avenue, Suite 104. Muskegon, Michigan 49442 until 3:00 p.m. June 23, 2017.

Bid documents may be obtained at [www.cityofmuskegoheights.org](http://www.cityofmuskegoheights.org) or the Builders Exchange of Michigan. A pre-bid voluntary conference will be held on June 19, 2017 at 1:00 PM at Muskegon Heights, City Hall, Council Chambers (2724 Peck, Muskegon Heights, MI). Inquiries can be made by the following means: Phone 231-724-6170 Timothy Burgess or via email at [BurgessTi@co.muskegon.mi.us](mailto:BurgessTi@co.muskegon.mi.us)

No late bids will be accepted. The Muskegon County Land Bank / the City of Muskegon Heights reserves the right to accept or reject any or all bids and reserves the right to waive formalities and to take such actions as it deems necessary in the best interest of Muskegon County Land Bank / the City of Muskegon Heights. Both the Muskegon County Land Bank / City of Muskegon Heights operates on an equal opportunity / affirmative action basis in its bidding policy (Title VII of the Civil Rights Act of 1964, Equal Opportunity Clause, Executive Order 11246, Chapter 60, Subpart A. 60-1.4, Revised Order No. 4)

Christopher J. Dean Fire Chief

Publish: June 8, 2017

**RFP 16- HHFDEMO4-2016**  
**Request for Qualifications and Cost Proposal**

Section I.  
Bid Certification  
(Page 1 of Bid Document)

I certify that this bid is made without prior understanding, agreement or connection with any corporation, firm or person submitting a bid for the same materials, supplies, equipment or service, that it meets or exceeds all specifications contained herein, and is in all respects fair and without collusion or fraud. I understand collusive bidding is a violation of state and federal law and can result in fines, prison sentence, and civil damage awards. I agree to abide by all conditions of this bid, all specifications as stated and certify that I am authorized to sign for the bidder.

Bidder: \_\_\_\_\_

Street Address: \_\_\_\_\_

City/State/Zip Code \_\_\_\_\_

Phone Number: \_\_\_\_\_

FAX: \_\_\_\_\_

E- Mail: \_\_\_\_\_

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

Title: \_\_\_\_\_

Date Certified: \_\_\_\_\_

**Bid Breakdown**

Asbestos Abatement Total: \_\_\_\_\_

Demolition Total: \_\_\_\_\_

Disposal Total: \_\_\_\_\_

Fill: \_\_\_\_\_

Landscaping Total: \_\_\_\_\_

**Total Bid Amount:** \_\_\_\_\_

**RFP 16- HHFDEMO4-2016**  
**Request for Qualifications and Cost Proposal**

**CONFLICT OF INTEREST DISCLOSURE FORM**  
(Page 2 of Bid Document)

For purposes of determining any possible conflict of interest, all bidders/proposers, must disclose if any City of Muskegon Heights or County of Muskegon employee(s), elected officials(s), of if any of its agencies is also an owner, corporate officer, agency, employee, etc., of their business.

Indicate either "yes" (a city employee or county, elected official, or employee also associated with your business), or "no." If yes, give person(s) name(s) and position(s) with your business.

YES \_\_\_\_\_

NO \_\_\_\_\_

NAME(S)

POSITION(S)

NAME(S)	POSITION(S)
_____	_____
_____	_____
_____	_____
_____	_____

FIRM NAME: \_\_\_\_\_

BY (PRINTED): \_\_\_\_\_

BY (SIGNATURE): \_\_\_\_\_

TITLE: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

PHONE NO. \_\_\_\_\_

**RFP 16- HHFDEMO4-2016**  
**Request for Qualifications and Cost Proposal**

**CERTIFICATION REGARDING DEBARMENT, SUSPENSION,  
INELIGIBILITY AND VOLUNTARY EXCLUSION**

(Page 3 of Bid Document)

This certification is required by the regulations implementing Executive Order 12549, Debarment and Suspension, 13 CFR Part 145. The regulations were published as Part VII of the May 26, 1988, *Federal Register* (pages 19160-19211).

Bidder certifies to the best of its knowledge and belief, that it and its principals:

(a)  Are  are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;

(b)  Have  have not within a three-year period preceding award of this bid been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or Local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(c)  Are  are not presently indicted for or otherwise criminally charged by a governmental entity (Federal, State or Local) with commission of any of the offenses enumerated in paragraph (b) above; and

(d)  Have  have not within a three-year period preceding bid had one or more public transactions (Federal, State or Local) terminated for cause or default.

\_\_\_\_\_  
Bidder Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Typed or Printed

\_\_\_\_\_  
Company Name

**RFP 16- HHFDEMO4-2016**  
**Request for Qualifications and Cost Proposal**

**A. General Bid Conditions/Instruction to Bid**

These conditions are an integral part of this bid, and as such, the bidder must comply with them.

1. The prospective bidder must use Local Governmental Units bid documents.
2. Alternatives must be placed on a separate sheet of paper.

**B. Federal and State Regulation Compliance**

1. In accordance with the Housing and Urban Development Act of 1968, as amended (12USC1701 u) and stated in the City of Muskegon Heights, Section 3 Employment Plan 10% of the grant dollars/ contract will be used to directly employ Muskegon Heights residents or businesses in the deconstruction or demolition of buildings funded under this program.
2. At the time of the solicitation, the Prime Demolition Contractor must identify and enter into a partnership with a deconstruction company for the purpose of providing services for this contract. The Prime Demolition Contractor will be responsible for the deconstruction activities on the site. The deconstruction company will be employed and the responsibility of the Prime Demolition Contractor.

**C. Project Submission Schedule**

The payment time or closing dates, as stated in the bid form, shall be required to deliver and complete items after the receipt of the award. Where multiple items appear on a bid request, the bidder shall, unless otherwise stated by the City, show the closing time in each item separately. The payment schedule must be included in and restated in each bid and adhered to as the following:

- |   |                       |
|---|-----------------------|
| 1. Request for Qualifications and Cost Proposal Available to the Public | June 8, 2017          |
| 2. Pre-bid Meeting  | June 19, 2017         |
| 3. Submission of Request for Qualifications and Cost Proposal Due       | June 23, 2017         |
| 4. Bid Awarded by the Muskegon County Land Bank                         | Apx June 27, 2017 APX |
| 5. Work commence by   | July 15, 2017         |
| 6. Demolition Completed   | October 15, 2017      |

If there are any questions concerning the specifications contained in this bid request, please contact Timothy Burgess phone 231-724-6170 or via email at [BurgessTi@co.muskegon.mi.us](mailto:BurgessTi@co.muskegon.mi.us)

The Muskegon County Land Bank / the City of Muskegon Heights reserves the right to accept or reject any and all bid requests, all rights granted to it by law, the right to waive formalities and take such action as it deems necessary in the best interest of the Muskegon County Land Bank / City of Muskegon Heights.

**RFP 16- HHFDEMO4-2016**  
**Request for Qualifications and Cost Proposal**

**D. Bidder/Offeror Representation**

1. Each bidder/offer must sign the bid with his or her signature and shall give his or her full business address on the form provided in this bid.
2. The County of Muskegon and the City of Muskegon Heights operates on an equal opportunity / affirmative action basis in its bidding policy (Title VII of the Civil Rights Act of 1964. Equal Opportunity Clause, Executive Order 11246, Chapter 60, Subpart A, 60-1.4, Revised Order No 4.) Bidding is open to all interested parties, in compliance with national, state and local laws.
3. This award will be made to that responsible bidder whose bid conforms to this solicitation and will be most advantageous to the County and City in price and number of items purchased.

**E. Bid / Offer Qualifications**

**~Proof of qualification must be submitted with bid~**

1. Debit to City or County: No bid shall be accepted, and no contract will be awarded to any person, firm or corporation that is in arrears to the City or County, upon debt or contract that is a defaulter as surety or otherwise, upon any obligation to the City or County, or that is deemed irresponsible or unreliable by the City or County. If requested, bidder/offer shall be required to submit satisfactory evidence that they have a practical knowledge of the particular sale/supply/service bid and that they have the necessary financial resources to provide the proposed supply/service as described in the specifications.
2. Experience: All contractors have a minimum of five (5) years of proven experience providing professional licensed demolition services or similar scope/scale. Failure to provide documented experience may result in disqualification from the bidprocess.

**F. Vendor /Bidder Complaints or Protests**

The Muskegon County Land Bank / City of Muskegon Heights have established administrative procedures for handling bidder complaints in a fair and timely manner.

Step 1: Bidders should inform the Muskegon County Treasure's Office in writing within five days of the incident that he or she has a complaint. The County Treasure will investigate the complaint and make a decision concerning the matter.

Step 2: If the bidder is dissatisfied with the Muskegon County Treasure's reply, an appeal must be made in writing within seven days to the Muskegon County Board of Commissioners

**G. Errors | Omissions | Discrepancies**

Any errors, omissions or discrepancies in the specifications discovered by a prospective bidder shall be brought to the attention of the Muskegon County Land Bank as soon after discovery. Further, the bidder shall not be allowed to take advantage of errors, omissions or discrepancies in the specifications.

**RFP 16- HHFDEMO4-2016**  
**Request for Qualifications and Cost Proposal**

**H. Bid Submission**

Prospective bidders will be expected to allow adequate time for the delivery of their bid by mail. Faxed bids will **not** be accepted.

**I. Bid Awards**

1. No bid award will be made at the time of the bid opening.
2. Individuals submitting bids, who wish to know the results before the award is made, may contact the Muskegon County Land Bank 5 business days following the bid opening.

**J. Termination for Convenience**

The Muskegon County Land Bank / the City of Muskegon Heights may terminate a contract, in whole or in part, whenever the City / County Land Bank determines that such termination is in the best interest of the City / County Land Bank, without showing cause, upon given notice to the contractor.

**K. Termination for Default**

When the bidder/contractor has not performed, or has unsatisfactorily performed the contract, the Muskegon County Land Bank may terminate the contract for default.

Bid conditions/instructions to the bidder, specifications/requirements may become part of the service contract.



**RFP 16- HHFDEMO4-2016**  
**Request for Qualifications and Cost Proposal**

**Section II**  
**Terms and Conditions**

**1. Scope of Services.**

The Contractor shall perform and carry out in a satisfactory and proper manner, as determined by the Local Governmental Units, the following:

- A. Act as Prime Contract on this demolition project.
- B. Perform, partner with or subcontract all deconstruction activities if required
- C. Remove and dispose of asbestos materials in accordance with Environmental Protection Agency, Michigan Occupational Safety and Health Administration and Michigan Department of Environmental Quality regulations.
- D. Demolition and removal of all structures located on property
- E. Break up and removal of all concrete, i.e., basements, driveways, walkways, slabs, etc

**2. Time and Performance.**

The services of the Contractor shall commence by July 15, 2017, and shall be completed by **October 15, 2017**. All requests for payment along with approved completion inspection reports shall be submitted to the Muskegon County Land Bank no later than **October 31, 2017**. A 10% retainage will be held by the Muskegon County Land Bank until all waivers and inspections are submitted.

**3. Relationship Between Parties.**

The Contractor is engaged by the Local Governmental Units only for the purposes and to the extent set forth in this Contract, and his relationship the Local Governmental Units during the term of this contract shall be that of an independent contractor. The Contractor shall be free to dispose of such portion of his entire time, energy, and skill during regular business hours as he is not obligated to devote hereunder to the Local Governmental Units in such manner as he sees fit and to such persons, firms, or corporations as he deems advisable. The Contractor shall not be considered as having employee status or as being entitled to participate in any plans, arrangements, or distributions by the Local Governmental Units pertaining to or in connection with any vacation, sick leave, insurance, retirement, longevity, or similar benefits for the Local Governmental Units' regular employees.

**RFP 16- HHFDEMO4-2016**  
**Request for Qualifications and Cost Proposal**

**4. Insurance**

All Prime and Subcontractors, working under this contract, must include the Local Governmental Units as co-insured and furnish evidence of comprehensive public liability insurance coverage in the amount of **\$2,000,000**. The contractor must also comply with local laws governing the workplace including Workers Compensation Insurance. Unemployment insurance is also required to participate in this project.

The Contractor shall indemnify and hold harmless the Local Governmental Units, its officers and employees from and against all claims, damages, losses and expenses, including attorney fees, arising out of or resulting from the performance of services under this Contract, provided any such claim, damage, loss or expense that is (a) attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property including the loss of use resulting therefrom, and (b) is caused in whole or in part by a negligent act or omission of the Contractor, any subcontractor, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable regardless of whether or not it is caused in part by a party indemnified hereunder.

**5. Permits and Codes**

The Prime and Subcontractor shall obtain and pay for all permits and license necessary for the completion and execution of the work and labor performed. All work performed must conform to applicable local codes and requirements.

**6. Assignment of Contract**

The Prime and Subcontractor shall not assign this contract without the prior written consent of the Local Governmental Units.

**7. Work Force**

**A. Project Management**

The demolition contractor will act as the prime contractor for the project. He / She, herein called the prime demolition contractor, will be responsible for all activities on the demolition site.

**RFP 16- HHFDEMO4-2016**  
**Request for Qualifications and Cost Proposal**

**8. Penalty for Unexcused Delays**

If the work is not completed within the time stipulated in this contract, including any time for excusable delays as provided below, the Contractor and or his sureties shall be liable for and shall pay to the Local Governmental Units the sum of \$200 for each calendar day of the delay as a fixed surcharge to cover the costs of additional administration and re-inspection, commencing from the time stipulated for the completion until such work is satisfactorily completed and accepted. Any such surcharge levied shall be certified by Muskegon County Land Bank and deducted from the final payment.

The rights of the Contractor to proceed shall not be terminated nor shall the Contractor be charged with surcharge for any delays in the completion of work due to:

- a. Any acts of government, including controls or restrictions upon or requisitioning of materials, equipment, tools or labor by reason of war, national defense or other national emergency.
- b. Causes not responsible or foreseeable by the parties to this contract at the time of execution of this contract, which are beyond the control and without fault or negligence of the Contractor, such as extreme weather conditions, fires, epidemic, quarantine strikes, freight embargo, and acts of another contractor in the performance of some other contract. Note: Seasonal load and speed restrictions are not considered an unforeseeable item or covered as a weather limitation.

**9. Default**

In the event of default by the Contractor in the observance or performance of any covenant, condition, or agreement on his part to be observed or performed under this Contract, and the continuance of such default for seven (7) days after written notice thereof by the City to the Contractor. Any notice given hereunder shall be sufficiently given if delivered to the Contractor personally or mailed to him by United States Postal Service with certified mail/ return receipt requested at the address set forth in the heading of this contract.

**10. Compensation**

- A. The Local Governmental Units shall pay compensation to the Contractor for his services under this contract as follows:
  1. Compensation for completion of the work shall be payable monthly upon a billing from the Contractor describing in detail the services performed by the Contractor during the preceding month.
  2. Local Governmental Units will only be billed monthly for each completed demolition that has passed city inspections.

**RFP 16- HHFDEMO4-2016**  
**Request for Qualifications and Cost Proposal**

3. It is expressly understood and agreed that in no event will the total compensation to be paid hereunder exceed the maximum sum for all services under this Contract.

**11. Michigan Law**

The laws of the State of Michigan shall govern this Agreement. Any litigation regarding this Agreement or its contents shall be filed in the County of Muskegon, if in State court, or in the Federal District Court nearest to Muskegon County, if in Federal Court.

**12. Terms and Conditions**

The terms and conditions used in this Agreement shall be given their common and ordinary definition and will not be construed against either party.

**13. Severability**

If anyone or more of the provisions contained herein shall for any reason be held to be invalid, illegal or unenforceable in any respect, then such provision or provisions shall be deemed severable from the remaining provisions hereof, and such invalidity, illegality or unenforceability shall not affect any other provisions hereof, and this Agreement shall be construed as if such invalid, illegal or unenforceable provision has never been contained herein.

**14. Surety: Bid and Performance Bond**

**Bidders are required to submit proof of a bid bond for 100% of the project cost at the time the bid is submitted**

Within five business days of being awarded the project, contractors must secure a performance bond in an amount equal to one hundred percent (100%) of the total contract amounts. Bonds must be issued by a bona fide company authorized to do business in the State of Michigan and to comply with state regulations. The contractor the performance bond is to ensure abatement of potential impacts to public health and safety resulting from demolition as well as ensure general cleanup of the demolition site.

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**RFP 16- HHFDEMO4-2016  
Request for Qualifications and Cost Proposal**

**Section IV  
Work Elements**

**A. Work Site / Structure Addresses**

<b>Muskegon Heights</b>	<b>Muskegon Heights</b>
All are 49444	All are 49444
2228 Riordan St	2321 Hoyt St
2529 Ray St	3025 Highland St
2140 McIlwraith St	2037 Elwood St
2145 Sanford St	276 Delano Ave
2116 Jefferson St	15 Crescent Ave
3128 Glendale St	409 Barney Ave
3225 Glendale St	3337 9th
2113 Howden St	3336 8th
227 E Hackley Ave	3200 7th
2327 Maffett St	3136 7th
2533 Reynolds St	2010 7th
2917 Wood St	3213 5th
2045 Superior St	
3320 Sanford St	
250 Rotterdam Ave	
2340 Riordan	<b>Muskegon</b>
2633 Reynolds St	All are 49442
2244 Reynolds St	862 Stevens
2341 Reynolds St	139 Myrtle
2345 Reynolds St	325 Iona
3027 Peck St	430 Allen
2145 Peck St	333 Catherine
2910 Mason Blvd	252 E Isabella
297 Maplewood Ave	618 Catawba
2521 Maffett St	
2340 Leahy St	
	<b>Dalton</b>
	Both are 49457
	6622 Poppy Way
	6085 Main St

**See attached asbestos surveys for more detailed information**

**RFP 16- HHFDEMO4-2016**  
**Request for Qualifications and Cost Proposal**

**B. General Statement of Work**

**Requirements The principal items of work**

**consist of:**

1. Remove asbestos removal and disposal as required by law.
2. Deconstruction of the structure when appropriated.
3. Demolition of all structures located on the property.
4. Break up and remove all concrete, i.e., driveways, walkways, slabs, etc.
5. Remove the basement and footings.
6. Removal of lead-based paint-containing materials according to the appropriate regulations.
7. Fill basement with clean backfill with 3 inches of clean topsoil and **seed with clover**.
  - a. Clover shall be evenly applied at a rate of 8 lbs of seed per 50x100 city lot
  - b. Approved types of clover include (common name): New Zealand White Clover, Ladino Clover or Dutch White or Sweet Clover. (A 50% -50% blend of any two approved clover types is preferred)
8. Top soil requirements:
  - a. Topsoil shall contain not less than 3% or more that 20% organic matter, by weight as determined by loss-on-ignition of oven-dried samples in accordance with ATM T-6.
  - b. Organic material shall be decomposed and free of wood.
9. Protect all trees not being removed as part of the project.
10. Remove **all** trash and debris on the work site.

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**RFP 16- HHFDEMO4-2016**  
**Request for Qualifications and Cost Proposal**

**C. Technical Specifications**

**Before commencing demolition**

**work:**

1. Execute rodent extermination procedures as specified by and to the satisfaction of the Muskegon County Health Authority.
2. Disconnect, or arrange for the disconnection of, utility service connections, such as water, sewers, steam, and telephone, to building to be demolished in accordance
  - a. **Note:** Natural gas and electrical disconnects have be done before the pre-bid conference and cost should **not** be included in the bid. However, the contractor is responsible for confirming service disconnections before commencing work.
3. Seal storm and sanitary sewers leading from structures to be demolished. (Note: Sanitary Sewer lateral to be plugged within five (5) feet of property line.) Also, all water services to be cut at curb box and plugged. These services cut and caps must inspected in accordance with local ordinances.
4. Preserve in operating condition active utilities traversing the project site; protect property, including but not limited to mains, manholes, catch basins, valve boxes, poles, gigs, and other appurtenances.
5. Provide adequate time for deconstruction contractors to evaluate and remove salvageable materials and equipment from the structure. (if applicable)
6. Assist when necessary the deconstruction contractor in removal of salvageable materials.

**During demolition:**

1. Provide adequate protection to persons and property.
2. Execute the work in such a manner as to avoid interference with the use of or passage to and from adjoining buildings and facilities.
3. Except as otherwise shown or specified, demolish structures and foundations, and remove complete steps, posts, porches, and similar construction.
4. Demolish masonry walls in small sections.

**RFP 16- HHFDEMO4-2016**  
**Request for Qualifications and Cost Proposal**

5. Remove, regardless of elevation, all floor construction over basements and cellars.
6. Remove structural steel, cast iron, and heavy timbers by individual pieces and lower carefully (if applicable).
7. Remove partitions, stairways, furnaces, piping, apparatus, and debris from within existing basements.
8. Wet down masonry thoroughly during demolition; prevent the spread of dust; provide water and necessary connections, therefore.
9. Do no blasting on the project site.
10. Provide substantial barricades around all basements and cellars, as soon as such openings are uncovered, adequate to block access, and to afford protection to workers and the public.
11. Leave no demolished material of any sort in any basement.
12. Remove from the site rubbish and debris found thereon and or resulting from the work of demolition. At completion, leave the site in a safe and clean condition, free of materials or equipment.
13. It shall be the Contractor's responsibility to properly dispose of **all** demolition materials. This includes regulated materials (i.e. asbestos, mercury, lead base paint, etc).
14. Properly grade soil to match existing surrounding neighborhood topography.

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**RFP 16- HHFDEMO4-2016**  
**Request for Qualifications and Cost Proposal**

**Section V**  
**Bid Submission**

The following information must be included in the bid package. Any omission of the requested information may cause you to forfeit the bid.

- Page 1: Bid certification
- Page 2: Conflict of interest disclosure form
- Page 3: Certification regarding debarment and suspension
- Page 4: Copy of deconstruction and or residential demolition license
- Page 5: Proof of comprehensive liability insurance
- Page 6: Total cost proposal for deconstruction and demolition of 4 units.
- Page 8: **Per location itemization of the bid**
  
- Page 7: Copy of bid bond**
  
- Page 8: Copies of asbestos abatement contractor license(s).
  
- Pages 9+ Business History/ Experience in Deconstruction and Demolition. Project list references, with contact person's name and telephone numbers. \*\* Evidence of a minimum of five (5) years of proven experience providing professional licensed demolition services or similar scope/scale must be provided in this section.

Upon project award winning bidder may be required to produce the following documents to meet MSHDA audit requirements.

Blight Elimination Audit Sheet

Eligibility Requirements

Partner: \_\_\_\_\_ Contractor: \_\_\_\_\_

Audited By: \_\_\_\_\_

Date: \_\_\_\_\_

YES / NO	Requirements	Notes
	Evidence of Financial Stability ( 2 Year Tax Return)	
	Evidence of Licenses and certification (SOM or Neshap)	
	Evidence of Insurance (Commercial > than 2 million, Employee > 500k)	
	Automobile Liability (must be > than a million)	
	Current Certificates <u>must</u> be on file in partners office at all times.	
	Evidence of Legal Standing (Certificate from LARA or Articles of organization)	
	A complete list of all contractors' board/officers	
	Any operation agreements (current copies)	
	Evidence of Experience (contractors must have min. 5 years licensed experience.)	
	Bid and Performance Bond (Bond = to 100% of total contractor amounts and issued from an authorized business with SOM)	
	Partners must ensure that there is no State or Federal debarment/suspension or violations of all contractors	
	State and Local Licenses and permits for all workers (Partners must ensure that all Contractors and Sub Contractors meet all state and local ordinances through documentation.)	
	Communities proposing demolition outside the city limits must submit documentation showing that local officials agree in demolition.	

Muskegon Heights	Asbestos / Environmental	Demolition	Backfill / Landscape	Other	Total
2228 Riordan St					
2529 Ray St					
2140 McIlwraith St					
2145 Sanford St					
2116 Jefferson St					
3128 Glendale St					
3225 Glendale St					
2113 Howden St					
227 E Hackley Ave					
2327 Maffett St					
2533 Reynolds St					
2917 Wood St					
2045 Superior St					
3320 Sanford St					
250 Rotterdam Ave					
2340 Riordan					
2633 Reynolds St					
2244 Reynolds St					
2341 Reynolds St					
2345 Reynolds St					
3027 Peck St					
2145 Peck St					
2910 Mason Blvd					
297 Maplewood Ave					
2521 Maffett St					
2340 Leahy St					
2321 Hoyt St					
3025 Highland St					
2037 Elwood St					
276 Delano Ave					
15 Crescent Ave					
409 Barney Ave					
3337 9th					
3336 8th					
3200 7th					
3136 7th					
2010 7th					
3213 5th					
Muskegon					
862 Stevens					
139 Myrtle					
325 Iona					
430 Allen					
333 Catherine					
252 E Isabella					
618 Catawba					
Dalton					
6622 Poppy Way					
6085 Main St					

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P.O. Box 13216  
Lansing, MI 48901  
Phone: 888.449.4566  
Fax: 888.448.8739  
www.redcedarconsulting.net

May 8, 2017

Mr. Tim Burgess  
Muskegon County Land Bank  
Land Bank Coordinator  
173 E. Apple Avenue, Suite 104  
Muskegon, MI 49442

***RE: Asbestos Containing Material and Hazardous Materials Inspection  
15 Crescent Ave., Muskegon Heights, MI 49444  
Parcel ID: 61-26-635-270-0005-00***

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 15 Crescent Ave., Muskegon Heights, Michigan (Subject Property). This inspection was completed at the request of the Muskegon County Land Bank to comply with the United States Environmental Protection Agency (USEPA) requirements for demolition and renovation set forth under the National Emissions Standards for Hazardous Air Pollutants (NESHAP, 40 CFR Part 61). This inspection was also completed to comply with the Occupational Safety and Health Administration (OSHA) Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

### **SUBJECT PROPERTY**

The Subject Property is comprised of a .17 acre residential parcel which contains an approximate 1,878 square foot residential building (the Building) constructed in 1920. The Building was constructed on a concrete block basement with two aboveground floors. The exterior walls of the Building were finished with asphalt siding while the roof was sealed with asphalt shingles. The Building can be further divided into a front entry, living/dining room, kitchen, bath, two bedrooms and rear entry on the first floor while the second floor contains a living/dining room, kitchen, bath and two bedrooms.

### **VISUAL INSPECTION AND SAMPLING**

#### **Asbestos Containing Materials Inspection**

Aaron Paquet and Darrell DeMasters of Red Cedar Consulting (Red Cedar), accredited State Of Michigan/EPA Asbestos Building Inspectors (Accreditation Numbers A30955 and A31159, respectively) who completed training per the Michigan Asbestos Workers Accreditation Act 440, completed an inspection of the Subject Property on April 20, 2017 for suspected asbestos containing building materials.

This inspection, and subsequent sample collection was completed in accordance with the USEPA Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763) assessment and sampling protocol.

During the completion of the inspection, each area of the Subject Property was visually inspected for asbestos containing building materials (ACBM). Following the completion of the visual inspection, Red Cedar staff identified each suspect area of friable and non-friable ACBM and sorted them into one of three homogenous categories for sampling purposes. AHERA defines friable as a material that when dry, may be crumbled, pulverized, or reduced to powder by hand pressure. A homogenous area is defined by OSHA as an area of surfacing, thermal system insulation (TSI) or miscellaneous material that is uniform in color and texture. Surfacing materials are most commonly found in sprayed-on, troweled-on or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members. TSI refers to materials applied to pipes, fittings, boilers, ductwork, or other components to prevent heat loss or gain, or condensation. Any material that does not fall under the surfacing or TSI category, such as floor tile, drywall, and acoustical ceiling tile are placed into the miscellaneous materials category.

Following the completion of the visual inspection, Red Cedar staff identified the following materials as suspect ACBM:

- Shingle Siding
- Roofing Material
- Linoleum
- 1'x1' Ceiling Tile
- 2'x4' Ceiling Tile
- 12"x12" Vinyl Tile
- 9"x9" Vinyl Tile
- Drywall & Joint Compound
- Glazing
- Plaster
- Surfacing Material

Red Cedar staff collected thirty two samples of suspect ACBM separated into thirteen distinct homogenous groups for laboratory analysis. Samples were collected and submitted to APEX Research Inc. Laboratories (APEX) (Accreditation Number 102118-0) for laboratory analysis. Analysis was completed utilizing polarized light microscopy (PLM) which is the Environmental Protection Agency (EPA) approved method for analysis of bulk materials for asbestos. PLM analysis completed pursuant to method (EPA 600/M4-82-020) identifies asbestos fiber bundles by the visual properties displayed when the sample is treated with various dispersion staining liquids. The laboratory report completed following the sample analysis indicates if asbestos is present, and at what percentage along with a description and percentage of other fibrous and non-fibrous materials and sample color. Chain-of-custody documentation was followed from sample collection through shipping and receiving of the samples at the designated laboratory. The documentation assures that samples will meet the quality assurance/quality control measures defined by AHERA. The laboratory analytical report prepared by APEX for the thirty two samples is included as Attachment A.

## **Hazardous Materials Inspection**

On April 20, 2017 the Subject Property was also inspected for the presence of hazardous materials which include but are not limited to polychlorinated biphenyls (PCBs) and potential mercury containing equipment and any items or containers that may contain or be classified as a hazardous or regulated material. Each material, if identified, was documented along with the approximate location. Any materials identified as hazardous are included in Table 1.

## **INSPECTION RESULTS AND RECOMMENDATIONS**

During the completion of the asbestos inspection, thirty two samples of suspect ACM were collected and are documented in Table 2 along with the Red Cedar sample number, description, friability, material type, ACM classification, sample location, material quantity and laboratory analytical results.

ACM, as defined by the USEPA NESHAP is “any material containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763 Section 1, Polarized Light Microscopy”.

Friable ACM is defined by NESHAP as any material containing more than 1 percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Friable ACM is a concern due the ease of unintentionally disturbing the ACM which may result in “visible emissions” which is known as a Fiber Release Episode.

Non-friable asbestos-containing material is defined as “material containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACM’s are separated into Category I and Category II ACM. Category I ACM is any asbestos containing packing’s, gaskets, resilient floor coverings (vinyl floor tile and linoleum are examples of these) and asphalt roofing products. Category II ACM is stated by NESHAP as any material excluding Category I non-friable ACM such as drywall, plaster or fiberboard insulation.

### **Presumed Asbestos Containing Material**

Presumed Asbestos Containing Materials (PACM) are suspect surfacing, TSI and miscellaneous materials found in buildings constructed prior to 1980 which are classified as and due to the age of the structure, are assumed to be ACM and do not require sample collection and analysis. OSHA dictates that PACM may be “rebutted” following a complete inspection pursuant to AHERA protocol.

The HVAC Duct Wrap located in the Building was classified as PACM due to the age of the structure and samples were not collected.

Table 3 lists the location, material description, friability, condition, material type (surfacing, thermal or miscellaneous) and approximate quantity of all PACM documented at the Subject Property.

Table 4 provides a summary all ACM documented at the Subject Property which includes the material location, description, and approximate quantity.

### **Friable ACM's**

A window glazing sample collected from a window in the 1<sup>st</sup> fl. Kitchen was found to contain up to 1.25% asbestos following analysis. The assessment to quantify the extent of this material identified seventeen windows at the following locations that would fall into the same homogenous group. The locations of the windows are listed below:

- Kitchen (1 window 34" wide x 60" tall)
- Kitchen (1 window 48" wide x 38" tall)
- W Bedroom (2 windows 44" wide x 60" tall)
- SE Bedroom (1 window 44" wide x 60" tall)
- Living Room (2 windows 44" wide x 60" tall)
- Front Entry (1 window 44" wide x 24" tall)
- 2nd Fl. Kitchen (1 window 34" wide x 62" tall)
- 2nd Fl. Living/Dining Room (1 window 40" wide x 62" tall)
- 2nd Fl. N Bedroom (1 window 40" wide x 62" tall)
- 2nd Fl. W Bedroom (1 window 40" wide x 54" tall)
- 2nd Fl. Bathroom (1 window 34" wide x 62" tall)
- 2nd Fl. Stairwell (1 window 24" wide x 24" tall)
- Basement (3 windows 28" wide x 24" tall)

Duct Wrap identified in the building in conjunction with the forced air heating system is classified as friable ACM. The visual assessment to quantify the extent of this material identified HVAC Duct Wrap at the following locations within the basement, first and second floors:

- Living (1 register, 10 sq. ft.)
- Kitchen (1 register, 10 sq. ft.)
- SE Bedroom (1 register, 10 sq. ft.)
- W Bedroom (1 register, 10 sq. ft.)
- 2<sup>nd</sup> Fl. Living Room (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- 2<sup>nd</sup> Fl. Bathroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- 2<sup>nd</sup> Fl. N Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- Basement (misc. HVAC wrap on Ductwork, 10 sq. ft.)
- Basement (misc. HVAC wrap on Electrical, 4 sq. ft.)

### **Category I ACM**

No Category I ACM was identified during the completion of this inspection.

### **Category II ACM**

Plaster samples, collected from the Living Room were each found to contain up to 1.5% asbestos following analysis. The assessment to quantify the extent of this material identified approximately 7,941 sq. ft. of plaster within the Building.



## **RECOMMENDATIONS**

### **Asbestos Containing Materials**

HVAC material identified in the Building system and listed below is classified as friable ACM and should be removed prior to any renovation/demolition activities.

- Living (1 register, 10 sq. ft.)
- Kitchen (1 register, 10 sq. ft.)
- SE Bedroom (1 register, 10 sq. ft.)
- W Bedroom (1 register, 10 sq. ft.)
- 2<sup>nd</sup> Fl. Living Room (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- 2<sup>nd</sup> Fl. Bathroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- 2<sup>nd</sup> Fl. N Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- Basement (misc. HVAC wrap on Ductwork, 10 sq. ft.)
- Basement (misc. HVAC wrap on Electrical, 4 sq. ft.)

Friable asbestos containing window glazing was identified on seventeen windows throughout the Building. The locations of these windows that should be abated prior to demolition/renovation activities are listed below:

- Kitchen (1 window 34" wide x 60" tall)
- Kitchen (1 window 48" wide x 38" tall)
- W Bedroom (2 windows 44" wide x 60" tall)
- SE Bedroom (1 window 44" wide x 60" tall)
- Living Room (2 windows 44" wide x 60" tall)
- Front Entry (1 window 44" wide x 24" tall)
- 2nd Fl. Kitchen (1 window 34" wide x 62" tall)
- 2nd Fl. Living/Dining Room (1 window 40" wide x 62" tall)
- 2nd Fl. N Bedroom (1 window 40" wide x 62" tall)
- 2nd Fl. W Bedroom (1 window 40" wide x 54" tall)
- 2nd Fl. Bathroom (1 window 34" wide x 62" tall)
- 2nd Fl. Stairwell (1 window 24" wide x 24" tall)
- Basement (3 windows 28" wide x 24" tall)

Please note: Other different sized windows are located throughout the Building but these windows were assessed and found to be constructed either without window glazing or were sampled and found to not contain asbestos and therefore are not required to be removed.

Plaster identified on the interior of the Building must be abated prior to completion of any renovation/demolition activities at the Subject Property. Any Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations must be properly abated.

Please note: The location of samples obtained during this inspection were in a random fashion and areas that were not identified during this inspection may be damaged or have become damaged since the inspection was completed. If Category I or Category II friable materials are discovered prior to or during the demolition/renovation process, these materials must be abated prior to commencement of any demolition/renovation activities at the Subject Property.

### **Hazardous Materials**

Hazardous Materials identified at the Subject Property and documented in Table 1 which require proper removal and disposal consist of the following items:

- Smoke Detector (2)
- Thermostat (1)
- 2' Fluorescent Light (Fixture and Ballast Only) (2)
- 2' Fluorescent Bulb (2)
- Gallon Container Misc. Paint (3)

### **REGULATORY REQUIREMENTS**

A Notification of Intent to Renovate/Demolish form must be filed with the Michigan Department of Environmental Quality- Air Quality Division at least 10 working days prior to any renovation or demolition activities at a site.

The Notification of Intent to Renovate/Demolish form must also be completed and submitted to the MIOSHA-Asbestos Program whenever demolition, encapsulation and/or renovation activities at a site involving greater than ten lineal feet and/or fifteen square feet of ACM will be completed.

Regulated asbestos containing materials per NESHAP (40 CFR Part 61) which falls into any of the following categories are ACM's that must be removed prior to any renovation/demolition activities at the Subject Property.

- Friable asbestos material.
- Category I non-friable ACM that has become friable.
- Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading.
- Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations.

Asbestos abatement should only be performed by a certified asbestos abatement contractor licensed to complete abatement work. The contractor must also follow the standards and requirements set forth per the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61).

Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-26-635-270-0005-00

Additional information regarding the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61) can be obtained by contacting the associated agency below.

NESHAP Asbestos Program  
Department of Environmental Quality  
Phone: 517-284-6777

MIOSHA-CSHD-Asbestos Program  
State of Michigan  
Phone: 517-284-7680  
Email: asbestos@michigan.gov


**DISCLAIMER**

Red Cedar Consulting performed destructive testing methods in an attempt to access and inspect all areas of the Building. Unfortunately, due to the age of construction along with multiple additions/renovations that may have been completed on the Building, additional inspections may be required if suspect ACM material not documented within this report is encountered during renovation/demolition activities.

This report was prepared at the request and for exclusive use by the Muskegon County Land Bank and may not be reproduced or sold without written permission from Red Cedar Consulting.

We appreciate the opportunity to provide the requested services. Please contact us at (888) 449-4566 with any questions or concerns.

Sincerely,  
**Red Cedar Consulting**



Aaron Paquet  
Michigan/EPA Certified Asbestos Building Inspector  
(A30955)

Red Cedar Consulting

***Attachment 1***  
***APEX Research Laboratory Analytical Results***



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 15 Crescent Ave

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69724  
Date Collected: 04/20/17  
Date Received: 04/21/17  
Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69724 - 01 Cust. #: CA-HM-01A Material: Shingle Siding Location: Appearance: black, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 65% Other - 35%
Lab ID #: 69724 - 02 Cust. #: CA-HM-01B Material: Shingle Siding Location: Appearance: black, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 65% Other - 35%
Lab ID #: 69724 - 03 Cust. #: CA-HM-02A Material: Roofing Material Location: Appearance: black, fibrous, homogenous Layer: 1 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Other - 70%

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



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Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69724 - 03a Cust. #: CA-HM-02A Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 69724 - 03b Cust. #: CA-HM-02A Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 3 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 69724 - 03c Cust. #: CA-HM-02A Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 4 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Other - 70%

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Robert T. Letarte Jr., Laboratory Director

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Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69724 - 04 Cust. #: CA-HM-02B Material: Roofing Material Location: Appearance: black, fibrous, homogenous Layer: 1 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 69724 - 04a Cust. #: CA-HM-02B Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 69724 - 04b Cust. #: CA-HM-02B Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 3 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Other - 70%

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Robert T. Letarte Jr., Laboratory Director

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Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69724 - 04c Cust. #: CA-HM-02B Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 4 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 69724 - 05 Cust. #: CA-HM-03A Material: 12x12 Tan VFT Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69724 - 05a Cust. #: CA-HM-03A Material: Mastic Location: Appearance: clear, nonfibrous, homogenous Layer: 2 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69724 - 05b Cust. #: CA-HM-03A Material: Flooring Location: Appearance: yellow, fibrous, nonhomogenous Layer: 3 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 69724 - 05c Cust. #: CA-HM-03A Material: Flooring Location: Appearance: blue, fibrous, nonhomogenous Layer: 4 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 69724 - 06 Cust. #: CA-HM-03B Material: 12x12 Tan VFT Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69724 - 06a Cust. #: CA-HM-03B Material: Mastic Location: Appearance: clear, nonfibrous, homogenous Layer: 2 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69724 - 06b Cust. #: CA-HM-03B Material: Flooring Location: Appearance: yellow, fibrous, nonhomogenous Layer: 3 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 69724 - 06c Cust. #: CA-HM-03B Material: Flooring Location: Appearance: blue, fibrous, nonhomogenous Layer: 4 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%

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

Robert T. Letarte Jr., Laboratory Director

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Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69724 - 07 Cust. #: CA-HM-04A Material: 12x12 Grey VFT Location: Appearance: beige,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69724 - 07a Cust. #: CA-HM-04A Material: Mastic Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69724 - 08 Cust. #: CA-HM-04B Material: 12x12 Grey VFT Location: Appearance: beige,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> 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.



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Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69724 - 08a Cust. #: CA-HM-04B Material: Mastic Location: Appearance: clear, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69724 - 09 Cust. #: CA-HM-05A Material: 1x1 White Ceiling Tile, Random Holes Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 95% Other - 5%
Lab ID #: 69724 - 10 Cust. #: CA-HM-05B Material: 1x1 White Ceiling Tile, Random Holes Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 95% Other - 5%

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



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Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69724  
Date Collected: 04/20/17  
Date Received: 04/21/17  
Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69724 - 11 Cust. #: CA-HM-06A Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69724 - 11a Cust. #: CA-HM-06A Material: Joint Compound Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69724 - 12 Cust. #: CA-HM-06B Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 15 Crescent Ave

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69724  
Date Collected: 04/20/17  
Date Received: 04/21/17  
Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69724 - 12a Cust. #: CA-HM-06B Material: Joint Compound Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69724 - 13 Cust. #: CA-HM-07A Material: 1x1 White Textured Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 95% Other - 5%
Lab ID #: 69724 - 14 Cust. #: CA-HM-07B Material: 1x1 White Textured Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 95% Other - 5%

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

Robert T. Letarte Jr., Laboratory Director

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Project: 15 Crescent Ave

**Report To:**  
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ARI Report # 17-69724  
Date Collected: 04/20/17  
Date Received: 04/21/17  
Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69724 - 15 Cust. #: CA-HM-08A Material: Window Glazing Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 1.25%  POINT COUNT RESULT	Other - 98.75%
Lab ID #: 69724 - 16 Cust. #: CA-HM-08B Material: Window Glazing Location: Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69724 - 17 Cust. #: CA-HM-09A Material: Gray Marble Linoleum Location: Appearance: grey, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 15 Crescent Ave

**Report To:**  
Mr. Aaron Paquet  
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P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69724  
Date Collected: 04/20/17  
Date Received: 04/21/17  
Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69724 - 18 Cust. #: CA-HM-09B Material: Gray Marble Linoleum Location: Appearance: grey, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 69724 - 19 Cust. #: CA-HM-10A Material: 9x9 White Speckle VFT Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69724 - 19a Cust. #: CA-HM-10A Material: Mastic Location: Appearance: brown, nonfibrous, homogenous Layer: 2 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0





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## Test Method, Polarized Light Microscopy (PLM)

Project: 15 Crescent Ave

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P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69724  
Date Collected: 04/20/17  
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Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69724 - 19b Cust. #: CA-HM-10A Material: Felt Location: Appearance: black, fibrous, homogenous Layer: 3 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 69724 - 19c Cust. #: CA-HM-10A Material: Adhesive Location: Appearance: brown, nonfibrous, homogenous Layer: 4 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69724 - 20 Cust. #: CA-HM-10B Material: 9x9 White Speckle VFT Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 15 Crescent Ave

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Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69724  
Date Collected: 04/20/17  
Date Received: 04/21/17  
Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69724 - 20a Cust. #: CA-HM-10B Material: Mastic Location: Appearance: brown,nonfibrous,homogenous Layer: 2 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69724 - 20b Cust. #: CA-HM-10B Material: Felt Location: Appearance: black,fibrous,homogenous Layer: 3 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 69724 - 20c Cust. #: CA-HM-10B Material: Adhesive Location: Appearance: brown,nonfibrous,homogenous Layer: 4 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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ARI Report # 17-69724  
Date Collected: 04/20/17  
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Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69724 - 21 Cust. #: CA-HM-11A Material: 2x4 White Smooth Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 95% Other - 5%
Lab ID #: 69724 - 22 Cust. #: CA-HM-11B Material: 2x4 White Smooth Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 95% Other - 5%
Lab ID #: 69724 - 23 Cust. #: CA-HS-01A Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Robert T. Letarte Jr., Laboratory Director

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ARI Report # 17-69724  
Date Collected: 04/20/17  
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Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69724 - 23a Cust. #: CA-HS-01A Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>YES</b> Chrysotile - 1.50%  POINT COUNT RESULT	Cellulose - 2% Other - 96.50%
Lab ID #: 69724 - 24 Cust. #: CA-HS-01B Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69724 - 24a Cust. #: CA-HS-01B Material: Plaster Base Coat Location: Appearance: Layer: 2 of 2	Asbestos Present:  NOT ANALYZED	

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ARI Report # 17-69724  
Date Collected: 04/20/17  
Date Received: 04/21/17  
Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69724 - 25 Cust. #: CA-HS-01C Material: Plaster Texture Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69724 - 25a Cust. #: CA-HS-01C Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69724 - 25b Cust. #: CA-HS-01C Material: Plaster Base Coat Location: Appearance: Layer: 3 of 3	Asbestos Present:  NOT ANALYZED	

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Lansing, MI 48901

ARI Report # 17-69724  
Date Collected: 04/20/17  
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Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69724 - 26 Cust. #: CA-HS-01D Material: Plaster Texture Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69724 - 26a Cust. #: CA-HS-01D Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69724 - 26b Cust. #: CA-HS-01D Material: Plaster Base Coat Location: Appearance: Layer: 3 of 3	Asbestos Present:  NOT ANALYZED	

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ARI Report # 17-69724  
Date Collected: 04/20/17  
Date Received: 04/21/17  
Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69724 - 27 Cust. #: CA-HS-01E Material: Plaster Texture Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69724 - 27a Cust. #: CA-HS-01E Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69724 - 27b Cust. #: CA-HS-01E Material: Plaster Base Coat Location: Appearance: Layer: 3 of 3	Asbestos Present:  NOT ANALYZED	

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ARI Report # 17-69724  
Date Collected: 04/20/17  
Date Received: 04/21/17  
Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69724 - 28 Cust. #: CA-HS-01F Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69724 - 28a Cust. #: CA-HS-01F Material: Plaster Base Coat Location: Appearance: Layer: 2 of 2	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69724 - 29 Cust. #: CA-HS-01G Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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ARI Report # 17-69724  
Date Collected: 04/20/17  
Date Received: 04/21/17  
Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69724 - 29a Cust. #: CA-HS-01G Material: Plaster Base Coat Location: Appearance: Layer: 2 of 2	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69724 - 30 Cust. #: CA-HS-02A Material: Surfacing Material Location: Appearance: white, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Vermiculite - 5% Other - 93%
Lab ID #: 69724 - 31 Cust. #: CA-HS-02B Material: Surfacing Material Location: Appearance: white, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Vermiculite - 5% Other - 93%

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Robert T. Letarte Jr., Laboratory Director

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Date Collected: 04/20/17  
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Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69724 - 32 Cust. #: CA-HS-02C Material: Surfacing Material Location: Appearance: white, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Vermiculite - 5% Other - 93%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

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NVLAP Lab Code 102118-0

Apex # **69724**

1 of 3

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189  
 Phone: 734-449-9990  
 E-mail: apexresearch@chartermi.net Fax: 734-449-9991



Client Name: Red Cedar Consulting

Date of Survey: 4-20-17

Address: PO Box 13216  
 Lansing, MI 48901

Project: 15 Barrett Ave

City, St., Zip: Lansing, MI 48901

Project #:

Phone: (888) 449-4566 Fax: (888) 448-8739

Contact Person: Aaron Paquet

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM.  
 apexresearch@redcedarconsulting.net

Rush 24 hour

48 hour 72 hour

Other: 5 days All Samples

Asbestos: Bulk  Wipe  Point Count  PCM   
 Lead: Bulk  Wipe  Air  Paint  Soil   
 Mold: Bulk  Tape  BioSIS  Other  Viable   
 TEM: AHERA 7400  Bulk/NOB  EPA Level II

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	CA-HH-01A	Sample Decking			
2	CA-HH-01B	..j			
3	CA-HH-02A	Roofing Material			
4	CA-HH-02B	..j			
5	CA-HH-03A	12x12 Tan Suspend VET			
6	CA-HH-03B	..			
7	CA-HH-04A	12x12 Gray VET			
8	CA-HH-04B	..			
9	CA-HH-05A	1x1 white CT w/Random holes			
10	CA-HH-05B	..			
11	CA-HH-06A	Waywell to Spirit Compound			

RECEIVED

Relinquished by: [Signature] Received by: [Signature]

Relinquished by: [Signature] Received by: [Signature]

Date: 4-20-17

Date: 4-20-17

69724

2 of 3

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

E-mail: apexresearch@chartermi.net Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-20-17

Project: 15 Cement Base

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM, apaquet@redcedarconsulting.net

Rush 24 hour

48 hour 72 hour

Other: 5 day  TTP All Samples

Asbestos: Bulk  x Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_

Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_

Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BioSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_

TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	CA-HM-06B	Aluminum Joint Compound			
13	CA-HM-07A	1x9 White textured CT			
14	CA-HM-07B	" " " "			
15	CA-HM-08A	Aluminum Siding			
16	CA-HM-08B	" " " "			
17	CA-HM-09A	Heavy Metal Sinterman			
18	CA-HM-09B	" " " "			
19	CA-HM-10A	3x9 White speckle VET			
20	CA-HM-10B	" " " "			
21	CA-HM-11A	2x4 white sinterman CT			
22	CA-HM-11B	" " " "			

Relinquished by: [Signature] Received by: UTS

Date: 4-20-17 Date: 4-26-17

Relinquished by: [Signature]

Date: APR 21 2017

RECEIVED

Received by: \_\_\_\_\_

Date: \_\_\_\_\_

69724

343

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990



E-mail: apexresearch@chartermi.net

Fax: 734-449-9991

Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-20-17

Project: 15 Cement Ave

Project #:

Contact Person: Aaron Paquet

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM.

Rush 24 hour

48 hour 72 hour

Other: 5 day



Asbestos: Bulk  Wipe  Point Count  PCM

Lead: Bulk  Wipe  Air  Paint  Soil

Mold: Bulk  Tape  BioSIS  Other  Viable

TEM: AHERA 7400  Bulk/NOB  EPA Level II

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
23	CA-H5-01A	Plaster			
24	CA-H5-01B				
25	CA-H5-01C				
26	CA-H5-01D				
27	CA-H5-01E				
28	CA-H5-01F				
29	CA-H5-01G				
30	CA-H5-02A	Surfacing Material			
31	CA-H5-02B				
32	CA-H5-02C				

RECEIVED

Relinquished by: Kelly McIntosh Received by: URS

Date: 4-20-17 Date: 4-20-17

Relinquished by: [Signature] APR 21 2017

Date: [Blank]

Received by: [Blank]

Date: [Blank]

***Tables***

**Table 1 - Summary of Hazardous Materials, 15 Crescent Ave., Muskegon Heights, Michigan**

<b>Hazardous Materials Description and Location</b>		
<b>Location</b>	<b>Material Description</b>	<b>Quantity</b>
1 <sup>st</sup> Floor Living Room	Thermostat	1
1 <sup>st</sup> Floor Hallway	Smoke Detector	1
1 <sup>st</sup> Floor Kitchen	2' Fluorescent Light (Fixture and Ballast Only)	1
1 <sup>st</sup> Floor Kitchen	2' Fluorescent Bulb	1
2 <sup>nd</sup> Floor Kitchen	2' Fluorescent Light (Fixture and Ballast Only)	1
2 <sup>nd</sup> Floor Kitchen	2' Fluorescent Bulb	1
Basement	Smoke Detector	1
Basement	Gallon Container Misc. Paint	3

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 15 Crescent Ave., Muskegon Heights, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
CA-HM-01A	Shingle Siding	No	M	Category I	ND	Exterior	NA
CA-HM-01B	Shingle Siding	No	M	Category I	ND	Exterior	NA
CA-HM-02A	Roofing Material	No	M	Category I	ND/ND/ND/ND	Exterior	NA
CA-HM-02B	Roofing Material	No	M	Category I	ND/ND/ND/ND	Exterior	NA
CA-HM-03A	Tan 12x12 Vinyl Floor Tile	No	M	Category I	ND/ND/ND/ND	1 <sup>st</sup> Fl. Kitchen	NA
CA-HM-03B	Tan 12x12 Vinyl Floor Tile	No	M	Category I	ND/ND/ND/ND	1 <sup>st</sup> Fl. Rear Entry	NA
CA-HM-04A	Gray 12x12 Vinyl Floor Tile	No	M	Category I	ND/ND	1 <sup>st</sup> Fl. Bathroom	NA
CA-HM-04B	Gray 12x12 Vinyl Floor Tile	No	M	Category I	ND/ND	1 <sup>st</sup> Fl. Bathroom	NA
CA-HM-05A	White 1'x1' Ceiling Tile With Random Holes	Yes	M	Category II	ND	1 <sup>st</sup> Fl. Kitchen	NA
CA-HM-05B	White 1'x1' Ceiling Tile With Random Holes	Yes	M	Category II	ND	1 <sup>st</sup> Fl. Kitchen	NA
CA-HM-06A	Drywall & Joint Compound	No	M	Category II	ND/ND	1 <sup>st</sup> Fl. SE Bedroom Ceiling	NA
CA-HM-06B	Drywall & Joint Compound	No	M	Category II	ND/ND	1 <sup>st</sup> Fl. Kitchen Ceiling	NA
CA-HM-07A	White 1'x1' Textured Ceiling Tile	Yes	M	Category II	ND	1 <sup>st</sup> Fl. W Bedroom	NA
CA-HM-07B	White 1'x1' Textured Ceiling Tile	Yes	M	Category II	ND	1 <sup>st</sup> Fl. SE Bedroom	NA
CA-HM-08A	Window Glazing	Yes	M	Category II	1.25%CH	1 <sup>st</sup> Fl. Kitchen	17 Windows
CA-HM-08B	Window Glazing	Yes	M	Category II	NA	1 <sup>st</sup> Fl. Kitchen	NA
CA-HM-09A	Gray Marble Linoleum	No	M	Category I	ND	2 <sup>nd</sup> Fl. Stairwell Landing	NA
CA-HM-09B	Gray Marble Linoleum	No	M	Category I	ND	2 <sup>nd</sup> Fl. Stairwell Landing	NA
CA-HM-10A	White Speckle 9"x9" Vinyl Tile	No	M	Category I	ND/ND/ND/ND	2 <sup>nd</sup> Fl. Kitchen	NA
CA-HM-10B	White Speckle 9"x9" Vinyl Tile	No	M	Category I	ND/ND/ND/ND	2 <sup>nd</sup> Fl. Kitchen	NA
CA-HM-11A	White Smooth 2'x4' Ceiling Tile	Yes	M	Category II	ND	2 <sup>nd</sup> Fl. Hallway	NA
CA-HM-11B	White Smooth 2'x4' Ceiling Tile	Yes	M	Category II	ND	2 <sup>nd</sup> Fl. W Bedroom	NA
CA-HS-01A	Plaster	No	S	Category II	ND/1.50%CH	1 <sup>st</sup> Fl. Living Room Ceiling	7,941 sq. ft.
CA-HS-01B	Plaster	No	S	Category II	ND/NA	1 <sup>st</sup> Fl. Kitchen Ceiling	NA
CA-HS-01C	Plaster	No	S	Category II	ND/ND/NA	1 <sup>st</sup> Fl. SE Bedroom Wall	NA
CA-HS-01D	Plaster	No	S	Category II	ND/ND/NA	1 <sup>st</sup> Fl. Kitchen Wall	NA



**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 15 Crescent Ave., Muskegon Heights, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
CA-HS-01E	Plaster	No	S	Category II	ND/ND/NA	1 <sup>st</sup> Fl. Living Room Wall	NA
CA-HS-01F	Plaster	No	S	Category II	ND/NA	2 <sup>nd</sup> Fl. Bathroom Ceiling	NA
CA-HS-01G	Plaster	No	S	Category II	ND/NA	2 <sup>nd</sup> Fl. Kitchen Wall	NA
CA-HS-02A	Surfacing Material	No	S	Category II	ND	2 <sup>nd</sup> Fl. Living Room Ceiling	NA
CA-HS-02B	Surfacing Material	No	S	Category II	ND	2 <sup>nd</sup> Fl. N Bedroom Ceiling	NA
CA-HS-02C	Surfacing Material	No	S	Category II	ND	Stairwell Ceiling	NA

**Notes:**

Material Types

M = Miscellaneous building material  
 TSI = Thermal System Insulation  
 S = Surfacing Material  
 PC = Point Count Analysis  
 CH = Chrysotile Asbestos

Abbreviations

NQ = Not quantified  
 NA = Not applicable  
 ND = Not detected. Laboratory result is less than 1 % asbestos  
 lin. ft. = linear feet  
 sq. ft. = square feet

Asbestos Containing Material (ACM) is defined as any material containing more than 1 percent asbestos as determined utilizing Polarized Light Microscopy.

**Table 3 - Summary of Presumed Asbestos Containing Materials, 15 Crescent Ave., Muskegon Heights, Michigan**

<b>Asbestos Containing Material Description and Location</b>					
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Condition</b>	<b>Material Type</b>	<b>Approx. Quantity</b>
Living (1 register, 10 sq. ft.) Kitchen (1 register, 10 sq. ft.) SE Bedroom (1 register, 10 sq. ft.) W Bedroom (1 register, 10 sq. ft.) 2 <sup>nd</sup> Fl. Living Room (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) 2 <sup>nd</sup> Fl. Bathroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) 2 <sup>nd</sup> Fl. N Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) Basement (misc. HVAC wrap on Ductwork, 10 sq. ft.) Basement Stairwell (misc. HVAC wrap on Electrical Panel, 4 sq. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	159 sq. ft.

**Notes:**

Material Types

- M = Miscellaneous building material
- TSI = Thermal System Insulation
- S = Surfacing Material

Abbreviations

- lin. ft. = linear feet
- sq. ft. = square feet

**Table 4 - Summary of All Asbestos Containing Materials, 15 Crescent Ave., Muskegon Heights, Michigan**

<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Living (1 register, 10 sq. ft.)			
Kitchen (1 register, 10 sq. ft.)			
SE Bedroom (1 register, 10 sq. ft.)			
W Bedroom (1 register, 10 sq. ft.)			
2 <sup>nd</sup> Fl. Living Room (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)			
2 <sup>nd</sup> Fl. Bathroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)	HVAC Duct Wrap	Yes	159 sq. ft.
2 <sup>nd</sup> Fl. N Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)			
Basement (misc. HVAC wrap on Ductwork, 10 sq. ft.)			
Basement Stairwell (misc. HVAC wrap on Electrical Panel, 4 sq. ft.)			
<b>Total</b>			<b>159 sq. ft.</b>
<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Kitchen (1 window 34" wide x 60" tall)	Glazing	Yes	1 Window
Kitchen (1 window 48" wide x 38" tall)	Glazing	Yes	1 Window
W Bedroom (2 windows 44" wide x 60" tall)	Glazing	Yes	2 Windows
SE Bedroom (1 window 44" wide x 60" tall)	Glazing	Yes	1 Window
Living Room (2 windows 44" wide x 60" tall)	Glazing	Yes	2 Windows
Front Entry (1 window 44" wide x 24" tall)	Glazing	Yes	1 Window
2 <sup>nd</sup> Fl. Kitchen (1 window 34" wide x 62" tall)	Glazing	Yes	1 Window
2 <sup>nd</sup> Fl. Living/Dining Room (1 window 40" wide x 62" tall)	Glazing	Yes	1 Window
2 <sup>nd</sup> Fl. N Bedroom (1 window 40" wide x 62" tall)	Glazing	Yes	1 Window
2 <sup>nd</sup> Fl. W Bedroom (1 window 40" wide x 54" tall)	Glazing	Yes	1 Window
2 <sup>nd</sup> Fl. Bathroom (1 window 34" wide x 62" tall)	Glazing	Yes	1 Window
2 <sup>nd</sup> Fl. Stairwell (1 window 24" wide x 24" tall)	Glazing	Yes	1 Window
Basement (3 windows 28" wide x 24" tall)	Glazing	Yes	3 Windows
<b>Total</b>			<b>17 Windows</b>

**Table 4 - Summary of All Asbestos Containing Materials, 15 Crescent Ave., Muskegon Heights, Michigan**

<b>Interior - Asbestos Containing Materials</b>				
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>	
1 <sup>st</sup> Floor	Wall Plaster	No	3,231 sq. ft.	
1 <sup>st</sup> Floor	Ceiling Plaster	No	1,067 sq. ft.	
2 <sup>nd</sup> Floor	Wall Plaster	No	2,752 sq. ft.	
2 <sup>nd</sup> Floor	Ceiling Plaster	No	891 sq. ft.	
		<b>Total</b>	<b>7,941 sq. ft.</b>	

**Notes:**

Abbreviations

lin. ft. = linear feet  
 sq. ft. = square feet

**Shaded/Bolded** = Friable ACM and any Category I and Category II non-friable ACM that has a high probability of becoming crumbled, pulverized, or reduced to powder by the demolition or renovation activities that must be properly abated prior to commencement of any demolition/renovation activities.

Demolition/renovation activities completed with intact Category I non-friable ACM are regulated by OSHA and must be completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note that a Negative Pressure Enclosure must be utilized during abatement when Site Conditions Warrant. Examples of these conditions include the abatement of Plaster and Vermiculite insulation, HVAC Duct Wrap in Poor Condition, and Air-O-Cell/Mag Pipe Wrap. Conditions outside of these should be assessed on a case by case basis during the Asbestos Abatement Contractors site walk and Work Plan Preparation.



P.O. Box 13216  
Lansing, MI 48901  
Phone: 888.449.4566  
Fax: 888.448.8739  
www.redcedarconsulting.net

May 12, 2017

Mr. Tim Burgess  
Muskegon County Land Bank  
Land Bank Coordinator  
173 E. Apple Avenue, Suite 104  
Muskegon, MI 49442

***RE: Asbestos Containing Material and Hazardous Materials Inspection  
139 Myrtle Ave., Muskegon, MI 49442  
Parcel ID: 61-24-205-208-0005-00***

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 139 Myrtle Ave., Muskegon, Michigan (Subject Property). This inspection was completed at the request of the Muskegon County Land Bank to comply with the United States Environmental Protection Agency (USEPA) requirements for demolition and renovation set forth under the National Emissions Standards for Hazardous Air Pollutants (NESHAP, 40 CFR Part 61). This inspection was also completed to comply with the Occupational Safety and Health Administration (OSHA) Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

### **SUBJECT PROPERTY**

The Subject Property is comprised of a .07 acre residential parcel which contains an approximate 872 square foot residential building (the Building) with an unknown construction date. The Building was constructed on a concrete block basement with one aboveground floor. The exterior walls of the Building were finished with fiber lap over wood lap while the roof was sealed with asphalt shingles. The Building can be further divided into a living room, dining room, kitchen, bath, and two bedrooms.

### **VISUAL INSPECTION AND SAMPLING**

#### **Asbestos Containing Materials Inspection**

Aaron Paquet and Darrell DeMasters of Red Cedar Consulting (Red Cedar), accredited State Of Michigan/EPA Asbestos Building Inspectors (Accreditation Numbers A30955 and A31159, respectively) who completed training per the Michigan Asbestos Workers Accreditation Act 440, completed an inspection of the Subject Property on April 28, 2017 for suspected asbestos containing building materials.

This inspection, and subsequent sample collection was completed in accordance with the USEPA Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763) assessment and sampling protocol.

During the completion of the inspection, each area of the Subject Property was visually inspected for asbestos containing building materials (ACBM). Following the completion of the visual inspection, Red Cedar staff identified each suspect area of friable and non-friable ACBM and sorted them into one of three homogenous categories for sampling purposes. AHERA defines friable as a material that when dry, may be crumbled, pulverized, or reduced to powder by hand pressure. A homogenous area is defined by OSHA as an area of surfacing, thermal system insulation (TSI) or miscellaneous material that is uniform in color and texture. Surfacing materials are most commonly found in sprayed-on, troweled-on or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members. TSI refers to materials applied to pipes, fittings, boilers, ductwork, or other components to prevent heat loss or gain, or condensation. Any material that does not fall under the surfacing or TSI category, such as floor tile, drywall, and acoustical ceiling tile are placed into the miscellaneous materials category.

Following the completion of the visual inspection, Red Cedar staff identified the following materials as suspect ACBM:

- Asphalt Shingle
- Fiberboard Siding
- Linoleum
- 1'x1' Ceiling Tile
- 16"x16" Ceiling Tile
- Drywall & Joint Compound
- Drywall
- Glazing
- Plaster

Red Cedar staff collected twenty six samples of suspect ACBM separated into eleven distinct homogenous groups for laboratory analysis. Samples were collected and submitted to APEX Research Inc. Laboratories (APEX) (Accreditation Number 102118-0) for laboratory analysis. Analysis was completed utilizing polarized light microscopy (PLM) which is the Environmental Protection Agency (EPA) approved method for analysis of bulk materials for asbestos. PLM analysis completed pursuant to method (EPA 600/M4-82-020) identifies asbestos fiber bundles by the visual properties displayed when the sample is treated with various dispersion staining liquids. The laboratory report completed following the sample analysis indicates if asbestos is present, and at what percentage along with a description and percentage of other fibrous and non-fibrous materials and sample color. Chain-of-custody documentation was followed from sample collection through shipping and receiving of the samples at the designated laboratory. The documentation assures that samples will meet the quality assurance/quality control measures defined by AHERA. The laboratory analytical report prepared by APEX for the twenty six samples is included as Attachment A.

## **Hazardous Materials Inspection**

On April 28, 2017 the Subject Property was also inspected for the presence of hazardous materials which include but are not limited to polychlorinated biphenyls (PCBs) and potential mercury containing equipment and any items or containers that may contain or be classified as a hazardous or regulated material. Each material, if identified, was documented along with the approximate location. Any materials identified as hazardous are included in Table 1.

## **INSPECTION RESULTS AND RECOMMENDATIONS**

During the completion of the asbestos inspection, twenty six samples of suspect ACM were collected and are documented in Table 2 along with the Red Cedar sample number, description, friability, material type, ACM classification, sample location, material quantity and laboratory analytical results.

ACM, as defined by the USEPA NESHAP is “any material containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763 Section 1, Polarized Light Microscopy”.

Friable ACM is defined by NESHAP as any material containing more than 1 percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Friable ACM is a concern due the ease of unintentionally disturbing the ACM which may result in “visible emissions” which is known as a Fiber Release Episode.

Non-friable asbestos-containing material is defined as “material containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACM’s are separated into Category I and Category II ACM. Category I ACM is any asbestos containing packing’s, gaskets, resilient floor coverings (vinyl floor tile and linoleum are examples of these) and asphalt roofing products. Category II ACM is stated by NESHAP as any material excluding Category I non-friable ACM such as drywall, plaster or fiberboard insulation.

## **Presumed Asbestos Containing Material**

Presumed Asbestos Containing Materials (PACM) are suspect surfacing, TSI and miscellaneous materials found in buildings constructed prior to 1980 which are classified as and due to the age of the structure, are assumed to be ACM and do not require sample collection and analysis. OSHA dictates that PACM may be “rebutted” following a complete inspection pursuant to AHERA protocol.

No PACM was identified during the completion of this inspection. All suspect materials identified were sampled and analyzed for ACM.

Table 3 lists the location, material description, friability, condition, material type (surfacing, thermal or miscellaneous) and approximate quantity of all PACM documented at the Subject Property.

Table 4 provides a summary all ACM documented at the Subject Property which includes the material location, description, and approximate quantity.

### **Friable ACM's**

A window glazing sample collected from a window in the Living Room was found to contain up to 5% asbestos following analysis. The assessment to quantify the extent of this material identified nine windows at the following locations that would fall into the same homogenous group. The locations of the windows are listed below:

- Living (2 windows 28" wide x 66" tall)
- W Bedroom (3 windows 28" wide x 66" tall)
- Dining (1 window 28" wide x 66" tall)
- Bath (1 window 40" wide x 38" tall)
- S Bedroom (1 window 28" wide x 66" tall)
- Kitchen (1 window 52" wide x 24" tall)

### **Category I ACM**

No Category I ACM was identified during the completion of this inspection.

### **Category II ACM**

No Category II non-friable ACM was identified during the completion of this inspection.

## **RECOMMENDATIONS**

### **Asbestos Containing Materials**

Friable asbestos containing window glazing was identified on nine windows throughout the Building. The locations of these windows that should be abated prior to demolition/renovation activities are listed below:

- Living (2 windows 28" wide x 66" tall)
- W Bedroom (3 windows 28" wide x 66" tall)
- Dining (1 window 28" wide x 66" tall)
- Bath (1 window 40" wide x 38" tall)
- S Bedroom (1 window 28" wide x 66" tall)
- Kitchen (1 window 52" wide x 24" tall)

Please note: Other different sized windows are located throughout the Building but these windows were assessed and found to be constructed either without window glazing or were sampled and found to not contain asbestos and therefore are not required to be removed.

Please note: The location of samples obtained during this inspection were in a random fashion and areas that were not identified during this inspection may be damaged or have become damaged since the inspection was completed. If Category I or Category II friable materials are discovered prior to or during the demolition/renovation process, these materials must be abated prior to commencement of any demolition/renovation activities at the Subject Property.



Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-24-205-208-0005-00

## **Hazardous Materials**

Hazardous Materials identified at the Subject Property and documented in Table 1 which require proper removal and disposal consist of the following items:

- Smoke Detector (1)
- 5-Gallon Container Misc. Paint (2)

## **REGULATORY REQUIREMENTS**

A Notification of Intent to Renovate/Demolish form must be filed with the Michigan Department of Environmental Quality- Air Quality Division at least 10 working days prior to any renovation or demolition activities at a site.

The Notification of Intent to Renovate/Demolish form must also be completed and submitted to the MIOSHA-Asbestos Program whenever demolition, encapsulation and/or renovation activities at a site involving greater than ten lineal feet and/or fifteen square feet of ACM will be completed.

Regulated asbestos containing materials per NESHAP (40 CFR Part 61) which falls into any of the following categories are ACM's that must be removed prior to any renovation/demolition activities at the Subject Property.

- Friable asbestos material.
- Category I non-friable ACM that has become friable.
- Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading.
- Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations.

Asbestos abatement should only be performed by a certified asbestos abatement contractor licensed to complete abatement work. The contractor must also follow the standards and requirements set forth per the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61).

Additional information regarding the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61) can be obtained by contacting the associated agency below.

NESHAP Asbestos Program  
Department of Environmental Quality  
Phone: 517-284-6777

MIOSHA-CSHD-Asbestos Program  
State of Michigan  
Phone: 517-284-7680  
Email: asbestos@michigan.gov

Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-24-205-208-0005-00


**DISCLAIMER**

Red Cedar Consulting performed destructive testing methods in an attempt to access and inspect all areas of the Building. Unfortunately, due to the age of construction along with multiple additions/renovations that may have been completed on the Building, additional inspections may be required if suspect ACM material not documented within this report is encountered during renovation/demolition activities.

This report was prepared at the request and for exclusive use by the Muskegon County Land Bank and may not be reproduced or sold without written permission from Red Cedar Consulting.

We appreciate the opportunity to provide the requested services. Please contact us at (888) 449-4566 with any questions or concerns.

Sincerely,  
**Red Cedar Consulting**



Aaron Paquet  
Michigan/EPA Certified Asbestos Building Inspector  
(A30955)

Red Cedar Consulting

***Attachment 1***  
***APEX Research Laboratory Analytical Results***



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: B9 Myrtle Ave

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69878  
Date Collected: 04/28/17  
Date Received: 05/01/17  
Date Analyzed: 05/04/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69878 - 01 Cust. #: MA-HM-01A Material: Asphalt Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 6	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 30% Other - 70%
Lab ID #: 69878 - 01a Cust. #: MA-HM-01A Material: Green/White Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 6	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 30% Other - 70%
Lab ID #: 69878 - 01b Cust. #: MA-HM-01A Material: Black Shingle Location: Appearance: black, fibrous, homogenous Layer: 3 of 6	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 30% Other - 70%

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: B9 Myrtle Ave

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69878  
Date Collected: 04/28/17  
Date Received: 05/01/17  
Date Analyzed: 05/04/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69878 - 01c Cust. #: MA-HM-01A Material: Black Shingle Location: Appearance: black, fibrous, homogenous Layer: 4 of 6	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69878 - 01d Cust. #: MA-HM-01A Material: Green/White Shingle Location: Appearance: black, fibrous, homogenous Layer: 5 of 6	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69878 - 01e Cust. #: MA-HM-01A Material: Green/White Shingle Location: Appearance: black, fibrous, homogenous Layer: 6 of 6	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: B9 Myrtle Ave

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69878  
Date Collected: 04/28/17  
Date Received: 05/01/17  
Date Analyzed: 05/04/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69878 - 02 Cust. #: MA-HM-01B Material: Asphalt Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 6	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 30% Other - 70%
Lab ID #: 69878 - 02a Cust. #: MA-HM-01B Material: Green/White Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 6	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 30% Other - 70%
Lab ID #: 69878 - 02b Cust. #: MA-HM-01B Material: Black Shingle Location: Appearance: black, fibrous, homogenous Layer: 3 of 6	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 30% Other - 70%

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Robert T. Letarte Jr., Laboratory Director

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ARI Report # 17-69878  
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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69878 - 02c Cust. #: MA-HM-01B Material: Black Shingle Location: Appearance: black, fibrous, homogenous Layer: 4 of 6	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 30% Other - 70%
Lab ID #: 69878 - 02d Cust. #: MA-HM-01B Material: Green/White Shingle Location: Appearance: black, fibrous, homogenous Layer: 5 of 6	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69878 - 02e Cust. #: MA-HM-01B Material: Green/White Shingle Location: Appearance: black, fibrous, homogenous Layer: 6 of 6	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%

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ARI Report # 17-69878  
Date Collected: 04/28/17  
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Date Analyzed: 05/04/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69878 - 03 Cust. #: MA-HM-02A Material: Fiberboard Siding Location: Appearance: black, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69878 - 04 Cust. #: MA-HM-02B Material: Fiberboard Siding Location: Appearance: black, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69878 - 05 Cust. #: MA-HM-03A Material: Beige Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%

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

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ARI Report # 17-69878  
Date Collected: 04/28/17  
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Date Analyzed: 05/04/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69878 - 06 Cust. #: MA-HM-03B Material: Beige Linoleum Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 69878 - 07 Cust. #: MA-HM-04A Material: White Linoleum Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 69878 - 08 Cust. #: MA-HM-04B Material: White Linoleum Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%

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Robert T. Letarte Jr., Laboratory Director

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Lansing, MI 48901

ARI Report # 17-69878  
Date Collected: 04/28/17  
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Date Analyzed: 05/04/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69878 - 09 Cust. #: MA-HM-05A Material: White Smooth 16x16 Ceiling Tile Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 69878 - 10 Cust. #: MA-HM-05B Material: White Smooth 16x16 Ceiling Tile Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 69878 - 11 Cust. #: MA-HM-06A Material: White Smooth 1x1 Ceiling Tile Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%

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Robert T. Letarte Jr., Laboratory Director

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Date Collected: 04/28/17  
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Date Analyzed: 05/04/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69878 - 12 Cust. #: MA-HM-06B Material: White Smooth 1x1 Ceiling Tile Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 69878 - 13 Cust. #: MA-HM-07A Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69878 - 13a Cust. #: MA-HM-07A Material: Joint Compound Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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Date Collected: 04/28/17  
Date Received: 05/01/17  
Date Analyzed: 05/04/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69878 - 14 Cust. #: MA-HM-07B Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69878 - 14a Cust. #: MA-HM-07B Material: Joint Compound Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69878 - 15 Cust. #: MA-HM-08A Material: Glazing Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 5%	Wollastonite - 5% Other - 90%

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Date Collected: 04/28/17  
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Date Analyzed: 05/04/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69878 - 16 Cust. #: MA-HM-08B Material: Glazing Location: Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69878 - 17 Cust. #: MA-HM-09A Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69878 - 18 Cust. #: MA-HM-09B Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%

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Lansing, MI 48901

ARI Report # 17-69878  
Date Collected: 04/28/17  
Date Received: 05/01/17  
Date Analyzed: 05/04/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69878 - 19 Cust. #: MA-HS-01A Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69878 - 19a Cust. #: MA-HS-01A Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 5% Other - 95%
Lab ID #: 69878 - 20 Cust. #: MA-HS-01B Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Date Analyzed: 05/04/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69878 - 20a Cust. #: MA-HS-01B Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 5% Other - 95%
Lab ID #: 69878 - 21 Cust. #: MA-HS-01C Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69878 - 21a Cust. #: MA-HS-01C Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 2% Other - 98%

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

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Date Analyzed: 05/04/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69878 - 22 Cust. #: MA-HS-01D Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 5% Other - 95%
Lab ID #: 69878 - 23 Cust. #: MA-HS-01E Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69878 - 23a Cust. #: MA-HS-01E Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 5% Other - 95%

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Date Collected: 04/28/17  
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Date Analyzed: 05/04/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69878 - 24 Cust. #: MA-HS-02A Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69878 - 24a Cust. #: MA-HS-02A Material: Plaster Base Coat Location: Appearance: grey, nonfibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Vermiculite - 20% Other - 79%
Lab ID #: 69878 - 24b Cust. #: MA-HS-02A Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%

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Date Analyzed: 05/04/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69878 - 25 Cust. #: MA-HS-02B Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69878 - 25a Cust. #: MA-HS-02B Material: Plaster Base Coat Location: Appearance: grey, nonfibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 69878 - 25b Cust. #: MA-HS-02B Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%

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Date Collected: 04/28/17  
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Date Analyzed: 05/04/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69878 - 26 Cust. #: MA-HS-02C Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69878 - 26a Cust. #: MA-HS-02C Material: Plaster Base Coat Location: Appearance: grey, nonfibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Vermiculite - 20% Other - 79%
Lab ID #: 69878 - 26b Cust. #: MA-HS-02C Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%

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NVLAP Lab Code 102118-0

69878

Pg 1 of 3

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189

Phone: 734-449-9990  
Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-28-17

Project: B9 Myrtle Ave.

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: SDP **(TTP)** All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BioSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	MA-HM-014	Asphalt Shingle			
2	MA-HM-013	" "			
3	MA-HM-02A	Fiberboard Siding			
4	MA-HM-02B	" "			
5	MA-HM-03A	Beige Linoleum			
6	MA-HM-03B	" "			
7	MA-HM-04A	White Linoleum			
8	MA-HM-04B	" "			
9	MA-HM-05A	White Smooth GRG CT			
10	MA-HM-05B	" "			
11	MA-HM-06A	White Smooth 1x1 CT			

Relinquished by: [Signature] Date: 4-28-17

Received by: UPS Date: 4-28-17

Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_

Received by: [Signature] Date: MAY 01 2017

RECEIVED

69878

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990



E-mail: apexresearch@chartermi.net Fax: 734-449-9991

Client Name: Red Cedar Consulting

Address: PO Box 13216  
Lansing, MI 48901

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-28-17

Project: 139 Myrtle Ave.

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: 5 Day **TTP** All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_

Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_

Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BioSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_

TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	MA-14M-06B	White <del>Sealant</del> Vel CT			
13	MA-14M-07A	Drywall & compound			
14	MA-14M-07B	" "			
15	MA-14M-08A	Clazing			
16	MA-14M-08B	" "			
17	MA-14M-09A	Drywall (no compound)			
18	MA-14M-09B	" "			
19	MA-14S-01A	Plaster			
20	MA-14S-01B	" "			
21	MA-14S-01C	" "			
22	MA-14S-01D	" "			

Relinquished by: [Signature] Received by: UPS  
Date: 4-28-17 Date: 4-28-17

Relinquished by: \_\_\_\_\_ Received by: [Signature]  
Date: \_\_\_\_\_ Date: MAY 01 2017

**RECEIVED**

69878

Pg 3 of 3

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

E-mail: apexresearch@chatemi.net

Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-28-17

Project: 139 Myrtle Ave.

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log-in \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: SDay All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_

Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_

Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_

TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
23	MA-45-01E	Plaster			
24	MA-45-02A				
25	MA-45-02B				
26	MA-45-02C	↓			

Relinquished by: [Signature] Received by: UBS  
Date: 4-28-17 Date: 4-28-17

Relinquished by: \_\_\_\_\_ Received by: [Signature]  
Date: \_\_\_\_\_ Date: MAY 01 2017

***Tables***

**Table 1 - Summary of Hazardous Materials, 139 Myrtle Ave., Muskegon, Michigan**

<b>Hazardous Materials Description and Location</b>		
<b>Location</b>	<b>Material Description</b>	<b>Quantity</b>
W Bedroom	5 Gallon Container Misc. Paint	2
Basement	Smoke Detector	1



**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 139 Myrtle Ave., Muskegon, Michigan**

<b>Sample Number</b>	<b>Sample Description</b>	<b>Friable</b>	<b>Material Type</b>	<b>Material Classification</b>	<b>% Asbestos Laboratory Result</b>	<b>Sample Location</b>	<b>Approx. Material Quantity</b>
MA-HM-01A	Asphalt Shingle	No	M	Category I	ND/ND/ND/ND/ ND/ND	Exterior	NA
MA-HM-01B	Asphalt Shingle	No	M	Category I	ND/ND/ND/ND/ ND/ND	Exterior	NA
MA-HM-02A	Fiberboard Siding	Yes	M	Category II	ND	Exterior	NA
MA-HM-02B	Fiberboard Siding	Yes	M	Category II	ND	Exterior	NA
MA-HM-03A	Beige Linoleum	No	M	Category I	ND	Living Room	NA
MA-HM-03B	Beige Linoleum	No	M	Category I	ND	Living Room	NA
MA-HM-04A	White Linoleum	No	M	Category I	ND	Bathroom	NA
MA-HM-04B	White Linoleum	No	M	Category I	ND	Bathroom	NA
MA-HM-05A	White Smooth 16x16 Ceiling Tile	Yes	M	Category II	ND	Living Room	NA
MA-HM-05B	White Smooth 16x16 Ceiling Tile	Yes	M	Category II	ND	Living Room	NA
MA-HM-06A	White Smooth 1'x1' Ceiling Tile	Yes	M	Category II	ND	W Bedroom	NA
MA-HM-06B	White Smooth 1'x1' Ceiling Tile	Yes	M	Category II	ND	Kitchen	NA
MA-HM-07A	Drywall & Joint Compound	No	M	Category II	ND/ND	S Bedroom Ceiling	NA
MA-HM-07B	Drywall & Joint Compound	No	M	Category II	ND/ND	S Bedroom Ceiling	NA
MA-HM-08A	Glazing	Yes	M	Category II	5%CH	Living Room	9 Windows
MA-HM-08B	Glazing	Yes	M	Category II	NA	W Bedroom	NA
MA-HM-09A	Drywall	No	M	Category II	ND	Living Room Wall	NA
MA-HM-09B	Drywall	No	M	Category II	ND	Kitchen Wall	NA
MA-HS-01A	Plaster	No	S	Category II	ND/ND	S Bedroom Ceiling	NA
MA-HS-01B	Plaster	No	S	Category II	ND/ND	Bathroom Ceiling	NA
MA-HS-01C	Plaster	No	S	Category II	ND/ND	Living Room Wall	NA
MA-HS-01D	Plaster	No	S	Category II	ND	W Bedroom Wall	NA
MA-HS-01E	Plaster	No	S	Category II	ND/ND	Dining Room Wall	NA
MA-HS-02A	Plaster	No	S	Category II	ND/ND/ND	S Bedroom Ceiling	NA
MA-HS-02B	Plaster	No	S	Category II	ND/ND/ND	S Bedroom Ceiling	NA
MA-HS-02C	Plaster	No	S	Category II	ND/ND/ND	W Bedroom Ceiling	NA

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 139 Myrtle Ave., Muskegon, Michigan**

**Notes:**

Material Types

M = Miscellaneous building material  
TSI = Thermal System Insulation  
S = Surfacing Material  
PC = Point Count Analysis  
CH = Chrysotile Asbestos

Abbreviations

NQ = Not quantified  
NA = Not applicable  
ND = Not detected. Laboratory result is less than 1 % asbestos  
lin. ft. = linear feet  
sq. ft. = square feet

Asbestos Containing Material (ACM) is defined as any material containing more than 1 percent asbestos as determined utilizing Polarized Light Microscopy.

**Table 3 - Summary of Presumed Asbestos Containing Materials, 139 Myrtle Ave., Muskegon, Michigan**

<b>Asbestos Containing Material Description and Location</b>					
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Condition</b>	<b>Material Type</b>	<b>Approx. Quantity</b>
No Presumed Asbestos Containing Materials Identified					

**Notes:**

Material Types

- M = Miscellaneous building material
- TSI = Thermal System Insulation
- S = Surfacing Material

Abbreviations

- lin. ft. = linear feet
- sq. ft. = square feet

**Table 4 - Summary of All Asbestos Containing Materials, 139 Myrtle Ave., Muskegon, Michigan**

<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Living (2 windows 28" wide x 66" tall)	Glazing	Yes	2 Windows
W Bedroom (3 windows 28" wide x 66" tall)	Glazing	Yes	3 Windows
Dining (1 window 28" wide x 66" tall)	Glazing	Yes	1 Window
Bath (1 window 40" wide x 38" tall)	Glazing	Yes	1 Window
S Bedroom (1 window 28" wide x 66" tall)	Glazing	Yes	1 Window
Kitchen (1 window 52" wide x 24" tall)	Glazing	Yes	1 Window
	<b>Total</b>		<b>9 Windows</b>

**Notes:**

Abbreviations

lin. ft. = linear feet

sq. ft. = square feet

**Shaded/Bolded** = Friable ACM and any Category I and Category II non-friable ACM that has a high probability of becoming crumbled, pulverized, or reduced to powder by the demolition or renovation activities that must be properly abated prior to commencement of any demolition/renovation activities.

Demolition/renovation activities completed with intact Category I non-friable ACM are regulated by OSHA and must be completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note that a Negative Pressure Enclosure must be utilized during abatement when Site Conditions Warrant. Examples of these conditions include the abatement of Plaster and Vermiculite insulation, HVAC Duct Wrap in Poor Condition, and Air-O-Cell/Mag Pipe Wrap. Conditions outside of these should be assessed on a case by case basis during the Asbestos Abatement Contractors site walk and Work Plan Preparation.



P.O. Box 13216  
Lansing, MI 48901  
Phone: 888.449.4566  
Fax: 888.448.8739  
www.redcedarconsulting.net

May 8, 2017

Mr. Tim Burgess  
Muskegon County Land Bank  
Land Bank Coordinator  
173 E. Apple Avenue, Suite 104  
Muskegon, MI 49442

**RE: *Asbestos Containing Material and Hazardous Materials Inspection***  
***227 Hackley Ave., Muskegon Heights, MI 49444***  
***Parcel ID: 61-26-185-066-0001-10***

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 227 Hackley Ave., Muskegon Heights, Michigan (Subject Property). This inspection was completed at the request of the Muskegon County Land Bank to comply with the United States Environmental Protection Agency (USEPA) requirements for demolition and renovation set forth under the National Emissions Standards for Hazardous Air Pollutants (NESHAP, 40 CFR Part 61). This inspection was also completed to comply with the Occupational Safety and Health Administration (OSHA) Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

### **SUBJECT PROPERTY**

The Subject Property is comprised of a .08 acre residential parcel which contains an approximate 768 square foot residential building (the Building) constructed in 1925. The Building was constructed on a concrete block basement with one aboveground floor. The exterior walls of the Building were finished with aluminum siding over wood lap while the roof was sealed with asphalt shingles. The Building can be further divided into a living room, dining room, kitchen, bath, two bedrooms and a rear entry.

### **VISUAL INSPECTION AND SAMPLING**

#### **Asbestos Containing Materials Inspection**

Aaron Paquet and Darrell DeMasters of Red Cedar Consulting (Red Cedar), accredited State Of Michigan/EPA Asbestos Building Inspectors (Accreditation Numbers A30955 and A31159, respectively) who completed training per the Michigan Asbestos Workers Accreditation Act 440, completed an inspection of the Subject Property on April 14, 2017 for suspected asbestos containing building materials.

This inspection, and subsequent sample collection was completed in accordance with the USEPA Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763) assessment and sampling protocol.

During the completion of the inspection, each area of the Subject Property was visually inspected for asbestos containing building materials (ACBM). Following the completion of the visual inspection, Red Cedar staff identified each suspect area of friable and non-friable ACBM and sorted them into one of three homogenous categories for sampling purposes. AHERA defines friable as a material that when dry, may be crumbled, pulverized, or reduced to powder by hand pressure. A homogenous area is defined by OSHA as an area of surfacing, thermal system insulation (TSI) or miscellaneous material that is uniform in color and texture. Surfacing materials are most commonly found in sprayed-on, troweled-on or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members. TSI refers to materials applied to pipes, fittings, boilers, ductwork, or other components to prevent heat loss or gain, or condensation. Any material that does not fall under the surfacing or TSI category, such as floor tile, drywall, and acoustical ceiling tile are placed into the miscellaneous materials category.

Following the completion of the visual inspection, Red Cedar staff identified the following materials as suspect ACBM:

- Asphalt Shingle
- Vinyl Flooring
- Linoleum
- 1'x1' Textured Ceiling Tile
- 12"x12" Vinyl Tile
- Drywall & Joint Compound
- Glazing
- Plaster
- Popcorn Surfacing

Red Cedar staff collected twenty four samples of suspect ACBM separated into ten distinct homogenous groups for laboratory analysis. Samples were collected and submitted to APEX Research Inc. Laboratories (APEX) (Accreditation Number 102118-0) for laboratory analysis. Analysis was completed utilizing polarized light microscopy (PLM) which is the Environmental Protection Agency (EPA) approved method for analysis of bulk materials for asbestos. PLM analysis completed pursuant to method (EPA 600/M4-82-020) identifies asbestos fiber bundles by the visual properties displayed when the sample is treated with various dispersion staining liquids. The laboratory report completed following the sample analysis indicates if asbestos is present, and at what percentage along with a description and percentage of other fibrous and non-fibrous materials and sample color. Chain-of-custody documentation was followed from sample collection through shipping and receiving of the samples at the designated laboratory. The documentation assures that samples will meet the quality assurance/quality control measures defined by AHERA. The laboratory analytical report prepared by APEX for the twenty four samples is included as Attachment A.

## **Hazardous Materials Inspection**

On April 14, 2017 the Subject Property was also inspected for the presence of hazardous materials which include but are not limited to polychlorinated biphenyls (PCBs) and potential mercury containing equipment and any items or containers that may contain or be classified as a hazardous or regulated material. Each material, if identified, was documented along with the approximate location. Any materials identified as hazardous are included in Table 1.

## **INSPECTION RESULTS AND RECOMMENDATIONS**

During the completion of the asbestos inspection, twenty four samples of suspect ACM were collected and are documented in Table 2 along with the Red Cedar sample number, description, friability, material type, ACM classification, sample location, material quantity and laboratory analytical results.

ACM, as defined by the USEPA NESHAP is “any material containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763 Section 1, Polarized Light Microscopy”.

Friable ACM is defined by NESHAP as any material containing more than 1 percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Friable ACM is a concern due the ease of unintentionally disturbing the ACM which may result in “visible emissions” which is known as a Fiber Release Episode.

Non-friable asbestos-containing material is defined as “material containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACM’s are separated into Category I and Category II ACM. Category I ACM is any asbestos containing packing’s, gaskets, resilient floor coverings (vinyl floor tile and linoleum are examples of these) and asphalt roofing products. Category II ACM is stated by NESHAP as any material excluding Category I non-friable ACM such as drywall, plaster or fiberboard insulation.

## **Presumed Asbestos Containing Material**

Presumed Asbestos Containing Materials (PACM) are suspect surfacing, TSI and miscellaneous materials found in buildings constructed prior to 1980 which are classified as and due to the age of the structure, are assumed to be ACM and do not require sample collection and analysis. OSHA dictates that PACM may be “rebutted” following a complete inspection pursuant to AHERA protocol.

The HVAC Duct Wrap located in the Building was classified as PACM due to the age of the structure and samples were not collected.

Table 3 lists the location, material description, friability, condition, material type (surfacing, thermal or miscellaneous) and approximate quantity of all PACM documented at the Subject Property.

Table 4 provides a summary all ACM documented at the Subject Property which includes the material location, description, and approximate quantity.

### **Friable ACM's**

Duct Wrap identified in the building in conjunction with the forced air heating system is classified as friable ACM. The visual assessment to quantify the extent of this material identified HVAC Duct Wrap at the following locations within the basement and first floor:

- Living (1 register, 10 sq. ft.)
- Dining (1 register, 10 sq. ft.)
- Kitchen (1 register, 10 sq. ft.)
- Bathroom (1 register, 10 sq. ft.)

### **Category I ACM**

Three types of resilient floor covering (Tan Marble Vinyl, Tan Squared Vinyl/Layered, Multi-Layered Flooring) located within the living room, bathroom and NE bedroom, respectively, were found to contain up to 35% Chrysotile asbestos. The assessment to quantify the extent of this material identified approximately 477 sq. ft. of this material within the Building.

### **Category II ACM**

No Category II non-friable ACM was identified during the completion of this inspection.

## **RECOMMENDATIONS**

### **Asbestos Containing Materials**

HVAC material identified in the Building system and listed below is classified as friable ACM and should be removed prior to any renovation/demolition activities.

- Living (1 register, 10 sq. ft.)
- Dining (1 register, 10 sq. ft.)
- Kitchen (1 register, 10 sq. ft.)
- Bathroom (1 register, 10 sq. ft.)

The Category I resilient floor coverings (Tan Marble Vinyl, Tan Squared Vinyl/Layered, Multi-Layered Flooring) are non-friable ACM's that may be left in place as long as the demolition/renovation activities are completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note: The location of samples obtained during this inspection were in a random fashion and areas that were not identified during this inspection may be damaged or have become damaged since the inspection was completed. If Category I or Category II friable materials are discovered prior to or during the demolition/renovation process, these materials must be abated prior to commencement of any demolition/renovation activities at the Subject Property.



## **Hazardous Materials**

Hazardous Materials identified at the Subject Property and documented in Table 1 which require proper removal and disposal consist of the following items:

- Television (2)

## **REGULATORY REQUIREMENTS**

A Notification of Intent to Renovate/Demolish form must be filed with the Michigan Department of Environmental Quality- Air Quality Division at least 10 working days prior to any renovation or demolition activities at a site.

The Notification of Intent to Renovate/Demolish form must also be completed and submitted to the MIOSHA-Asbestos Program whenever demolition, encapsulation and/or renovation activities at a site involving greater than ten lineal feet and/or fifteen square feet of ACM will be completed.

Regulated asbestos containing materials per NESHAP (40 CFR Part 61) which falls into any of the following categories are ACM's that must be removed prior to any renovation/demolition activities at the Subject Property.

- Friable asbestos material.
- Category I non-friable ACM that has become friable.
- Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading.
- Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations.

Asbestos abatement should only be performed by a certified asbestos abatement contractor licensed to complete abatement work. The contractor must also follow the standards and requirements set forth per the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61).

Additional information regarding the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61) can be obtained by contacting the associated agency below.

NESHAP Asbestos Program  
Department of Environmental Quality  
Phone: 517-284-6777

MIOSHA-CSHD-Asbestos Program  
State of Michigan  
Phone: 517-284-7680  
Email: [asbestos@michigan.gov](mailto:asbestos@michigan.gov)

Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-26-185-066-0001-10

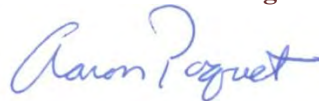
**DISCLAIMER**

Red Cedar Consulting performed destructive testing methods in an attempt to access and inspect all areas of the Building. Unfortunately, due to the age of construction along with multiple additions/renovations that may have been completed on the Building, additional inspections may be required if suspect ACM material not documented within this report is encountered during renovation/demolition activities.

This report was prepared at the request and for exclusive use by the Muskegon County Land Bank and may not be reproduced or sold without written permission from Red Cedar Consulting.

We appreciate the opportunity to provide the requested services. Please contact us at (888) 449-4566 with any questions or concerns.

Sincerely,  
**Red Cedar Consulting**



Aaron Paquet  
Michigan/EPA Certified Asbestos Building Inspector  
(A30955)

Red Cedar Consulting

***Attachment 1***  
***APEX Research Laboratory Analytical Results***



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 227 E. Hackley Ave

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69624  
Date Collected: 04/14/17  
Date Received: 04/17/17  
Date Analyzed: 04/18/17  
Date Reported: 04/24/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69624 - 01 Cust. #: HA-HM-01A Material: Roofing Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69624 - 02 Cust. #: HA-HM-01B Material: Roofing Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69624 - 03 Cust. #: HA-HM-02A Material: Tan Marble Vinyl Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 40%	Other - 60%

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: 227 E. Hackley Ave

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69624  
Date Collected: 04/14/17  
Date Received: 04/17/17  
Date Analyzed: 04/18/17  
Date Reported: 04/24/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69624 - 04 Cust. #: HA-HM-02B Material: Tan Marble Vinyl Location: Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69624 - 05 Cust. #: HA-HM-03A Material: Tan Squared Vinyl Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 69624 - 05a Cust. #: HA-HM-03A Material: Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 2 of 2	Asbestos Present: <b>YES</b> Chrysotile - 35%	Other - 65%

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: 227 E. Hackley Ave

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69624  
Date Collected: 04/14/17  
Date Received: 04/17/17  
Date Analyzed: 04/18/17  
Date Reported: 04/24/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69624 - 06 Cust. #: HA-HM-03B Material: Tan Squared Vinyl Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 69624 - 06a Cust. #: HA-HM-03B Material: Linoleum Location: Appearance: Layer: 2 of 2	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69624 - 07 Cust. #: HA-HM-04A Material: 12x12 Black/Grey VFT Location: Appearance: grey, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 227 E. Hackley Ave

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69624  
Date Collected: 04/14/17  
Date Received: 04/17/17  
Date Analyzed: 04/18/17  
Date Reported: 04/24/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69624 - 07a Cust. #: HA-HM-04A Material: Glue Location: Appearance: yellow,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69624 - 08 Cust. #: HA-HM-04B Material: 12x12 Black/Grey VFT Location: Appearance: grey,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69624 - 08a Cust. #: HA-HM-04B Material: Glue Location: Appearance: yellow,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Robert T. Letarte Jr., Laboratory Director

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P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69624  
Date Collected: 04/14/17  
Date Received: 04/17/17  
Date Analyzed: 04/18/17  
Date Reported: 04/24/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69624 - 09 Cust. #: HA-HM-05A Material: Multilayer Flooring Location: NE Bedroom Appearance: white, fibrous, nonhomogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 69624 - 09a Cust. #: HA-HM-05A Material: Floor Tile Location: NE Bedroom Appearance: green, fibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>YES</b> Chrysotile - 10%	Other - 90%
Lab ID #: 69624 - 09b Cust. #: HA-HM-05A Material: Mastic Location: NE Bedroom Appearance: black, nonfibrous, homogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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Project: 227 E. Hackley Ave

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P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69624  
Date Collected: 04/14/17  
Date Received: 04/17/17  
Date Analyzed: 04/18/17  
Date Reported: 04/24/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69624 - 10 Cust. #: HA-HM-05B Material: Multilayer Flooring Location: NE Bedroom Appearance: white, fibrous, nonhomogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 69624 - 10a Cust. #: HA-HM-05B Material: Floor Tile Location: NE Bedroom Appearance: Layer: 2 of 3	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69624 - 10b Cust. #: HA-HM-05B Material: Mastic Location: NE Bedroom Appearance: black, nonfibrous, homogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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Lansing, MI 48901

ARI Report # 17-69624  
Date Collected: 04/14/17  
Date Received: 04/17/17  
Date Analyzed: 04/18/17  
Date Reported: 04/24/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69624 - 11 Cust. #: HA-HM-06A Material: 1x1 White Textured CT Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 69624 - 12 Cust. #: HA-HM-06B Material: 1x1 White Textured CT Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 69624 - 13 Cust. #: HA-HM-07A Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%

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Lansing, MI 48901

ARI Report # 17-69624  
Date Collected: 04/14/17  
Date Received: 04/17/17  
Date Analyzed: 04/18/17  
Date Reported: 04/24/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69624 - 13a Cust. #: HA-HM-07A Material: Joint Compound Location: Appearance: white, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> Chrysotile - 0.50%  POINT COUNT RESULT	Other - 99.50%
Lab ID #: 69624 - 14 Cust. #: HA-HM-07B Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69624 - 14a Cust. #: HA-HM-07B Material: Joint Compound Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> Chrysotile - 1.00%  POINT COUNT RESULT	Other - 99.00%

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# Certificate of Laboratory Analysis

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Lansing, MI 48901

ARI Report # 17-69624  
Date Collected: 04/14/17  
Date Received: 04/17/17  
Date Analyzed: 04/18/17  
Date Reported: 04/24/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69624 - 15 Cust. #: HA-HM-08A Material: Window Glazing Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Wollastonite - 2% Other - 98%
Lab ID #: 69624 - 16 Cust. #: HA-HM-08B Material: Window Glazing Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Wollastonite - 1% Other - 99%
Lab ID #: 69624 - 17 Cust. #: HA-HS-01A Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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 P.O. Box 13216  
 Lansing, MI 48901

ARI Report # 17-69624  
 Date Collected: 04/14/17  
 Date Received: 04/17/17  
 Date Analyzed: 04/18/17  
 Date Reported: 04/24/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69624 - 17a Cust. #: HA-HS-01A Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 5% Other - 95%
Lab ID #: 69624 - 18 Cust. #: HA-HS-01B Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 5% Other - 95%
Lab ID #: 69624 - 19 Cust. #: HA-HS-01C Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Lansing, MI 48901

ARI Report # 17-69624  
Date Collected: 04/14/17  
Date Received: 04/17/17  
Date Analyzed: 04/18/17  
Date Reported: 04/24/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69624 - 19a Cust. #: HA-HS-01C Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 5% Other - 95%
Lab ID #: 69624 - 20 Cust. #: HA-HS-01D Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69624 - 20a Cust. #: HA-HS-01D Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 5% Other - 95%

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Project: 227 E. Hackley Ave

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Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69624  
Date Collected: 04/14/17  
Date Received: 04/17/17  
Date Analyzed: 04/18/17  
Date Reported: 04/24/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69624 - 21 Cust. #: HA-HS-01E Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69624 - 21a Cust. #: HA-HS-01E Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 5% Other - 95%
Lab ID #: 69624 - 22 Cust. #: HA-HS-02A Material: Popcorn Surfacing Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Lansing, MI 48901

ARI Report # 17-69624  
Date Collected: 04/14/17  
Date Received: 04/17/17  
Date Analyzed: 04/18/17  
Date Reported: 04/24/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69624 - 23 Cust. #: HA-HS-02B Material: Popcorn Surfacing Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 69624 - 24 Cust. #: HA-HS-02C Material: Popcorn Surfacing Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

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NVLAP Lab Code 102118-0



# 69624

1 of 3

## APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990



E-mail: apexresearch@chartermi.net

Fax: 734-449-9991

Client Name: Red Cedar Consulting

Date of Survey: 4-14-17

Address: PO Box 13216

Project: 22751 Shelley Lane

City, St., Zip: Lansing, MI 48901

Project #:

Phone: (888) 449-4566 Fax: (888) 448-8739

Contact Person: Aaron Paquet

### Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: 5 day  TTP All Samples

Asbestos: Bulk  x Wipe  Point Count  PCM

Lead: Bulk  Wipe  Air  Paint  Soil

Mold: Bulk  Tape  Biosis  Other  Viable

TEM: AHERA 7400  Bulk/NOB  EPA Level II

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	HA-HM-01A	Roofing Shingle			
2	01B	" "			
3	02A	Ten Master Vinyl			
4	02B	" "			
5	03A	Ten Spaced Vinyl Regrod			
6	03B	" "			
7	04A	12x12 Black & Gray VFT			
8	04B	" "			
9	05A	Multi Layered Flooring (VFR)			
10	05B	" "			
11	06A	1x1 White Textured CT			

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

Relinquished by: [Signature] Date: 4-14-17

Received by: UPS Date: 4-14-17

Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_

Received by: [Signature] Date: APR 17 2017

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69624

243

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189  
Phone: 734-449-9990  
E-mail: apexresearch@chartermi.net  
Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216  
Lansing, MI 48901

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-14-17

Project: 227 E. Shepley Ave

Project #: \_\_\_\_\_

Contact Person: Aaron Paquet

apauquet@redcedarconsulting.net

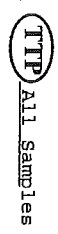
Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

Rush 24 hour

48 hour 72 hour

Other: 5 day



Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BIOSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	HA-HM-068	1x1 White Textured CT			
13	HA-HM-07A	Remnant of paint compound			
14	HA-HM-07B	" " " "			
15	HA-HM-08A	Window Siding			
16	HA-HM-08B	" " " "			
17	HA-HS-01A	Plaster			
18	HA-HS-01B	" " " "			
19	HA-HS-01C	" " " "			
20	HA-HS-01D	" " " "			
21	HA-HS-01E	" " " "			
22	HA-HS-02A	Popcorn Surfacing			

Relinquished by: *[Signature]*

Date: 4-14-17

Received by: *[Signature]*

Date: 4-14-17

Relinquished by: \_\_\_\_\_

Date: \_\_\_\_\_

Received by: *[Signature]*

Date: APR 17 2017

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3 of 3

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

F-mail: apexresearch@chartermi.net Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-14-17

Project: 227 E. Heckley Ave

Project #: \_\_\_\_\_

Contact Person: Aaron Paquet

## Turn Around Times: (Circle One)

PIM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: Slag All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BIOSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
23	HA-HS-02B	Roof surfacing			
24	HA-HS-02C	..			

Relinquished by: *[Signature]* Received by: *[Signature]*

Date: 4-14-17 Date: 4-14-17

Relinquished by: \_\_\_\_\_

Date: \_\_\_\_\_

Received by: *[Signature]*

Date: APR 17 2017

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***Tables***

**Table 1 - Summary of Hazardous Materials, 227 Hackley Ave., Muskegon Heights, Michigan**

<b>Hazardous Materials Description and Location</b>		
<b>Location</b>	<b>Material Description</b>	<b>Quantity</b>
Dining Room	Television	1
Rear Entry	Television	1

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 227 Hackley Ave., Muskegon Heights, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
HA-HM-01A	Roofing Shingle	No	M	Category I	ND	Exterior	NA
HA-HM-01B	Roofing Shingle	No	M	Category I	ND	Exterior	NA
HA-HM-02A	Tan Marble Vinyl	No	M	Category I	40%	Living Room	324 sq. ft.
HA-HM-02B	Tan Marble Vinyl	No	M	Category I	NA	Living Room	NA
HA-HM-03A	Tan Squared Vinyl/Layered	No	M	Category I	ND/35%CH	Bathroom	63 sq. ft.
HA-HM-03B	Tan Squared Vinyl/Layered	No	M	Category I	ND/NA	Bathroom	NA
HA-HM-04A	12x12 Black & Gray Vinyl Floor Tile	No	M	Category I	ND/ND	E Bedroom	NA
HA-HM-04B	12x12 Black & Gray Vinyl Floor Tile	No	M	Category I	ND/ND	E Bedroom	NA
HA-HM-05A	Multi Layered Flooring	No	M	Category I	ND/10%CH/ND	NE Bedroom	90 sq. ft.
HA-HM-05B	Multi Layered Flooring	No	M	Category I	ND/NA/ND	NE Bedroom	NA
HA-HM-06A	White 1'x1' Ceiling Tile	Yes	M	Category II	ND	Living Room Ceiling	NA
HA-HM-06B	White 1'x1' Ceiling Tile	Yes	M	Category II	ND	Living Room Ceiling	NA
HA-HM-07A	Drywall & Joint Compound	No	M	Category II	ND/0.50%CH-PC	NE Bedroom Wall	NA
HA-HM-07B	Drywall & Joint Compound	No	M	Category II	ND/1.00%CH-PC	E Bedroom Wall	NA
HA-HM-08A	Window Glazing	Yes	M	Category II	ND	Living Room	NA
HA-HM-08B	Window Glazing	Yes	M	Category II	ND	Dining Room	NA
HA-HS-01A	Plaster	No	S	Category II	ND/ND	Living Room Ceiling	NA
HA-HS-01B	Plaster	No	S	Category II	ND	Living Room Ceiling	NA
HA-HS-01C	Plaster	No	S	Category II	ND/ND	Kitchen Wall	NA
HA-HS-01D	Plaster	No	S	Category II	ND/ND	Kitchen Wall	NA
HA-HS-01E	Plaster	No	S	Category II	ND/ND	Kitchen Wall	NA
HA-HS-02A	Popcorn Surfacing	No	S	Category II	ND	Rear Entry Ceiling	NA
HA-HS-02B	Popcorn Surfacing	No	S	Category II	ND	Rear Entry Wall	NA
HA-HS-02C	Popcorn Surfacing	No	S	Category II	ND	Rear Entry Wall	NA

**Notes:**

Material Types

M = Miscellaneous building material

Abbreviations

NQ = Not quantified

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 227 Hackley Ave., Muskegon Heights, Michigan**

TSI = Thermal System Insulation  
S = Surfacing Material  
PC = Point Count Analysis  
CH = Chrysotile Asbestos

NA = Not applicable  
ND = Not detected. Laboratory result is less than 1 % asbestos  
lin. ft. = linear feet  
sq. ft. = square feet

Asbestos Containing Material (ACM) is defined as any material containing more than 1 percent asbestos as determined utilizing Polarized Light Microscopy.

**Table 3 - Summary of Presumed Asbestos Containing Materials, 227 Hackley Ave., Muskegon Heights, Michigan**

<b>Asbestos Containing Material Description and Location</b>					
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Condition</b>	<b>Material Type</b>	<b>Approx. Quantity</b>
Living (1 register, 10 sq. ft.) Dining (1 register, 10 sq. ft.) Kitchen (1 register, 10 sq. ft.) Bathroom (1 register, 10 sq. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	40 sq. ft.

**Notes:**

Material Types

- M = Miscellaneous building material
- TSI = Thermal System Insulation
- S = Surfacing Material

Abbreviations

- lin. ft. = linear feet
- sq. ft. = square feet



**Table 4 - Summary of All Asbestos Containing Materials, 227 Hackley Ave., Muskegon Heights, Michigan**

<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Living Room	Tan Marble Vinyl	No	162 sq. ft.
Dining	Tan Marble Vinyl	No	162 sq. ft.
Bathroom	Tan Squared Vinyl/Layered	No	63 sq. ft.
NE Bedroom	Multi Layered Flooring	No	90 sq. ft.
<b>Total</b>			<b>477 sq. ft.</b>
<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Living (1 register, 10 sq. ft.)	HVAC Duct Wrap	Yes	40 sq. ft.
Dining (1 register, 10 sq. ft.)			
Kitchen (1 register, 10 sq. ft.)			
Bathroom (1 register, 10 sq. ft.)			
<b>Total</b>			<b>40 sq. ft.</b>

**Notes:**

Abbreviations

lin. ft. = linear feet

sq. ft. = square feet

**Shaded/Bolded** = Friable ACM and any Category I and Category II non-friable ACM that has a high probability of becoming crumbled, pulverized, or reduced to powder by the demolition or renovation activities that must be properly abated prior to commencement of any demolition/renovation activities.

Demolition/renovation activities completed with intact Category I non-friable ACM are regulated by OSHA and must be completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note that a Negative Pressure Enclosure must be utilized during abatement when Site Conditions Warrant. Examples of these conditions include the abatement of Plaster and Vermiculite insulation, HVAC Duct Wrap in Poor Condition, and Air-O-Cell/Mag Pipe Wrap. Conditions outside of these should be assessed on a case by case basis during the Asbestos Abatement Contractors site walk and Work Plan Preparation.



P.O. Box 13216  
Lansing, MI 48901  
Phone: 888.449.4566  
Fax: 888.448.8739  
www.redcedarconsulting.net

May 8, 2017

Mr. Tim Burgess  
Muskegon County Land Bank  
Land Bank Coordinator  
173 E. Apple Avenue, Suite 104  
Muskegon, MI 49442

***RE: Asbestos Containing Material and Hazardous Materials Inspection  
250 W Rotterdam Ave., Muskegon Heights, MI 49444  
Parcel ID: 61-26-770-021-0021-00***

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 250 W Rotterdam Ave., Muskegon Heights, Michigan (Subject Property). This inspection was completed at the request of the Muskegon County Land Bank to comply with the United States Environmental Protection Agency (USEPA) requirements for demolition and renovation set forth under the National Emissions Standards for Hazardous Air Pollutants (NESHAP, 40 CFR Part 61). This inspection was also completed to comply with the Occupational Safety and Health Administration (OSHA) Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

### **SUBJECT PROPERTY**

The Subject Property is comprised of a .14 acre residential parcel which contains a 440 sq. ft. detached garage and approximate 884 square foot residential building (the Building) constructed in 1940. The Building was constructed on a concrete block basement with one aboveground floor. The exterior walls of the Building were finished with Transite siding while the roof was sealed with asphalt shingles. The Building can be further divided into a living/dining room, kitchen, bath, two bedrooms and a rear entry.

### **VISUAL INSPECTION AND SAMPLING**

#### **Asbestos Containing Materials Inspection**

Aaron Paquet and Darrell DeMasters of Red Cedar Consulting (Red Cedar), accredited State Of Michigan/EPA Asbestos Building Inspectors (Accreditation Numbers A30955 and A31159, respectively) who completed training per the Michigan Asbestos Workers Accreditation Act 440, completed an inspection of the Subject Property on April 20, 2017 for suspected asbestos containing building materials.

This inspection, and subsequent sample collection was completed in accordance with the USEPA Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763) assessment and sampling protocol.

During the completion of the inspection, each area of the Subject Property was visually inspected for asbestos containing building materials (ACBM). Following the completion of the visual inspection, Red Cedar staff identified each suspect area of friable and non-friable ACBM and sorted them into one of three homogenous categories for sampling purposes. AHERA defines friable as a material that when dry, may be crumbled, pulverized, or reduced to powder by hand pressure. A homogenous area is defined by OSHA as an area of surfacing, thermal system insulation (TSI) or miscellaneous material that is uniform in color and texture. Surfacing materials are most commonly found in sprayed-on, troweled-on or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members. TSI refers to materials applied to pipes, fittings, boilers, ductwork, or other components to prevent heat loss or gain, or condensation. Any material that does not fall under the surfacing or TSI category, such as floor tile, drywall, and acoustical ceiling tile are placed into the miscellaneous materials category.

Following the completion of the visual inspection, Red Cedar staff identified the following materials as suspect ACBM:

- Roofing Materials
- 12"x12" Vinyl Tile
- Drywall & Joint Compound
- Glazing
- Plaster

Red Cedar staff collected seventeen samples of suspect ACBM separated into seven distinct homogenous groups for laboratory analysis. Samples were collected and submitted to APEX Research Inc. Laboratories (APEX) (Accreditation Number 102118-0) for laboratory analysis. Analysis was completed utilizing polarized light microscopy (PLM) which is the Environmental Protection Agency (EPA) approved method for analysis of bulk materials for asbestos. PLM analysis completed pursuant to method (EPA 600/M4-82-020) identifies asbestos fiber bundles by the visual properties displayed when the sample is treated with various dispersion staining liquids. The laboratory report completed following the sample analysis indicates if asbestos is present, and at what percentage along with a description and percentage of other fibrous and non-fibrous materials and sample color. Chain-of-custody documentation was followed from sample collection through shipping and receiving of the samples at the designated laboratory. The documentation assures that samples will meet the quality assurance/quality control measures defined by AHERA. The laboratory analytical report prepared by APEX for the seventeen samples is included as Attachment A.

### **Hazardous Materials Inspection**

On April 20, 2017 the Subject Property was also inspected for the presence of hazardous materials which include but are not limited to polychlorinated biphenyls (PCBs) and potential mercury containing equipment and any items or containers that may contain or be classified as a hazardous or regulated material. Each material, if identified, was documented along with the approximate location. Any materials identified as hazardous are included in Table 1.

## **INSPECTION RESULTS AND RECOMMENDATIONS**

During the completion of the asbestos inspection, seventeen samples of suspect ACM were collected and are documented in Table 2 along with the Red Cedar sample number, description, friability, material type, ACM classification, sample location, material quantity and laboratory analytical results.

ACM, as defined by the USEPA NESHAP is “any material containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763 Section 1, Polarized Light Microscopy”.

Friable ACM is defined by NESHAP as any material containing more than 1 percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Friable ACM is a concern due the ease of unintentionally disturbing the ACM which may result in “visible emissions” which is known as a Fiber Release Episode.

Non-friable asbestos-containing material is defined as “material containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACM’s are separated into Category I and Category II ACM. Category I ACM is any asbestos containing packing’s, gaskets, resilient floor coverings (vinyl floor tile and linoleum are examples of these) and asphalt roofing products. Category II ACM is stated by NESHAP as any material excluding Category I non-friable ACM such as drywall, plaster or fiberboard insulation.

### **Presumed Asbestos Containing Material**

Presumed Asbestos Containing Materials (PACM) are suspect surfacing, TSI and miscellaneous materials found in buildings constructed prior to 1980 which are classified as and due to the age of the structure, are assumed to be ACM and do not require sample collection and analysis. OSHA dictates that PACM may be “rebutted” following a complete inspection pursuant to AHERA protocol.

The HVAC Duct Wrap located in the Building and the Cementitious “Transite” Siding on the Building and scattered through the yard was classified as PACM due to the age of the structure and samples were not collected.

Table 3 lists the location, material description, friability, condition, material type (surfacing, thermal or miscellaneous) and approximate quantity of all PACM documented at the Subject Property.

Table 4 provides a summary all ACM documented at the Subject Property which includes the material location, description, and approximate quantity.

### **Friable ACM's**

Window glazing samples collected from the NE Bedroom and Basement were found to contain up to 5% asbestos following analysis. The assessment to quantify the extent of this material identified seventeen windows at the following locations that would fall into the same homogenous group. The locations of the windows are listed below:

- Attic (2 windows 24" wide x 42" tall)
- Kitchen (2 windows 24" wide x 46" tall)
- Living (2 windows 28" wide x 58" tall)
- NE Bedroom (1 window 28" wide x 58" tall)
- SE Bedroom (1 window 28" wide x 58" tall)
- Front Porch (4 windows 28" wide x 54" tall)
- Basement (5 windows 38" wide x 18" tall)

Duct Wrap identified in the building in conjunction with the forced air heating system is classified as friable ACM. The visual assessment to quantify the extent of this material identified HVAC Duct Wrap at the following locations within the basement and first floor:

- Living (2 registers, 10 sq. ft.)

### **Category I ACM**

No Category I ACM was identified during the completion of this inspection.

### **Category II ACM**

The cementitious "Transite" siding located on the exterior of the Building and scattered through the yard was classified as PACM and no samples were collected. The visual assessment to quantify the extent of this material identified 1,280 sq. ft. of cementitious (Transite) siding on the Building and property.

## **RECOMMENDATIONS**

### **Asbestos Containing Materials**

HVAC material identified in the Building system and listed below is classified as friable ACM and should be removed prior to any renovation/demolition activities.

- Living (2 registers, 10 sq. ft.)

Friable asbestos containing window glazing was identified on seventeen windows throughout the Building. The locations of these windows that should be abated prior to demolition/renovation activities are listed below:

- Attic (2 windows 24” wide x 42” tall)
- Kitchen (2 windows 24” wide x 46” tall)
- Living (2 windows 28” wide x 58” tall)
- NE Bedroom (1 window 28” wide x 58” tall)
- SE Bedroom (1 window 28” wide x 58” tall)
- Front Porch (4 windows 28” wide x 54” tall)
- Basement (5 windows 38” wide x 18” tall)

Please note: Other different sized windows are located throughout the Building but these windows were assessed and found to be constructed either without window glazing or were sampled and found to not contain asbestos and therefore are not required to be removed.

Transite siding and Transite debris was identified on the exterior of the Building and must be abated prior to completion of any demolition activities at the Subject Property. In demolition, all cementitious ACM must be removed prior to demolition due to the likelihood of becoming regulated due to the demolition process.

Please note: The location of samples obtained during this inspection were in a random fashion and areas that were not identified during this inspection may be damaged or have become damaged since the inspection was completed. If Category I or Category II friable materials are discovered prior to or during the demolition/renovation process, these materials must be abated prior to commencement of any demolition/renovation activities at the Subject Property.

### **Hazardous Materials**

Hazardous Materials identified at the Subject Property and documented in Table 1 which require proper removal and disposal consist of the following items:

- Automobile Tires (3)

### **REGULATORY REQUIREMENTS**

A Notification of Intent to Renovate/Demolish form must be filed with the Michigan Department of Environmental Quality- Air Quality Division at least 10 working days prior to any renovation or demolition activities at a site.

The Notification of Intent to Renovate/Demolish form must also be completed and submitted to the MIOSHA-Asbestos Program whenever demolition, encapsulation and/or renovation activities at a site involving greater than ten lineal feet and/or fifteen square feet of ACM will be completed.

Regulated asbestos containing materials per NESHAP (40 CFR Part 61) which falls into any of the following categories are ACM's that must be removed prior to any renovation/demolition activities at the Subject Property.

- Friable asbestos material.
- Category I non-friable ACM that has become friable.
- Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading.
- Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations.

Asbestos abatement should only be performed by a certified asbestos abatement contractor licensed to complete abatement work. The contractor must also follow the standards and requirements set forth per the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61).

Additional information regarding the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61) can be obtained by contacting the associated agency below.

NESHAP Asbestos Program  
Department of Environmental Quality  
Phone: 517-284-6777

MIOSHA-CSHD-Asbestos Program  
State of Michigan  
Phone: 517-284-7680  
Email: [asbestos@michigan.gov](mailto:asbestos@michigan.gov)


## **DISCLAIMER**

Red Cedar Consulting performed destructive testing methods in an attempt to access and inspect all areas of the Building. Unfortunately, due to the age of construction along with multiple additions/renovations that may have been completed on the Building, additional inspections may be required if suspect ACM material not documented within this report is encountered during renovation/demolition activities.

This report was prepared at the request and for exclusive use by the Muskegon County Land Bank and may not be reproduced or sold without written permission from Red Cedar Consulting.

We appreciate the opportunity to provide the requested services. Please contact us at (888) 449-4566 with any questions or concerns.

Sincerely,  
**Red Cedar Consulting**



Aaron Paquet  
Michigan/EPA Certified Asbestos Building Inspector  
(A30955)

Red Cedar Consulting

***Attachment 1***  
***APEX Research Laboratory Analytical Results***





# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 250 Rotterdam Ave

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69723  
Date Collected: 04/20/17  
Date Received: 04/21/17  
Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69723 - 01 Cust. #: RA-HM-01A Material: Roofing Materials Location: Appearance: black, fibrous, homogenous Layer: 1 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 30% Other - 70%
Lab ID #: 69723 - 01a Cust. #: RA-HM-01A Material: Grey Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 30% Other - 70%
Lab ID #: 69723 - 01b Cust. #: RA-HM-01A Material: Black Shingle Location: Appearance: black, fibrous, homogenous Layer: 3 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%

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: 250 Rotterdam Ave

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Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69723  
Date Collected: 04/20/17  
Date Received: 04/21/17  
Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69723 - 01c Cust. #: RA-HM-01A Material: Black Shingle Location: Appearance: black, fibrous, homogenous Layer: 4 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69723 - 02 Cust. #: RA-HM-01B Material: Roofing Materials Location: Appearance: black, fibrous, homogenous Layer: 1 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 30% Other - 70%
Lab ID #: 69723 - 02a Cust. #: RA-HM-01B Material: Grey Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 30% Other - 70%

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

Robert T. Letarte Jr., Laboratory Director

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# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 250 Rotterdam Ave

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Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69723  
Date Collected: 04/20/17  
Date Received: 04/21/17  
Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69723 - 02b Cust. #: RA-HM-01B Material: Black Shingle Location: Appearance: black, fibrous, homogenous Layer: 3 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69723 - 02c Cust. #: RA-HM-01B Material: Black Shingle Location: Appearance: black, fibrous, homogenous Layer: 4 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69723 - 03 Cust. #: RA-HM-02A Material: Drywall Location: Garage Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Fiberglass - 5% Other - 75%

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

Robert T. Letarte Jr., Laboratory Director

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## Test Method, Polarized Light Microscopy (PLM)

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Lansing, MI 48901

ARI Report # 17-69723  
Date Collected: 04/20/17  
Date Received: 04/21/17  
Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69723 - 03a Cust. #: RA-HM-02A Material: Joint Compound Location: Garage Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69723 - 04 Cust. #: RA-HM-02B Material: Drywall Location: Garage Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Fiberglass - 5% Other - 75%
Lab ID #: 69723 - 04a Cust. #: RA-HM-02B Material: Joint Compound Location: Garage Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> 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.



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## Test Method, Polarized Light Microscopy (PLM)

Project: 250 Rotterdam Ave

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ARI Report # 17-69723  
Date Collected: 04/20/17  
Date Received: 04/21/17  
Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69723 - 05 Cust. #: RA-HM-03A Material: 12x12 Tan VFT Location: Appearance: brown,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 69723 - 05a Cust. #: RA-HM-03A Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69723 - 06 Cust. #: RA-HM-03B Material: 12x12 Tan VFT Location: Appearance: brown,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	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.



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Lansing, MI 48901

ARI Report # 17-69723  
Date Collected: 04/20/17  
Date Received: 04/21/17  
Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69723 - 06a Cust. #: RA-HM-03B Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69723 - 07 Cust. #: RA-HM-04A Material: Drywall Location: House Appearance: white,fibrous,nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69723 - 07a Cust. #: RA-HM-04A Material: Joint Compound Location: House Appearance: white,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> Chrysotile - 0.25%  <b>POINT COUNT RESULT</b>	Other - 99.75%

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: 250 Rotterdam Ave

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ARI Report # 17-69723  
Date Collected: 04/20/17  
Date Received: 04/21/17  
Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69723 - 08 Cust. #: RA-HM-04B Material: Drywall Location: House Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69723 - 08a Cust. #: RA-HM-04B Material: Joint Compound Location: House Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> Chrysotile - Trace  <b>POINT COUNT RESULT</b>	Other - 100%
Lab ID #: 69723 - 09 Cust. #: RA-HM-05A Material: 1st Floor Window Glazing Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> Chrysotile - Trace  <b>POINT COUNT RESULT</b>	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: 250 Rotterdam Ave

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69723  
Date Collected: 04/20/17  
Date Received: 04/21/17  
Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69723 - 10 Cust. #: RA-HM-05B Material: 1st Floor Window Glazing Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 5%	Other - 95%
Lab ID #: 69723 - 11 Cust. #: RA-HM-06A Material: Basement Window Glazing Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> Chrysotile - 0.25%  <b>POINT COUNT RESULT</b>	Other - 99.75%
Lab ID #: 69723 - 12 Cust. #: RA-HM-06B Material: Basement Window Glazing Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 5%	Other - 95%

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: 250 Rotterdam Ave

**Report To:**  
Mr. Aaron Paquet  
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P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69723  
Date Collected: 04/20/17  
Date Received: 04/21/17  
Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69723 - 13 Cust. #: RA-HS-01A Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69723 - 13a Cust. #: RA-HS-01A Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Hair - 2% Other - 97%
Lab ID #: 69723 - 14 Cust. #: RA-HS-01B Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Robert T. Letarte Jr., Laboratory Director

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Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69723 - 14a Cust. #: RA-HS-01B Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Hair - 2% Other - 97%
Lab ID #: 69723 - 15 Cust. #: RA-HS-01C Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Hair - 1% Other - 98%
Lab ID #: 69723 - 16 Cust. #: RA-HS-01D Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> 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



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## Test Method, Polarized Light Microscopy (PLM)

Project: 250 Rotterdam Ave

**Report To:**  
Mr. Aaron Paquet  
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P.O. Box 13216  
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ARI Report # 17-69723  
Date Collected: 04/20/17  
Date Received: 04/21/17  
Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69723 - 16a Cust. #: RA-HS-01D Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Hair - 1% Other - 98%
Lab ID #: 69723 - 17 Cust. #: RA-HS-01E Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69723 - 17a Cust. #: RA-HS-01E Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	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

Apex # **69723**

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

E-mail: apexresearch@chartermi.net Fax: 734-449-9991



1 of 2

Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-20-17

Project: 250 Rattlers Lane Ave

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log-in \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: 5 day **(TTP) All Samples**

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
 Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
 Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BioSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
 TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	RA-HH-01A	Roofing Materials			
2	RA-HM-01B	" "			
3	RA-HH-02A	Asphalt & Spout Compound (Stairs)			
4	RA-HM-02B	" "			
5	RA-HH-03A	12x12 Teak VET			
6	RA-HM-03B	" "			
7	RA-HH-04A	Asphalt & Spout Compound (Stairs)			
8	RA-HM-04B	" "			
9	RA-HH-05A	1st floor window cladding			
10	RA-HH-05B	" "			
11	RA-HH-06A	Basement window cladding			

Relinquished by: *[Signature]* Received by: *[Signature]*

Date: 4-20-17 Date: 4-20-17

Relinquished by: *[Signature]* Received by: *[Signature]*

Date: 10/00 APR 21 2017 Date: \_\_\_\_\_

**RECEIVED**

69703

2012

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189

Phone: 734-449-9990  
E-mail: apexresearch@chartermi.net  
Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216  
Lansing, MI 48901

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-20-17

Project: 250 Rittsdem Ave.

Project #:

Contact Person: Aaron Paquet

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: 5 day

TTP All Samples

Asbestos: Bulk  Wipe  PCM   
Lead: Bulk  Wipe  Air  Paint  Soil   
Mold: Bulk  Tape  BIOSIS  Other  Viable   
TEM: AHERA 7400 Bulk/NOB EPA Level II

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	RA-HM-06B	Basement Window Slagging			
13	RA-H5-01A	Plaster			
14	RA-H5-01B				
15	RA-H5-01C				
16	RA-H5-01D				
17	RA-H5-01E				

Relinquished by: [Signature] Received by: UTS

Date: 4-20-17

Date: 4-20-17

**RECEIVED**

Relinquished by: [Signature]  
APR 21 2017

Received by: \_\_\_\_\_  
Date: \_\_\_\_\_

***Tables***

**Table 1 - Summary of Hazardous Materials, 250 W Rotterdam Ave., Muskegon Heights, Michigan**

<b>Hazardous Materials Description and Location</b>		
<b>Location</b>	<b>Material Description</b>	<b>Quantity</b>
Exterior	Automobile Tires	3

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 250 W Rotterdam Ave., Muskegon Heights, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
RA-HM-01A	Roofing Material	No	M	Category I	ND/ND/ND/ND	Exterior	NA
RA-HM-01B	Roofing Material	No	M	Category I	ND/ND/ND/ND	Exterior	NA
RA-HM-02A	Drywall & Joint Compound	No	M	Category II	ND/ND	Garage Loft Wall	NA
RA-HM-02B	Drywall & Joint Compound	No	M	Category II	ND/ND	Garage Loft Wall	NA
RA-HM-03A	White 12x12 Vinyl Tile	No	M	Category I	ND/ND	Rear Entry	NA
RA-HM-03B	White 12x12 Vinyl Tile	No	M	Category I	ND/ND	Rear Entry	NA
RA-HM-04A	Drywall & Joint Compound	No	M	Category II	ND/0.25%CH-PC	Bathroom Ceiling	NA
RA-HM-04B	Drywall & Joint Compound	No	M	Category II	ND/TRACE-CH-PC	Bathroom Ceiling	NA
RA-HM-05A	1 <sup>st</sup> Floor Window Glazing	Yes	M	Category II	Trace CH-PC	Living Room	NA
RA-HM-05B	1 <sup>st</sup> Floor Window Glazing	Yes	M	Category II	5%CH	Living Room	12 Windows
RA-HM-06A	Basement Window Glazing	Yes	M	Category II	0.25%CH-PC	Basement	NA
RA-HM-06B	Basement Window Glazing	Yes	M	Category II	5%CH	Basement	5 Windows
RA-HS-01A	Plaster	No	S	Category II	ND/ND	Living Room Ceiling	NA
RA-HS-01B	Plaster	No	S	Category II	ND/ND	NE Bedroom Ceiling	NA
RA-HS-01C	Plaster	No	S	Category II	ND	SE Bedroom Wall	NA
RA-HS-01D	Plaster	No	S	Category II	ND/ND	NE Bedroom Wall	NA
RA-HS-01E	Plaster	No	S	Category II	ND/ND	Kitchen Wall	NA

**Notes:**

Material Types

- M = Miscellaneous building material
- TSI = Thermal System Insulation
- S = Surfacing Material
- PC = Point Count Analysis
- CH = Chrysotile Asbestos

Abbreviations

- NQ = Not quantified
- NA = Not applicable
- ND = Not detected. Laboratory result is less than 1 % asbestos
- lin. ft. = linear feet
- sq. ft. = square feet

Asbestos Containing Material (ACM) is defined as any material containing more than 1 percent asbestos as determined utilizing Polarized Light Microscopy.



**Table 3 - Summary of Presumed Asbestos Containing Materials, 250 W Rotterdam Ave., Muskegon Heights, Michigan**

<b>Asbestos Containing Material Description and Location</b>					
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Condition</b>	<b>Material Type</b>	<b>Approx. Quantity</b>
Building Exterior	Transite Siding and Transite Debris in Yard	No	Fair	M	1, 280 sq. ft.
Living (2 registers, 10 sq. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	20 sq. ft.

**Notes:**

Material Types

M = Miscellaneous building material  
 TSI = Thermal System Insulation  
 S = Surfacing Material

Abbreviations

lin. ft. = linear feet  
 sq. ft. = square feet

**Table 4 - Summary of All Asbestos Containing Materials, 250 W Rotterdam Ave., Muskegon Heights, Michigan**

<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Living (2 registers, 20 sq. ft.)	HVAC Duct Wrap	Yes	20 sq. ft.
<b>Total</b>			<b>20 sq. ft.</b>
<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Attic (2 windows 24" wide x 42" tall)	Glazing	Yes	2 Windows
Kitchen (2 windows 24" wide x 46" tall)	Glazing	Yes	2 Windows
Living (2 windows 28" wide x 58" tall)	Glazing	Yes	2 Windows
NE Bedroom (1 window 28" wide x 58" tall)	Glazing	Yes	1 Window
SE Bedroom (1 window 28" wide x 58" tall)	Glazing	Yes	1 Window
Front Porch (4 windows 28" wide x 54" tall)	Glazing	Yes	4 Windows
Basement (5 windows 38" wide x 18" tall)	Glazing	Yes	5 Windows
<b>Total</b>			<b>17 Windows</b>
<b>Exterior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Building Exterior	Transite Siding and Transite Debris in Yard	No	1,280 sq. ft.
<b>Total</b>			<b>1,280 sq. ft.</b>

**Notes:**

Abbreviations

lin. ft. = linear feet  
 sq. ft. = square feet

**Shaded/Bolded** = Friable ACM and any Category I and Category II non-friable ACM that has a high probability of becoming crumbled, pulverized, or reduced to powder by the demolition or renovation activities that must be properly abated prior to commencement of any demolition/renovation activities.

Demolition/renovation activities completed with intact Category I non-friable ACM are regulated by OSHA and must be completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note that a Negative Pressure Enclosure must be utilized during abatement when Site Conditions Warrant. Examples of these conditions include the abatement of Plaster and Vermiculite insulation, HVAC Duct Wrap in Poor Condition, and Air-O-Cell/Mag Pipe Wrap. Conditions outside of these should be assessed on a case by case basis during the Asbestos Abatement Contractors site walk and Work Plan Preparation.



P.O. Box 13216  
Lansing, MI 48901  
Phone: 888.449.4566  
Fax: 888.448.8739  
www.redcedarconsulting.net

May 12, 2017

Mr. Tim Burgess  
Muskegon County Land Bank  
Land Bank Coordinator  
173 E. Apple Avenue, Suite 104  
Muskegon, MI 49442

**RE: *Asbestos Containing Material and Hazardous Materials Inspection***  
***252 E Isabella Ave., Muskegon, MI 49442***  
***Parcel ID: 61-24-205-245-0007-00***

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 252 E Isabella Ave., Muskegon, Michigan (Subject Property). This inspection was completed at the request of the Muskegon County Land Bank to comply with the United States Environmental Protection Agency (USEPA) requirements for demolition and renovation set forth under the National Emissions Standards for Hazardous Air Pollutants (NESHAP, 40 CFR Part 61). This inspection was also completed to comply with the Occupational Safety and Health Administration (OSHA) Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

### **SUBJECT PROPERTY**

The Subject Property is comprised of a .08 acre residential parcel which contains an approximate 880 square foot residential building (the Building) with an unknown construction date. The Building was constructed on a concrete block basement with one aboveground floor. The exterior walls of the Building were made of brick while the roof was sealed with asphalt shingles. The Building can be further divided into a front entry, living room, dining room, kitchen, bath, and two bedrooms on the first floor.

### **VISUAL INSPECTION AND SAMPLING**

#### **Asbestos Containing Materials Inspection**

Aaron Paquet and Darrell DeMasters of Red Cedar Consulting (Red Cedar), accredited State Of Michigan/EPA Asbestos Building Inspectors (Accreditation Numbers A30955 and A31159, respectively) who completed training per the Michigan Asbestos Workers Accreditation Act 440, completed an inspection of the Subject Property on April 26, 2017 for suspected asbestos containing building materials.

This inspection, and subsequent sample collection was completed in accordance with the USEPA Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763) assessment and sampling protocol.

During the completion of the inspection, each area of the Subject Property was visually inspected for asbestos containing building materials (ACBM). Following the completion of the visual inspection, Red Cedar staff identified each suspect area of friable and non-friable ACBM and sorted them into one of three homogenous categories for sampling purposes. AHERA defines friable as a material that when dry, may be crumbled, pulverized, or reduced to powder by hand pressure. A homogenous area is defined by OSHA as an area of surfacing, thermal system insulation (TSI) or miscellaneous material that is uniform in color and texture. Surfacing materials are most commonly found in sprayed-on, troweled-on or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members. TSI refers to materials applied to pipes, fittings, boilers, ductwork, or other components to prevent heat loss or gain, or condensation. Any material that does not fall under the surfacing or TSI category, such as floor tile, drywall, and acoustical ceiling tile are placed into the miscellaneous materials category.

Following the completion of the visual inspection, Red Cedar staff identified the following materials as suspect ACBM:

- Roofing Materials
- 1'x1' Ceiling Tile
- 12"x12" Vinyl Tile
- Drywall
- Glazing
- Plaster

Red Cedar staff collected fifteen samples of suspect ACBM separated into six distinct homogenous groups for laboratory analysis. Samples were collected and submitted to APEX Research Inc. Laboratories (APEX) (Accreditation Number 102118-0) for laboratory analysis. Analysis was completed utilizing polarized light microscopy (PLM) which is the Environmental Protection Agency (EPA) approved method for analysis of bulk materials for asbestos. PLM analysis completed pursuant to method (EPA 600/M4-82-020) identifies asbestos fiber bundles by the visual properties displayed when the sample is treated with various dispersion staining liquids. The laboratory report completed following the sample analysis indicates if asbestos is present, and at what percentage along with a description and percentage of other fibrous and non-fibrous materials and sample color. Chain-of-custody documentation was followed from sample collection through shipping and receiving of the samples at the designated laboratory. The documentation assures that samples will meet the quality assurance/quality control measures defined by AHERA. The laboratory analytical report prepared by APEX for the fifteen samples is included as Attachment A.

## **Hazardous Materials Inspection**

On April 26, 2017 the Subject Property was also inspected for the presence of hazardous materials which include but are not limited to polychlorinated biphenyls (PCBs) and potential mercury containing equipment and any items or containers that may contain or be classified as a hazardous or regulated material. Each material, if identified, was documented along with the approximate location. Any materials identified as hazardous are included in Table 1.

## **INSPECTION RESULTS AND RECOMMENDATIONS**

During the completion of the asbestos inspection, fifteen samples of suspect ACM were collected and are documented in Table 2 along with the Red Cedar sample number, description, friability, material type, ACM classification, sample location, material quantity and laboratory analytical results.

ACM, as defined by the USEPA NESHAP is “any material containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763 Section 1, Polarized Light Microscopy”.

Friable ACM is defined by NESHAP as any material containing more than 1 percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Friable ACM is a concern due the ease of unintentionally disturbing the ACM which may result in “visible emissions” which is known as a Fiber Release Episode.

Non-friable asbestos-containing material is defined as “material containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACM’s are separated into Category I and Category II ACM. Category I ACM is any asbestos containing packing’s, gaskets, resilient floor coverings (vinyl floor tile and linoleum are examples of these) and asphalt roofing products. Category II ACM is stated by NESHAP as any material excluding Category I non-friable ACM such as drywall, plaster or fiberboard insulation.

### **Presumed Asbestos Containing Material**

Presumed Asbestos Containing Materials (PACM) are suspect surfacing, TSI and miscellaneous materials found in buildings constructed prior to 1980 which are classified as and due to the age of the structure, are assumed to be ACM and do not require sample collection and analysis. OSHA dictates that PACM may be “rebutted” following a complete inspection pursuant to AHERA protocol.

No PACM was identified during the completion of this inspection. All suspect materials identified were sampled and analyzed for ACM.

Table 3 lists the location, material description, friability, condition, material type (surfacing, thermal or miscellaneous) and approximate quantity of all PACM documented at the Subject Property.

Table 4 provides a summary all ACM documented at the Subject Property which includes the material location, description, and approximate quantity.

**Friable ACM's**

No friable ACM's were identified during the completion of this inspection.

**Category I ACM**

No Category I ACM was identified during the completion of this inspection.

**Category II ACM**

No Category II non-friable ACM was identified during the completion of this inspection.

**RECOMMENDATIONS**

**Asbestos Containing Materials**

No ACM was identified within the Building that would require abatement prior to demolition/renovation of the structure.

Please note: The location of samples obtained during this inspection were in a random fashion and areas that were not identified during this inspection may be damaged or have become damaged since the inspection was completed. If Category I or Category II friable materials are discovered prior to or during the demolition/renovation process, these materials must be abated prior to commencement of any demolition/renovation activities at the Subject Property.

**Hazardous Materials**

Hazardous Materials identified at the Subject Property and documented in Table 1 which require proper removal and disposal consist of the following items:

- Smoke Detector (1)
- Television (3)
- Automobile Tires (11)

**REGULATORY REQUIREMENTS**

A Notification of Intent to Renovate/Demolish form must be filed with the Michigan Department of Environmental Quality- Air Quality Division at least 10 working days prior to any renovation or demolition activities at a site.

The Notification of Intent to Renovate/Demolish form must also be completed and submitted to the MIOSHA-Asbestos Program whenever demolition, encapsulation and/or renovation activities at a site involving greater than ten lineal feet and/or fifteen square feet of ACM will be completed.

Regulated asbestos containing materials per NESHAP (40 CFR Part 61) which falls into any of the following categories are ACM's that must be removed prior to any renovation/demolition activities at the Subject Property.

- Friable asbestos material.
- Category I non-friable ACM that has become friable.
- Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading.
- Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations.

Asbestos abatement should only be performed by a certified asbestos abatement contractor licensed to complete abatement work. The contractor must also follow the standards and requirements set forth per the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61).

Additional information regarding the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61) can be obtained by contacting the associated agency below.

NESHAP Asbestos Program  
Department of Environmental Quality  
Phone: 517-284-6777

MIOSHA-CSHD-Asbestos Program  
State of Michigan  
Phone: 517-284-7680  
Email: [asbestos@michigan.gov](mailto:asbestos@michigan.gov)

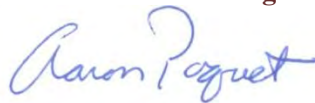
### **DISCLAIMER**

Red Cedar Consulting performed destructive testing methods in an attempt to access and inspect all areas of the Building. Unfortunately, due to the age of construction along with multiple additions/renovations that may have been completed on the Building, additional inspections may be required if suspect ACM material not documented within this report is encountered during renovation/demolition activities.

This report was prepared at the request and for exclusive use by the Muskegon County Land Bank and may not be reproduced or sold without written permission from Red Cedar Consulting.

We appreciate the opportunity to provide the requested services. Please contact us at (888) 449-4566 with any questions or concerns.

Sincerely,  
**Red Cedar Consulting**



Aaron Paquet  
Michigan/EPA Certified Asbestos Building Inspector  
(A30955)

Red Cedar Consulting

***Attachment 1***  
***APEX Research Laboratory Analytical Results***





# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 252 Isabella

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69841  
Date Collected: 04/26/17  
Date Received: 04/27/17  
Date Analyzed: 05/03/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69841 - 01 Cust. #: SA-HM-01A Material: Roofing Materials Location: Appearance: black, fibrous, homogenous Layer: 1 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 69841 - 01a Cust. #: SA-HM-01A Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 69841 - 01b Cust. #: SA-HM-01A Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 3 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Other - 70%

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: 252 Isabella

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69841  
Date Collected: 04/26/17  
Date Received: 04/27/17  
Date Analyzed: 05/03/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69841 - 01c Cust. #: SA-HM-01A Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 4 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 69841 - 01d Cust. #: SA-HM-01A Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 5 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 25% Other - 75%
Lab ID #: 69841 - 02 Cust. #: SA-HM-01B Material: Roofing Materials Location: Appearance: black, fibrous, homogenous Layer: 1 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Other - 70%

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: 252 Isabella

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69841  
Date Collected: 04/26/17  
Date Received: 04/27/17  
Date Analyzed: 05/03/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69841 - 02a Cust. #: SA-HM-01B Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 69841 - 02b Cust. #: SA-HM-01B Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 3 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 69841 - 02c Cust. #: SA-HM-01B Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 4 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Other - 70%

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.



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Project: 252 Isabella

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Lansing, MI 48901

ARI Report # 17-69841  
Date Collected: 04/26/17  
Date Received: 04/27/17  
Date Analyzed: 05/03/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69841 - 02d Cust. #: SA-HM-01B Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 5 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 25% Other - 75%
Lab ID #: 69841 - 03 Cust. #: SA-HM-02A Material: 12x12 White VFT Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69841 - 03a Cust. #: SA-HM-02A Material: Mastic Location: Appearance: yellow, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> 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: 252 Isabella

**Report To:**

Mr. Aaron Paquet  
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P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69841  
Date Collected: 04/26/17  
Date Received: 04/27/17  
Date Analyzed: 05/03/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69841 - 04 Cust. #: SA-HM-02B Material: 12x12 White VFT Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69841 - 04a Cust. #: SA-HM-02B Material: Mastic Location: Appearance: yellow, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69841 - 05 Cust. #: SA-HM-03A Material: 1x1 White Smooth Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 95% Other - 5%

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

Robert T. Letarte Jr., Laboratory Director

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## Test Method, Polarized Light Microscopy (PLM)

Project: 252 Isabella

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P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69841  
Date Collected: 04/26/17  
Date Received: 04/27/17  
Date Analyzed: 05/03/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69841 - 06 Cust. #: SA-HM-03B Material: 1x1 White Smooth Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 95% Other - 5%
Lab ID #: 69841 - 07 Cust. #: SA-HM-04A Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Fiberglass - 5% Other - 80%
Lab ID #: 69841 - 08 Cust. #: SA-HM-04B Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Fiberglass - 5% 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: 252 Isabella

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69841  
Date Collected: 04/26/17  
Date Received: 04/27/17  
Date Analyzed: 05/03/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69841 - 09 Cust. #: SA-HM-05A Material: Window Glazing Location: Appearance: beige,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69841 - 10 Cust. #: SA-HM-05B Material: Window Glazing Location: Appearance: beige,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69841 - 11 Cust. #: SA-HS-01A Material: Plaster Finish Coat Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> 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: 252 Isabella

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69841  
Date Collected: 04/26/17  
Date Received: 04/27/17  
Date Analyzed: 05/03/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69841 - 11a Cust. #: SA-HS-01A Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 69841 - 12 Cust. #: SA-HS-01B Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69841 - 12a Cust. #: SA-HS-01B Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%

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

Robert T. Letarte Jr., Laboratory Director

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Project: 252 Isabella

**Report To:**  
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Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69841  
Date Collected: 04/26/17  
Date Received: 04/27/17  
Date Analyzed: 05/03/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69841 - 13 Cust. #: SA-HS-01C Material: Plaster Finish Coat Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69841 - 13a Cust. #: SA-HS-01C Material: Plaster Base Coat Location: Appearance: grey,fibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 69841 - 14 Cust. #: SA-HS-01D Material: Plaster Finish Coat Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 252 Isabella

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69841  
Date Collected: 04/26/17  
Date Received: 04/27/17  
Date Analyzed: 05/03/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69841 - 14a Cust. #: SA-HS-01D Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 69841 - 15 Cust. #: SA-HS-01E Material: Plaster Texture Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69841 - 15a Cust. #: SA-HS-01E Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 252 Isabella

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69841  
Date Collected: 04/26/17  
Date Received: 04/27/17  
Date Analyzed: 05/03/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69841 - 15b Cust. #: SA-HS-01E Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

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NVLAP Lab Code 102118-0

Apex # **69841**

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

E-mail: apexresearch@charterni.net

Fax: 734-449-9991



1 of 2

Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-26-17

Project: 252 Bealville

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: 5 days All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
 Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
 Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BioSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
 TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	SA-HM-01A	Roofing Materials			
2	SA-HM-01B	..			
3	SA-HM-02A	12x12 white VET			
4	SA-HM-02B	..			
5	SA-HM-03A	1x1 white smooth CT			
6	SA-HM-03B	..			
7	SA-HM-04A	Asphalt			
8	SA-HM-05A	..			
9	SA-HM-05B	Windows Siding			
10	SA-HM-05C	..			
11	SA-HS-01A	Plaster			

Relinquished by: APM Received by: UPS  
 Date: 4-26-17 Date: 4-26-17

Relinquished by: [Signature] Received by: \_\_\_\_\_  
 Date: 1045 APR 27 2017 Date: \_\_\_\_\_

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

E-mail: apexresearch@chartermi.net

Fax: 734-449-9991



2 of 2

Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-26-17

Project: 252

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: 5 day TTP All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BioSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	SA-HS-01B	Plester			
13	SA-HS-01C				
14	SA-HS-01D				
15	SA-HS-01E	✓			

RECEIVED

Relinquished by: Alexandra Received by: DPB

Date: 4-26-17 Date: 4-26-17

Relinquished by: AAP

Date: APEX RESEARCH

Received by: \_\_\_\_\_

Date: \_\_\_\_\_

***Tables***

**Table 1 - Summary of Hazardous Materials, 252 E Isabella Ave., Muskegon Heights, Michigan**

<b>Hazardous Materials Description and Location</b>		
<b>Location</b>	<b>Material Description</b>	<b>Quantity</b>
NW Bedroom	Television	1
Kitchen	Automobile Tire	1
Front Entry	Automobile Tire	10
Front Entry	Television	1
Basement	Smoke Detector	1
Basement	Television	1

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 252 E Isabella Ave., Muskegon, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
SA-HM-01A	Roofing Materials	No	M	Category I	ND/ND/ND/ ND/ND	Exterior	NA
SA-HM-01B	Roofing Materials	No	M	Category I	ND/ND/ND/ ND/ND	Exterior	NA
SA-HM-02A	White 12x12 Vinyl Floor Tile	No	M	Category I	ND/ND	Kitchen	NA
SA-HM-02B	White 12x12 Vinyl Floor Tile	No	M	Category I	ND/ND	Kitchen	NA
SA-HM-03A	White Smooth 1'x1' Ceiling Tile	Yes	M	Category II	ND	Living Room	NA
SA-HM-03B	White Smooth 1'x1' Ceiling Tile	Yes	M	Category II	ND	Dining Room	NA
SA-HM-04A	Drywall	No	M	Category II	ND	Dining Room Ceiling	NA
SA-HM-04B	Drywall	No	M	Category II	ND	Dining Room Ceiling	NA
SA-HM-05A	Window Glazing	Yes	M	Category II	ND	Dining Room	NA
SA-HM-05B	Window Glazing	Yes	M	Category II	ND	Living Room	NA
SA-HS-01A	Plaster	No	S	Category II	ND/ND	Living Room Ceiling	NA
SA-HS-01B	Plaster	No	S	Category II	ND/ND	W Bedroom Ceiling	NA
SA-HS-01C	Plaster	No	S	Category II	ND/ND	Living Room Wall	NA
SA-HS-01D	Plaster	No	S	Category II	ND/ND	Kitchen Wall	NA
SA-HS-01E	Plaster	No	S	Category II	ND/ND/ND	W Bedroom Wall	NA

**Notes:**

Material Types

- M = Miscellaneous building material
- TSI = Thermal System Insulation
- S = Surfacing Material
- PC = Point Count Analysis
- CH = Chrysotile Asbestos

Abbreviations

- NQ = Not quantified
- NA = Not applicable
- ND = Not detected. Laboratory result is less than 1 % asbestos
- lin. ft. = linear feet
- sq. ft. = square feet

Asbestos Containing Material (ACM) is defined as any material containing more than 1 percent asbestos as determined utilizing Polarized Light Microscopy.



**Table 3 - Summary of Presumed Asbestos Containing Materials, 252 E Isabella Ave., Muskegon, Michigan**

<b>Asbestos Containing Material Description and Location</b>					
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Condition</b>	<b>Material Type</b>	<b>Approx. Quantity</b>
No Presumed Asbestos Containing Materials Identified					

**Notes:**

Material Types

- M = Miscellaneous building material
- TSI = Thermal System Insulation
- S = Surfacing Material

Abbreviations

- lin. ft. = linear feet
- sq. ft. = square feet

**Table 4 - Summary of All Asbestos Containing Materials, 252 E Isabella Ave., Muskegon, Michigan**

<b>Exterior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
No Asbestos Containing Materials Identified			

**Notes:**

Abbreviations

lin. ft. = linear feet

sq. ft. = square feet

**Shaded/Bolded** = Friable ACM and any Category I and Category II non-friable ACM that has a high probability of becoming crumbled, pulverized, or reduced to powder by the demolition or renovation activities that must be properly abated prior to commencement of any demolition/renovation activities.

Demolition/renovation activities completed with intact Category I non-friable ACM are regulated by OSHA and must be completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note that a Negative Pressure Enclosure must be utilized during abatement when Site Conditions Warrant. Examples of these conditions include the abatement of Plaster and Vermiculite insulation, HVAC Duct Wrap in Poor Condition, and Air-O-Cell/Mag Pipe Wrap. Conditions outside of these should be assessed on a case by case basis during the Asbestos Abatement Contractors site walk and Work Plan Preparation.



P.O. Box 13216  
Lansing, MI 48901  
Phone: 888.449.4566  
Fax: 888.448.8739  
www.redcedarconsulting.net

May 12, 2017

Mr. Tim Burgess  
Muskegon County Land Bank  
Land Bank Coordinator  
173 E. Apple Avenue, Suite 104  
Muskegon, MI 49442

**RE: *Asbestos Containing Material and Hazardous Materials Inspection***  
***276 E Delano Ave., Muskegon Heights, MI 49444***  
***Parcel ID: 61-26-185-032-0012-00***

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 276 E Delano Ave., Muskegon Heights, Michigan (Subject Property). This inspection was completed at the request of the Muskegon County Land Bank to comply with the United States Environmental Protection Agency (USEPA) requirements for demolition and renovation set forth under the National Emissions Standards for Hazardous Air Pollutants (NESHAP, 40 CFR Part 61). This inspection was also completed to comply with the Occupational Safety and Health Administration (OSHA) Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

### **SUBJECT PROPERTY**

The Subject Property is comprised of a .04 acre residential parcel which contains an approximate 612 square foot residential building (the Building) constructed in 1914. The Building was constructed on a concrete foundation with one aboveground floor. The exterior walls of the Building were finished with vinyl and asphalt siding while the roof was sealed with asphalt shingles. The Building can be further divided into a living room, kitchen, bathroom and two bedrooms.

### **VISUAL INSPECTION AND SAMPLING**

#### **Asbestos Containing Materials Inspection**

Aaron Paquet and Darrell DeMasters of Red Cedar Consulting (Red Cedar), accredited State Of Michigan/EPA Asbestos Building Inspectors (Accreditation Numbers A30955 and A31159, respectively) who completed training per the Michigan Asbestos Workers Accreditation Act 440, completed an inspection of the Subject Property on April 21, 2017 for suspected asbestos containing building materials.

This inspection, and subsequent sample collection was completed in accordance with the USEPA Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763) assessment and sampling protocol.

During the completion of the inspection, each area of the Subject Property was visually inspected for asbestos containing building materials (ACBM). Following the completion of the visual inspection, Red Cedar staff identified each suspect area of friable and non-friable ACBM and sorted them into one of three homogenous categories for sampling purposes. AHERA defines friable as a material that when dry, may be crumbled, pulverized, or reduced to powder by hand pressure. A homogenous area is defined by OSHA as an area of surfacing, thermal system insulation (TSI) or miscellaneous material that is uniform in color and texture. Surfacing materials are most commonly found in sprayed-on, troweled-on or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members. TSI refers to materials applied to pipes, fittings, boilers, ductwork, or other components to prevent heat loss or gain, or condensation. Any material that does not fall under the surfacing or TSI category, such as floor tile, drywall, and acoustical ceiling tile are placed into the miscellaneous materials category.

Following the completion of the visual inspection, Red Cedar staff identified the following materials as suspect ACBM:

- Asphalt Shingle
- Asphalt Siding
- 9"x9" Vinyl Tile
- Linoleum
- 12"x12" Vinyl Tile
- Vapor Barrier
- Plaster

Red Cedar staff collected fifteen samples of suspect ACBM separated into seven distinct homogenous groups for laboratory analysis. Samples were collected and submitted to APEX Research Inc. Laboratories (APEX) (Accreditation Number 102118-0) for laboratory analysis. Analysis was completed utilizing polarized light microscopy (PLM) which is the Environmental Protection Agency (EPA) approved method for analysis of bulk materials for asbestos. PLM analysis completed pursuant to method (EPA 600/M4-82-020) identifies asbestos fiber bundles by the visual properties displayed when the sample is treated with various dispersion staining liquids. The laboratory report completed following the sample analysis indicates if asbestos is present, and at what percentage along with a description and percentage of other fibrous and non-fibrous materials and sample color. Chain-of-custody documentation was followed from sample collection through shipping and receiving of the samples at the designated laboratory. The documentation assures that samples will meet the quality assurance/quality control measures defined by AHERA. The laboratory analytical report prepared by APEX for the fifteen samples is included as Attachment A.

## **Hazardous Materials Inspection**

On April 21, 2017 the Subject Property was also inspected for the presence of hazardous materials which include but are not limited to polychlorinated biphenyls (PCBs) and potential mercury containing equipment and any items or containers that may contain or be classified as a hazardous or regulated material. Each material, if identified, was documented along with the approximate location. Any materials identified as hazardous are included in Table 1.

## **INSPECTION RESULTS AND RECOMMENDATIONS**

During the completion of the asbestos inspection, fifteen samples of suspect ACM were collected and are documented in Table 2 along with the Red Cedar sample number, description, friability, material type, ACM classification, sample location, material quantity and laboratory analytical results.

ACM, as defined by the USEPA NESHAP is “any material containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763 Section 1, Polarized Light Microscopy”.

Friable ACM is defined by NESHAP as any material containing more than 1 percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Friable ACM is a concern due the ease of unintentionally disturbing the ACM which may result in “visible emissions” which is known as a Fiber Release Episode.

Non-friable asbestos-containing material is defined as “material containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACM’s are separated into Category I and Category II ACM. Category I ACM is any asbestos containing packing’s, gaskets, resilient floor coverings (vinyl floor tile and linoleum are examples of these) and asphalt roofing products. Category II ACM is stated by NESHAP as any material excluding Category I non-friable ACM such as drywall, plaster or fiberboard insulation.

### **Presumed Asbestos Containing Material**

Presumed Asbestos Containing Materials (PACM) are suspect surfacing, TSI and miscellaneous materials found in buildings constructed prior to 1980 which are classified as and due to the age of the structure, are assumed to be ACM and do not require sample collection and analysis. OSHA dictates that PACM may be “rebutted” following a complete inspection pursuant to AHERA protocol.

No PACM was identified during the completion of this inspection. All suspect materials identified were sampled and analyzed for ACM.

Table 3 lists the location, material description, friability, condition, material type (surfacing, thermal or miscellaneous) and approximate quantity of all PACM documented at the Subject Property.

Table 4 provides a summary all ACM documented at the Subject Property which includes the material location, description, and approximate quantity.

**Friable ACM's**

No friable ACM's were identified during the completion of this inspection.

**Category I ACM**

No Category I ACM was identified during the completion of this inspection.

**Category II ACM**

No Category II non-friable ACM was identified during the completion of this inspection.

**RECOMMENDATIONS**

**Asbestos Containing Materials**

No ACM was identified within the Building that would require abatement prior to demolition/renovation of the structure.

Please note: The location of samples obtained during this inspection were in a random fashion and areas that were not identified during this inspection may be damaged or have become damaged since the inspection was completed. If Category I or Category II friable materials are discovered prior to or during the demolition/renovation process, these materials must be abated prior to commencement of any demolition/renovation activities at the Subject Property.

**Hazardous Materials**

Hazardous Materials identified at the Subject Property and documented in Table 1 which require proper removal and disposal consist of the following items:

- No Hazardous Materials Identified

**REGULATORY REQUIREMENTS**

A Notification of Intent to Renovate/Demolish form must be filed with the Michigan Department of Environmental Quality- Air Quality Division at least 10 working days prior to any renovation or demolition activities at a site.

The Notification of Intent to Renovate/Demolish form must also be completed and submitted to the MIOSHA-Asbestos Program whenever demolition, encapsulation and/or renovation activities at a site involving greater than ten lineal feet and/or fifteen square feet of ACM will be completed.

Regulated asbestos containing materials per NESHAP (40 CFR Part 61) which falls into any of the following categories are ACM's that must be removed prior to any renovation/demolition activities at the Subject Property.

- Friable asbestos material.

Project No.: 17-1083  
Muskegon County Land Bank  
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- Category I non-friable ACM that has become friable.
- Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading.
- Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations.

Asbestos abatement should only be performed by a certified asbestos abatement contractor licensed to complete abatement work. The contractor must also follow the standards and requirements set forth per the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61).

Additional information regarding the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61) can be obtained by contacting the associated agency below.

NESHAP Asbestos Program  
Department of Environmental Quality  
Phone: 517-284-6777

MIOSHA-CSHD-Asbestos Program  
State of Michigan  
Phone: 517-284-7680  
Email: asbestos@michigan.gov

### **DISCLAIMER**

Red Cedar Consulting performed destructive testing methods in an attempt to access and inspect all areas of the Building. Unfortunately, due to the age of construction along with multiple additions/renovations that may have been completed on the Building, additional inspections may be required if suspect ACM material not documented within this report is encountered during renovation/demolition activities.

This report was prepared at the request and for exclusive use by the Muskegon County Land Bank and may not be reproduced or sold without written permission from Red Cedar Consulting.

We appreciate the opportunity to provide the requested services. Please contact us at (888) 449-4566 with any questions or concerns.

Sincerely,  
**Red Cedar Consulting**



Aaron Paquet  
Michigan/EPA Certified Asbestos Building Inspector  
(A30955)

Red Cedar Consulting

***Attachment 1***  
***APEX Research Laboratory Analytical Results***





# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 276 E. Delano St.

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69750  
Date Collected: 04/21/17  
Date Received: 04/24/17  
Date Analyzed: 04/28/17  
Date Reported: 05/01/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69750 - 01 Cust. #: DS-HM-01A Material: Shingle Roof Location: Appearance: beige, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 15% Other - 85%
Lab ID #: 69750 - 01a Cust. #: DS-HM-01A Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 25% Other - 75%
Lab ID #: 69750 - 02 Cust. #: DS-HM-01B Material: Shingle Roof Location: Appearance: black, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 15% Other - 85%

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



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Date Reported: 05/01/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69750 - 02a Cust. #: DS-HM-01B Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 25% Other - 75%
Lab ID #: 69750 - 03 Cust. #: DS-HM-02A Material: Asphalt Siding Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 60% Other - 40%
Lab ID #: 69750 - 04 Cust. #: DS-HM-02B Material: Asphalt Siding Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 60% Other - 40%

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Date Analyzed: 04/28/17  
Date Reported: 05/01/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69750 - 05 Cust. #: DS-HM-03A Material: Felt/Mastic Location: Appearance: black, fibrous, nonhomogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69750 - 05a Cust. #: DS-HM-03A Material: 9x9 Layered VFT Location: Appearance: brown, fibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 69750 - 05b Cust. #: DS-HM-03A Material: Felt/Glue Location: Appearance: black, fibrous, homogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%

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Date Reported: 05/01/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69750 - 06 Cust. #: DS-HM-03B Material: Felt/Mastic Location: Appearance: black, fibrous, nonhomogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69750 - 06a Cust. #: DS-HM-03B Material: 9x9 Layered VFT Location: Appearance: brown, fibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 69750 - 06b Cust. #: DS-HM-03B Material: Felt/Glue Location: Appearance: black, fibrous, homogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%

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Date Analyzed: 04/28/17  
Date Reported: 05/01/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69750 - 07 Cust. #: DS-HM-04A Material: Brown Linoleum Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 69750 - 08 Cust. #: DS-HM-04B Material: Brown Linoleum Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 69750 - 09 Cust. #: DS-HM-05A Material: Grey Square 12x12 VFT Layered Location: Appearance: grey, nonfibrous, homogenous Layer: 1 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Date Analyzed: 04/28/17  
Date Reported: 05/01/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69750 - 09a Cust. #: DS-HM-05A Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69750 - 09b Cust. #: DS-HM-05A Material: Floor Tile Location: Appearance: beige,nonfibrous,homogenous Layer: 3 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69750 - 09c Cust. #: DS-HM-05A Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 4 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Date Analyzed: 04/28/17  
Date Reported: 05/01/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69750 - 10 Cust. #: DS-HM-05B Material: Grey Square 12x12 VFT Layered Location: Appearance: grey,nonfibrous,homogenous Layer: 1 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69750 - 10a Cust. #: DS-HM-05B Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69750 - 10b Cust. #: DS-HM-05B Material: Floor Tile Location: Appearance: beige,nonfibrous,homogenous Layer: 3 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Date Reported: 05/01/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69750 - 10c Cust. #: DS-HM-05B Material: Glue Location: Appearance: clear, nonfibrous, homogenous Layer: 4 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69750 - 10d Cust. #: DS-HM-05B Material: Flooring Remnants Location: Appearance: brown, fibrous, homogenous Layer: 5 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Other - 85%
Lab ID #: 69750 - 11 Cust. #: DS-HM-06A Material: Vapor Barrier Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%

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Date Reported: 05/01/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69750 - 12 Cust. #: DS-HM-06B Material: Vapor Barrier Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 69750 - 13 Cust. #: DS-HS-01A Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69750 - 13a Cust. #: DS-HS-01A Material: Plaster Base Coat Location: Appearance: beige, fibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Hair - 1% Other - 98%

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Date Analyzed: 04/28/17  
Date Reported: 05/01/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69750 - 13b Cust. #: DS-HS-01A Material: Drywall Location: Appearance: beige, fibrous, nonhomogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69750 - 14a Cust. #: DS-HS-01B Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69750 - 14b Cust. #: DS-HS-01B Material: Plaster Base Coat Location: Appearance: beige, fibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Hair - 1% Other - 98%

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ARI Report # 17-69750  
Date Collected: 04/21/17  
Date Received: 04/24/17  
Date Analyzed: 04/28/17  
Date Reported: 05/01/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69750 - 14c Cust. #: DS-HS-01B Material: Drywall Location: Appearance: beige, fibrous, nonhomogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69750 - 15 Cust. #: DS-HS-01C Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69750 - 15a Cust. #: DS-HS-01C Material: Plaster Base Coat Location: Appearance: beige, fibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Hair - 1% 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: 276 E. Delano St.

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69750  
Date Collected: 04/21/17  
Date Received: 04/24/17  
Date Analyzed: 04/28/17  
Date Reported: 05/01/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69750 - 15b Cust. #: DS-HS-01C Material: Drywall Location: Appearance: beige, fibrous, nonhomogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	
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

Apex # **69750**

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

E-mail: apexresearch@chartermi.net Fax: 734-449-9991



1872

Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-21-17

Project: 276 E. Delaware St

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log# \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: *Sday* **(TTP)** All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
 Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
 Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BioSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
 TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	DS-HM-01A	Shingle Roof			
2	DS-HM-01B	" "			
3	DS-HM-02A	Asphalt Siding			
4	DS-HM-02B	" "			
5	DS-HM-03A	9x9 Sengued VET			
6	DS-HM-03B	" "			
7	DS-HM-04A	Brown Siding			
8	DS-HM-04B	" "			
9	DS-HM-05A	Gray Sengued 12x12 VET Sengued			
10	DS-HM-05B	" "			
11	DS-HM-06A	Napa Barrier			

Relinquished by: *Aspek Matele* Received by: *UPS*

Date: 4-21-17 Date: 4-21-17

Relinquished by: *CA Paquet* Received by: \_\_\_\_\_

Date: 1/25 APR 24 2017 Date: \_\_\_\_\_

69750

2 of 2

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

E-mail: apexresearch@chartermi.net Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-21-17

Project: 276 E. Adams St

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

P1M EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: 5 day

TTP All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BioSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
B	DS-HM-06B	Vapor Barrier			
B	DS-HS-01A	Plaster			
B	DS-HS-01B	↓			
B	DS-HS-01C				

RECEIVED

Relinquished by: [Signature] Received by: UPB

Date: 4-21-17 Date: 4-21-17

Relinquished by: [Signature]

Date: \_\_\_\_\_ APEX RESEARCH

Received by: \_\_\_\_\_

Date: \_\_\_\_\_

***Tables***

**Table 1 - Summary of Hazardous Materials, 276 E Delano Ave., Muskegon Heights, Michigan**

<b>Hazardous Materials Description and Location</b>		
<b>Location</b>	<b>Material Description</b>	<b>Quantity</b>
No Hazardous Materials Identified		



**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 276 E Delano Ave., Muskegon Heights, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
DS-HM-01A	Asphalt Shingle	No	M	Category I	ND/ND	Exterior	NA
DS-HM-01B	Asphalt Shingle	No	M	Category I	ND/ND	Exterior	NA
DS-HM-02A	Asphalt Siding	No	M	Category I	ND	Exterior	NA
DS-HM-02B	Asphalt Siding	No	M	Category I	ND	Exterior	NA
DS-HM-03A	9"x9" Layered Vinyl Tile	No	M	Category I	ND/ND/ND	Living	NA
DS-HM-03B	9"x9" Layered Vinyl Tile	No	M	Category I	ND/ND/ND	Living	NA
DS-HM-04A	Brown Linoleum	No	M	Category I	ND	SW Bedroom	NA
DS-HM-04B	Brown Linoleum	No	M	Category I	ND	SW Bedroom	NA
DS-HM-05A	Gray Square 12"x12" Vinyl Tile Layered	No	M	Category I	ND/ND/ND/ND	NW Bedroom	NA
DS-HM-05B	Gray Square 12"x12" Vinyl Tile Layered	No	M	Category I	ND/ND/ND/ ND/ND	NW Bedroom	NA
DS-HM-06A	Vapor Barrier	Yes	M	Category II	ND	Exterior	NA
DS-HM-06B	Vapor Barrier	Yes	M	Category II	ND	Exterior	NA
DS-HS-01A	Plaster	No	S	Category II	ND/ND/ND	Bathroom Ceiling	NA
DS-HS-01B	Plaster	No	S	Category II	ND/ND/ND	NW Bedroom Ceiling	NA
DS-HS-01C	Plaster	No	S	Category II	ND/ND/ND	NW Bedroom Ceiling	NA

**Notes:**

Material Types

M = Miscellaneous building material  
 TSI = Thermal System Insulation  
 S = Surfacing Material  
 PC = Point Count Analysis  
 CH = Chrysotile Asbestos

Abbreviations

NQ = Not quantified  
 NA = Not applicable  
 ND = Not detected. Laboratory result is less than 1 % asbestos  
 lin. ft. = linear feet  
 sq. ft. = square feet

Asbestos Containing Material (ACM) is defined as any material containing more than 1 percent asbestos as determined utilizing Polarized Light Microscopy.

**Table 3 - Summary of Presumed Asbestos Containing Materials, 276 E Delano Ave., Muskegon Heights, Michigan**

<b>Asbestos Containing Material Description and Location</b>					
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Condition</b>	<b>Material Type</b>	<b>Approx. Quantity</b>
No Presumed Asbestos Containing Materials Identified					

**Notes:**

Material Types

- M = Miscellaneous building material
- TSI = Thermal System Insulation
- S = Surfacing Material

Abbreviations

- lin. ft. = linear feet
- sq. ft. = square feet

**Table 4 - Summary of All Asbestos Containing Materials, 276 E Delano Ave., Muskegon Heights, Michigan**

<b>Exterior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
No Asbestos Containing Materials Identified			

**Notes:**

Abbreviations

lin. ft. = linear feet

sq. ft. = square feet

**Shaded/Bolded** = Friable ACM and any Category I and Category II non-friable ACM that has a high probability of becoming crumbled, pulverized, or reduced to powder by the demolition or renovation activities that must be properly abated prior to commencement of any demolition/renovation activities.

Demolition/renovation activities completed with intact Category I non-friable ACM are regulated by OSHA and must be completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note that a Negative Pressure Enclosure must be utilized during abatement when Site Conditions Warrant. Examples of these conditions include the abatement of Plaster and Vermiculite insulation, HVAC Duct Wrap in Poor Condition, and Air-O-Cell/Mag Pipe Wrap. Conditions outside of these should be assessed on a case by case basis during the Asbestos Abatement Contractors site walk and Work Plan Preparation.



P.O. Box 13216  
Lansing, MI 48901  
Phone: 888.449.4566  
Fax: 888.448.8739  
www.redcedarconsulting.net

May 8, 2017

Mr. Tim Burgess  
Muskegon County Land Bank  
Land Bank Coordinator  
173 E. Apple Avenue, Suite 104  
Muskegon, MI 49442

***RE: Asbestos Containing Material and Hazardous Materials Inspection  
297 W Maplewood Ave., Muskegon Heights, MI 49444  
Parcel ID: 61-26-400-015-0020-00***

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 297 W Maplewood Ave. Muskegon Heights, Michigan (Subject Property). This inspection was completed at the request of the Muskegon County Land Bank to comply with the United States Environmental Protection Agency (USEPA) requirements for demolition and renovation set forth under the National Emissions Standards for Hazardous Air Pollutants (NESHAP, 40 CFR Part 61). This inspection was also completed to comply with the Occupational Safety and Health Administration (OSHA) Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

### **SUBJECT PROPERTY**

The Subject Property is comprised of a .11 acre residential parcel which contains an approximate 480 square foot residential building (the Building) constructed in 1945. The Building was constructed on a concrete foundation with one aboveground floor. The exterior walls of the Building were finished with clapboard siding while the roof was sealed with asphalt shingles. The Building can be further divided into a living room, kitchen, bathroom, den and a bedroom.

### **VISUAL INSPECTION AND SAMPLING**

#### **Asbestos Containing Materials Inspection**

Aaron Paquet and Darrell DeMasters of Red Cedar Consulting (Red Cedar), accredited State Of Michigan/EPA Asbestos Building Inspectors (Accreditation Numbers A30955 and A31159, respectively) who completed training per the Michigan Asbestos Workers Accreditation Act 440, completed an inspection of the Subject Property on April 19, 2017 for suspected asbestos containing building materials.

This inspection, and subsequent sample collection was completed in accordance with the USEPA Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763) assessment and sampling protocol.

During the completion of the inspection, each area of the Subject Property was visually inspected for asbestos containing building materials (ACBM). Following the completion of the visual inspection, Red Cedar staff identified each suspect area of friable and non-friable ACBM and sorted them into one of three homogenous categories for sampling purposes. AHERA defines friable as a material that when dry, may be crumbled, pulverized, or reduced to powder by hand pressure. A homogenous area is defined by OSHA as an area of surfacing, thermal system insulation (TSI) or miscellaneous material that is uniform in color and texture. Surfacing materials are most commonly found in sprayed-on, troweled-on or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members. TSI refers to materials applied to pipes, fittings, boilers, ductwork, or other components to prevent heat loss or gain, or condensation. Any material that does not fall under the surfacing or TSI category, such as floor tile, drywall, and acoustical ceiling tile are placed into the miscellaneous materials category.

Following the completion of the visual inspection, Red Cedar staff identified the following materials as suspect ACBM:

- Vapor Barrier
- Roofing Shingle
- 12"x12" Vinyl Tile
- Vinyl Flooring
- 1'x1' Ceiling Tile
- Drywall and Joint Compound
- Fiberboard
- Glazing

Red Cedar staff collected eighteen samples of suspect ACBM separated into nine distinct homogenous groups for laboratory analysis. Samples were collected and submitted to APEX Research Inc. Laboratories (APEX) (Accreditation Number 102118-0) for laboratory analysis. Analysis was completed utilizing polarized light microscopy (PLM) which is the Environmental Protection Agency (EPA) approved method for analysis of bulk materials for asbestos. PLM analysis completed pursuant to method (EPA 600/M4-82-020) identifies asbestos fiber bundles by the visual properties displayed when the sample is treated with various dispersion staining liquids. The laboratory report completed following the sample analysis indicates if asbestos is present, and at what percentage along with a description and percentage of other fibrous and non-fibrous materials and sample color. Chain-of-custody documentation was followed from sample collection through shipping and receiving of the samples at the designated laboratory. The documentation assures that samples will meet the quality assurance/quality control measures defined by AHERA. The laboratory analytical report prepared by APEX for the eighteen samples is included as Attachment A.

## **Hazardous Materials Inspection**

On April 19, 2017 the Subject Property was also inspected for the presence of hazardous materials which include but are not limited to polychlorinated biphenyls (PCBs) and potential mercury containing equipment and any items or containers that may contain or be classified as a hazardous or regulated material. Each material, if identified, was documented along with the approximate location. Any materials identified as hazardous are included in Table 1.

## **INSPECTION RESULTS AND RECOMMENDATIONS**

During the completion of the asbestos inspection, eighteen samples of suspect ACM were collected and are documented in Table 2 along with the Red Cedar sample number, description, friability, material type, ACM classification, sample location, material quantity and laboratory analytical results.

ACM, as defined by the USEPA NESHAP is “any material containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763 Section 1, Polarized Light Microscopy”.

Friable ACM is defined by NESHAP as any material containing more than 1 percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Friable ACM is a concern due the ease of unintentionally disturbing the ACM which may result in “visible emissions” which is known as a Fiber Release Episode.

Non-friable asbestos-containing material is defined as “material containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACM’s are separated into Category I and Category II ACM. Category I ACM is any asbestos containing packing’s, gaskets, resilient floor coverings (vinyl floor tile and linoleum are examples of these) and asphalt roofing products. Category II ACM is stated by NESHAP as any material excluding Category I non-friable ACM such as drywall, plaster or fiberboard insulation.

### **Presumed Asbestos Containing Material**

Presumed Asbestos Containing Materials (PACM) are suspect surfacing, TSI and miscellaneous materials found in buildings constructed prior to 1980 which are classified as and due to the age of the structure, are assumed to be ACM and do not require sample collection and analysis. OSHA dictates that PACM may be “rebutted” following a complete inspection pursuant to AHERA protocol.

No PACM was identified during the completion of this inspection. All suspect materials identified were sampled and analyzed for ACM.

Table 3 lists the location, material description, friability, condition, material type (surfacing, thermal or miscellaneous) and approximate quantity of all PACM documented at the Subject Property.

Table 4 provides a summary all ACM documented at the Subject Property which includes the material location, description, and approximate quantity.

### **Friable ACM's**

Fiberboard and Drywall adhesive identified in the Building is classified as friable ACM. The visual assessment to quantify the extent of this material identified approximately 2,126 sq. ft. of this material within the Building.

### **Category I ACM**

Two types of resilient floor covering (12"x12" Brown Marble Vinyl Tile and 12"x12" Tan Vinyl Tile) located within the living room, den, NE bedroom and kitchen, respectively, were found to contain up to 5% Chrysotile asbestos. The assessment to quantify the extent of this material identified approximately 422 sq. ft. of this material within the Building.

### **Category II ACM**

No Category II non-friable ACM was identified during the completion of this inspection.

## **RECOMMENDATIONS**

### **Asbestos Containing Materials**

Fiberboard and Drywall Adhesive identified in the Building is classified as friable ACM and should be removed prior to any renovation/demolition activities.

The Category I resilient floor coverings (12"x12" Brown Marble Vinyl Tile and 12"x12" Tan Vinyl Tile) are non-friable ACM's that may be left in place as long as the demolition/renovation activities are completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note: The location of samples obtained during this inspection were in a random fashion and areas that were not identified during this inspection may be damaged or have become damaged since the inspection was completed. If Category I or Category II friable materials are discovered prior to or during the demolition/renovation process, these materials must be abated prior to commencement of any demolition/renovation activities at the Subject Property.

### **Hazardous Materials**

Hazardous Materials identified at the Subject Property and documented in Table 1 which require proper removal and disposal consist of the following items:

- Smoke Detector (1)

Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-26-400-015-0020-00

## **REGULATORY REQUIREMENTS**

A Notification of Intent to Renovate/Demolish form must be filed with the Michigan Department of Environmental Quality- Air Quality Division at least 10 working days prior to any renovation or demolition activities at a site.

The Notification of Intent to Renovate/Demolish form must also be completed and submitted to the MIOSHA-Asbestos Program whenever demolition, encapsulation and/or renovation activities at a site involving greater than ten lineal feet and/or fifteen square feet of ACM will be completed.

Regulated asbestos containing materials per NESHAP (40 CFR Part 61) which falls into any of the following categories are ACM's that must be removed prior to any renovation/demolition activities at the Subject Property.

- Friable asbestos material.
- Category I non-friable ACM that has become friable.
- Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading.
- Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations.

Asbestos abatement should only be performed by a certified asbestos abatement contractor licensed to complete abatement work. The contractor must also follow the standards and requirements set forth per the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61).

Additional information regarding the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61) can be obtained by contacting the associated agency below.

NESHAP Asbestos Program  
Department of Environmental Quality  
Phone: 517-284-6777

MIOSHA-CSHD-Asbestos Program  
State of Michigan  
Phone: 517-284-7680  
Email: [asbestos@michigan.gov](mailto:asbestos@michigan.gov)



Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-26-400-015-0020-00

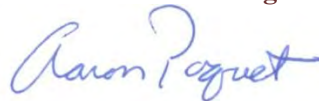
**DISCLAIMER**

Red Cedar Consulting performed destructive testing methods in an attempt to access and inspect all areas of the Building. Unfortunately, due to the age of construction along with multiple additions/renovations that may have been completed on the Building, additional inspections may be required if suspect ACM material not documented within this report is encountered during renovation/demolition activities.

This report was prepared at the request and for exclusive use by the Muskegon County Land Bank and may not be reproduced or sold without written permission from Red Cedar Consulting.

We appreciate the opportunity to provide the requested services. Please contact us at (888) 449-4566 with any questions or concerns.

Sincerely,  
**Red Cedar Consulting**



Aaron Paquet  
Michigan/EPA Certified Asbestos Building Inspector  
(A30955)

Red Cedar Consulting

***Attachment 1***  
***APEX Research Laboratory Analytical Results***



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 297 Maplewood Ave

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69696  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/24/17  
Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69696 - 01 Cust. #: MA-HM-01A Material: Vapor Barrier Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 69696 - 02 Cust. #: MA-HM-01B Material: Vapor Barrier Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 69696 - 03 Cust. #: MA-HM-02A Material: 12x12 Brown Marble VFT Location: Appearance: brown, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>YES</b> Chrysotile - 5%	Other - 95%

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 297 Maplewood Ave

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69696  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/24/17  
Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69696 - 03a Cust. #: MA-HM-02A Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69696 - 04 Cust. #: MA-HM-02B Material: 12x12 Brown Marble VFT Location: Appearance: Layer: 1 of 2	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69696 - 04a Cust. #: MA-HM-02B Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> 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.



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# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 297 Maplewood Ave

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69696  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/24/17  
Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69696 - 05 Cust. #: MA-HM-03A Material: 12x12 Tan VFT Location: Appearance: brown, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>YES</b> Chrysotile - 5%	Other - 95%
Lab ID #: 69696 - 05a Cust. #: MA-HM-03A Material: Mastic Location: Appearance: black, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 69696 - 06 Cust. #: MA-HM-03B Material: 12x12 Tan VFT Location: Appearance: Layer: 1 of 2	Asbestos Present:  NOT ANALYZED	

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

Robert T. Letarte Jr., Laboratory Director

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## Test Method, Polarized Light Microscopy (PLM)

Project: 297 Maplewood Ave

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Date Received: 04/20/17  
Date Analyzed: 04/24/17  
Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69696 - 06a Cust. #: MA-HM-03B Material: Mastic Location: Appearance: black,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 69696 - 07 Cust. #: MA-HM-04A Material: Grey Vinyl Location: Appearance: grey,fibrous,nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 69696 - 08 Cust. #: MA-HM-04B Material: Grey Vinyl Location: Appearance: grey,fibrous,nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% 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: 297 Maplewood Ave

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69696  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/24/17  
Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69696 - 09 Cust. #: MA-HM-05A Material: 1x1 White Smooth Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 69696 - 10 Cust. #: MA-HM-05B Material: 1x1 White Smooth Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 69696 - 11 Cust. #: MA-HM-06A Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%

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

Robert T. Letarte Jr., Laboratory Director

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Lansing, MI 48901

ARI Report # 17-69696  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/24/17  
Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69696 - 11a Cust. #: MA-HM-06A Material: Joint Compound Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69696 - 12 Cust. #: MA-HM-06B Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69696 - 12a Cust. #: MA-HM-06B Material: Joint Compound Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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Project: 297 Maplewood Ave

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P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69696  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/24/17  
Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69696 - 13 Cust. #: MA-HM-07A Material: Fiberboard Location: Appearance: brown, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 69696 - 13a Cust. #: MA-HM-07A Material: Glue Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>YES</b> Chrysotile - 5%	Other - 95%
Lab ID #: 69696 - 14 Cust. #: MA-HM-07B Material: Fiberboard Location: Appearance: brown, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%

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

Robert T. Letarte Jr., Laboratory Director

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# Certificate of Laboratory Analysis

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Project: 297 Maplewood Ave

**Report To:**  
Mr. Aaron Paquet  
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P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69696  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/24/17  
Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69696 - 14a Cust. #: MA-HM-07B Material: Glue Location: Appearance: Layer: 2 of 2	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69696 - 15 Cust. #: MA-HM-08A Material: Window Glazing Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Wollastonite - 1% Other - 99%
Lab ID #: 69696 - 16 Cust. #: MA-HM-08B Material: Window Glazing Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Wollastonite - 1% Other - 99%

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

Robert T. Letarte Jr., Laboratory Director

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## Test Method, Polarized Light Microscopy (PLM)

Project: 297 Maplewood Ave

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69696  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/24/17  
Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69696 - 17 Cust. #: MA-HM-09A Material: Roofing Shingles, Core Location: Appearance: black, fibrous, homogenous Layer: 1 of 6	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69696 - 17a Cust. #: MA-HM-09A Material: Green Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 6	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69696 - 17b Cust. #: MA-HM-09A Material: Grey Shingle Location: Appearance: black, fibrous, homogenous Layer: 3 of 6	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 30% Other - 70%

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 297 Maplewood Ave

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69696  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/24/17  
Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69696 - 17c Cust. #: MA-HM-09A Material: Grey Shingle Location: Appearance: black, fibrous, homogenous Layer: 4 of 6	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 30% Other - 70%
Lab ID #: 69696 - 17d Cust. #: MA-HM-09A Material: Green/White Shingle Location: Appearance: black, fibrous, homogenous Layer: 5 of 6	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69696 - 17e Cust. #: MA-HM-09A Material: Green/White Shingle Location: Appearance: black, fibrous, homogenous Layer: 6 of 6	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



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Project: 297 Maplewood Ave

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69696  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/24/17  
Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69696 - 18 Cust. #: MA-HM-09B Material: Roofing Shingles, Core Location: Appearance: black, fibrous, homogenous Layer: 1 of 6	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69696 - 18a Cust. #: MA-HM-09B Material: Green Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 6	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69696 - 18b Cust. #: MA-HM-09B Material: Grey Shingle Location: Appearance: black, fibrous, homogenous Layer: 3 of 6	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 30% Other - 70%

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

Robert T. Letarte Jr., Laboratory Director

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## Test Method, Polarized Light Microscopy (PLM)

Project: 297 Maplewood Ave

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Mr. Aaron Paquet  
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Lansing, MI 48901

ARI Report # 17-69696  
Date Collected: 04/19/17  
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Date Analyzed: 04/24/17  
Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69696 - 18c Cust. #: MA-HM-09B Material: Grey Shingle Location: Appearance: black, fibrous, homogenous Layer: 4 of 6	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 30% Other - 70%
Lab ID #: 69696 - 18d Cust. #: MA-HM-09B Material: Green/White Shingle Location: Appearance: black, fibrous, homogenous Layer: 5 of 6	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69696 - 18e Cust. #: MA-HM-09B Material: Green/White Shingle Location: Appearance: black, fibrous, homogenous Layer: 6 of 6	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0

# 69696

1 of 2

## MLLA Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189  
 Phone: 734-449-9990  
 Fax: 734-449-9991  
 E-mail: apexresearch@chartermi.net



Client Name: Red Cedar Consulting

Address: PO Box 13216  
 Lansing, MI 48901

City, St, Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-19-17

Project: 297 Maplewood Ave

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
 Log-in \_\_\_\_\_  
 Report \_\_\_\_\_

### Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: Sdey All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
 Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
 Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ Biosis \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
 TEM: AHERA 7400 Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	MA-HH-01A	Vapor Barrier			
2	MA-HH-01B	" "			
3	MA-HH-02A	12x12 Beam/Plank VET			
4	MA-HH-02B	" "			
5	MA-HH-03A	12x12 Tan VET			
6	MA-HH-03B	" "			
7	MA-HH-04A	Tray Vinyl			
8	MA-HH-04B	" "			
9	MA-HH-05A	1x1 White Smooth CT			
10	MA-HH-05B	" "			
11	MA-HH-06A	Asphalt Spout Compound			

Relinquished by: APR 19 2017 Received by: UPS

Relinquished by: \_\_\_\_\_

Received by: APR 20 2017



69696

2012

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990



E-mail: apexresearch@chartermi.net

Fax: 734-449-9991

Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-19-17

Project: 297 Maplewood Rose

Project #:

Contact Person: Aaron Paquet

Lab Use Only
Log-In _____
Report _____

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: 5 days

TTP All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_

Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_

Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BioSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_

TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	MA-HM-06B	Asphalt on front driveway			
13	MA-HM-07A	Fiberboard			
14	MA-HM-07B	"			
15	MA-HM-08A	Subfloor Slagging			
16	MA-HM-08B	"			
17	MA-HM-09A	Roofing Shingles (one)			
18	MA-HM-09B	"			

Relinquished by: [Signature] Received by: UPS

Date: 4-19-17 Date: 4-19-17

Relinquished by: \_\_\_\_\_

Date: \_\_\_\_\_

Received by: **RECEIVED**

Date: APR 20 2017



***Tables***

**Table 1 - Summary of Hazardous Materials, 297 W Maplewood Ave., Muskegon Heights, Michigan**

<b>Hazardous Materials Description and Location</b>		
<b>Location</b>	<b>Material Description</b>	<b>Quantity</b>
Living Room	Smoke Detector	1

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 297 W Maplewood Ave., Muskegon Heights, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
MA-HM-01A	Vapor Barrier	No	M	Category I	ND	Exterior	NA
MA-HM-01B	Vapor Barrier	No	M	Category I	ND	Exterior	NA
MA-HM-02A	12"x12" Brown Marble Vinyl Tile	No	M	Category I	5%CH/ND	Living	292 sq. ft.
MA-HM-02B	12"x12" Brown Marble Vinyl Tile	No	M	Category I	NA/ND	Den	NA
MA-HM-03A	12"x12" Tan Vinyl Tile	No	M	Category I	5%CH/ND	Kitchen	130 sq. ft.
MA-HM-03B	12"x12" Tan Vinyl Tile	No	M	Category I	5%CH/ND	Kitchen	NA
MA-HM-04A	Gray Vinyl	No	M	Category I	ND	Bathroom	NA
MA-HM-04B	Gray Vinyl	No	M	Category I	ND	Bathroom	NA
MA-HM-05A	1'x1' White Smooth Ceiling Tile	Yes	M	Category II	ND	Living	NA
MA-HM-05B	1'x1' White Smooth Ceiling Tile	Yes	M	Category II	ND	Kitchen	NA
MA-HM-06A	Drywall and Joint Compound	No	M	Category II	ND/ND	Living Ceiling	NA
MA-HM-06B	Drywall and Joint Compound	No	M	Category II	ND/ND	Living Wall	NA
MA-HM-07A	Fiberboard/Glue Pod	Yes	M	Category II	ND/5%CH	Den Ceiling	2,126 sq. ft.
MA-HM-07B	Fiberboard/Glue Pod	Yes	M	Category II	ND/NA	Kitchen Wall	NA
MA-HM-08A	Glazing	Yes	M	Category II	ND	Kitchen	NA
MA-HM-08B	Glazing	Yes	M	Category II	ND	Living	NA
MA-HM-09A	Roofing Shingles (Core)	No	M	Category I	ND/ND/ND/ ND/ND/ND	Exterior	NA
MA-HM-09B	Roofing Shingles (Core)	No	M	Category I	ND/ND/ND/ ND/ND/ND	Exterior	NA

**Notes:**

Material Types

M = Miscellaneous building material  
 TSI = Thermal System Insulation  
 S = Surfacing Material  
 PC = Point Count Analysis  
 CH = Chrysotile Asbestos

Abbreviations

NQ = Not quantified  
 NA = Not applicable  
 ND = Not detected. Laboratory result is less than 1 % asbestos  
 lin. ft. = linear feet  
 sq. ft. = square feet

Asbestos Containing Material (ACM) is defined as any material containing more than 1 percent asbestos as determined utilizing Polarized Light Microscopy.

**Table 3 - Summary of Presumed Asbestos Containing Materials, 297 W Maplewood Ave., Muskegon Heights, Michigan**

<b>Asbestos Containing Material Description and Location</b>					
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Condition</b>	<b>Material Type</b>	<b>Approx. Quantity</b>
No Presumed Asbestos Containing Materials Identified					

**Notes:**

Material Types

- M = Miscellaneous building material
- TSI = Thermal System Insulation
- S = Surfacing Material

Abbreviations

- lin. ft. = linear feet
- sq. ft. = square feet

**Table 4 - Summary of All Asbestos Containing Materials, 297 W Maplewood Ave., Muskegon Heights, Michigan**

<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Living	12"x12" Brown Marble Vinyl Tile	No	110 sq. ft.
Den	12"x12" Brown Marble Vinyl Tile	No	72 sq. ft.
NE Bedroom	12"x12" Brown Marble Vinyl Tile	No	110 sq. ft.
Kitchen	12"x12" Tan Vinyl Tile	No	130 sq. ft.
<b>Total</b>			<b>422 sq. ft.</b>
<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Den Walls	Fiberboard Glue	Yes	288 sq. ft.
Den Ceiling	Fiberboard Glue	Yes	80 sq. ft.
NE Bedroom Walls	Fiberboard Glue	Yes	352 sq. ft.
NE Bedroom Ceiling	Fiberboard Glue	Yes	120 sq. ft.
Kitchen Walls	Fiberboard Glue	Yes	368 sq. ft.
Kitchen Ceiling	Fiberboard Glue	Yes	130 sq. ft.
Bathroom Walls	Fiberboard Glue	Yes	256 sq. ft.
Bathroom Ceiling	Fiberboard Glue	Yes	60 sq. ft.
Living Room Walls (between paneling and drywall)	Drywall Glue	Yes	352 sq. ft.
Living Room Ceiling (between paneling and drywall)	Drywall Glue	Yes	120 sq. ft.
<b>Total</b>			<b>2,126 sq. ft.</b>

**Notes:**

Abbreviations

lin. ft. = linear feet

sq. ft. = square feet

**Shaded/Bolded** = Friable ACM and any Category I and Category II non-friable ACM that has a high probability of becoming crumbled, pulverized, or reduced to powder by the demolition or renovation activities that must be properly abated prior to commencement of any demolition/renovation activities.

Demolition/renovation activities completed with intact Category I non-friable ACM are regulated by OSHA and must be completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

**Table 4 - Summary of All Asbestos Containing Materials, 297 W Maplewood Ave., Muskegon Heights, Michigan**

Please note that a Negative Pressure Enclosure must be utilized during abatement when Site Conditions Warrant. Examples of these conditions include the abatement of Plaster and Vermiculite insulation, HVAC Duct Wrap in Poor Condition, and Air-O-Cell/Mag Pipe Wrap. Conditions outside of these should be assessed on a case by case basis during the Asbestos Abatement Contractors site walk and Work Plan Preparation.



P.O. Box 13216  
Lansing, MI 48901  
Phone: 888.449.4566  
Fax: 888.448.8739  
www.redcedarconsulting.net

May 12, 2017

Mr. Tim Burgess  
Muskegon County Land Bank  
Land Bank Coordinator  
173 E. Apple Avenue, Suite 104  
Muskegon, MI 49442

**RE: *Asbestos Containing Material and Hazardous Materials Inspection***  
***325 Iona Ave., Muskegon, MI 49442***  
***Parcel ID: 61-24-205-247-0012-00***

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 325 Iona Ave., Muskegon, Michigan (Subject Property). This inspection was completed at the request of the Muskegon County Land Bank to comply with the United States Environmental Protection Agency (USEPA) requirements for demolition and renovation set forth under the National Emissions Standards for Hazardous Air Pollutants (NESHAP, 40 CFR Part 61). This inspection was also completed to comply with the Occupational Safety and Health Administration (OSHA) Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

### **SUBJECT PROPERTY**

The Subject Property is comprised of a .10 acre residential parcel which contains an approximate 926 square foot residential building (the Building) with an unknown construction date. The Building was constructed on a concrete block basement with two aboveground floors. The exterior walls of the Building were finished with vinyl siding over asphalt siding while the roof was sealed with asphalt shingles. The Building can be further divided into a front entry, living room, dining room, kitchen, bath, and rear entry on the first floor while the second floor contains three bedrooms.

### **VISUAL INSPECTION AND SAMPLING**

#### **Asbestos Containing Materials Inspection**

Aaron Paquet and Darrell DeMasters of Red Cedar Consulting (Red Cedar), accredited State Of Michigan/EPA Asbestos Building Inspectors (Accreditation Numbers A30955 and A31159, respectively) who completed training per the Michigan Asbestos Workers Accreditation Act 440, completed an inspection of the Subject Property on April 26, 2017 for suspected asbestos containing building materials.

This inspection, and subsequent sample collection was completed in accordance with the USEPA Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763) assessment and sampling protocol.

During the completion of the inspection, each area of the Subject Property was visually inspected for asbestos containing building materials (ACBM). Following the completion of the visual inspection, Red Cedar staff identified each suspect area of friable and non-friable ACBM and sorted them into one of three homogenous categories for sampling purposes. AHERA defines friable as a material that when dry, may be crumbled, pulverized, or reduced to powder by hand pressure. A homogenous area is defined by OSHA as an area of surfacing, thermal system insulation (TSI) or miscellaneous material that is uniform in color and texture. Surfacing materials are most commonly found in sprayed-on, troweled-on or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members. TSI refers to materials applied to pipes, fittings, boilers, ductwork, or other components to prevent heat loss or gain, or condensation. Any material that does not fall under the surfacing or TSI category, such as floor tile, drywall, and acoustical ceiling tile are placed into the miscellaneous materials category.

Following the completion of the visual inspection, Red Cedar staff identified the following materials as suspect ACBM:

- Asphalt Siding
- Roofing Materials
- Linoleum
- 1'x1' Ceiling Tile
- 12"x12" Vinyl Tile
- Drywall
- Glazing
- Plaster

Red Cedar staff collected nineteen samples of suspect ACBM separated into eight distinct homogenous groups for laboratory analysis. Samples were collected and submitted to APEX Research Inc. Laboratories (APEX) (Accreditation Number 102118-0) for laboratory analysis. Analysis was completed utilizing polarized light microscopy (PLM) which is the Environmental Protection Agency (EPA) approved method for analysis of bulk materials for asbestos. PLM analysis completed pursuant to method (EPA 600/M4-82-020) identifies asbestos fiber bundles by the visual properties displayed when the sample is treated with various dispersion staining liquids. The laboratory report completed following the sample analysis indicates if asbestos is present, and at what percentage along with a description and percentage of other fibrous and non-fibrous materials and sample color. Chain-of-custody documentation was followed from sample collection through shipping and receiving of the samples at the designated laboratory. The documentation assures that samples will meet the quality assurance/quality control measures defined by AHERA. The laboratory analytical report prepared by APEX for the nineteen samples is included as Attachment A.



## **Hazardous Materials Inspection**

On April 26, 2017 the Subject Property was also inspected for the presence of hazardous materials which include but are not limited to polychlorinated biphenyls (PCBs) and potential mercury containing equipment and any items or containers that may contain or be classified as a hazardous or regulated material. Each material, if identified, was documented along with the approximate location. Any materials identified as hazardous are included in Table 1.

## **INSPECTION RESULTS AND RECOMMENDATIONS**

During the completion of the asbestos inspection, nineteen samples of suspect ACM were collected and are documented in Table 2 along with the Red Cedar sample number, description, friability, material type, ACM classification, sample location, material quantity and laboratory analytical results.

ACM, as defined by the USEPA NESHAP is “any material containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763 Section 1, Polarized Light Microscopy”.

Friable ACM is defined by NESHAP as any material containing more than 1 percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Friable ACM is a concern due the ease of unintentionally disturbing the ACM which may result in “visible emissions” which is known as a Fiber Release Episode.

Non-friable asbestos-containing material is defined as “material containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACM’s are separated into Category I and Category II ACM. Category I ACM is any asbestos containing packing’s, gaskets, resilient floor coverings (vinyl floor tile and linoleum are examples of these) and asphalt roofing products. Category II ACM is stated by NESHAP as any material excluding Category I non-friable ACM such as drywall, plaster or fiberboard insulation.

### **Presumed Asbestos Containing Material**

Presumed Asbestos Containing Materials (PACM) are suspect surfacing, TSI and miscellaneous materials found in buildings constructed prior to 1980 which are classified as and due to the age of the structure, are assumed to be ACM and do not require sample collection and analysis. OSHA dictates that PACM may be “rebutted” following a complete inspection pursuant to AHERA protocol.

No PACM was identified during the completion of this inspection. All suspect materials identified were sampled and analyzed for ACM.

Table 3 lists the location, material description, friability, condition, material type (surfacing, thermal or miscellaneous) and approximate quantity of all PACM documented at the Subject Property.

Table 4 provides a summary all ACM documented at the Subject Property which includes the material location, description, and approximate quantity.

### **Friable ACM's**

A window glazing sample collected from a window in the Front Entry was found to contain up to 10% asbestos following analysis. The assessment to quantify the extent of this material identified eighteen windows at the following locations that would fall into the same homogenous group. The locations of the windows are listed below:

- Front Entry (10 windows 25" wide x 50" tall)
- Living Room (2 windows 28" wide x 45" tall)
- Dining Room (1 window 28" wide x 45" tall)
- Kitchen (1 window 18" wide x 57" tall)
- Kitchen (2 windows 28" wide x 45" tall)
- Bath (1 window 28" wide x 45" tall)
- 2nd Fl. N Bedroom (1 window 28" wide x 45" tall)

### **Category I ACM**

No Category I ACM was identified during the completion of this inspection.

### **Category II ACM**

No Category II non-friable ACM was identified during the completion of this inspection.

## **RECOMMENDATIONS**

### **Asbestos Containing Materials**

Friable asbestos containing window glazing was identified on eighteen windows throughout the Building. The locations of these windows that should be abated prior to demolition/renovation activities are listed below:

- Front Entry (10 windows 25" wide x 50" tall)
- Living Room (2 windows 28" wide x 45" tall)
- Dining Room (1 window 28" wide x 45" tall)
- Kitchen (1 window 18" wide x 57" tall)
- Kitchen (2 windows 28" wide x 45" tall)
- Bath (1 window 28" wide x 45" tall)
- 2nd Fl. N Bedroom (1 window 28" wide x 45" tall)

Please note: Other different sized windows are located throughout the Building but these windows were assessed and found to be constructed either without window glazing or were sampled and found to not contain asbestos and therefore are not required to be removed.

Please note: The location of samples obtained during this inspection were in a random fashion and areas that were not identified during this inspection may be damaged or have become damaged since the inspection was completed. If Category I or Category II friable materials are discovered prior to or during

Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-24-205-247-0012-00

the demolition/renovation process, these materials must be abated prior to commencement of any demolition/renovation activities at the Subject Property.

### **Hazardous Materials**

Hazardous Materials identified at the Subject Property and documented in Table 1 which require proper removal and disposal consist of the following items:

- Smoke Detector (1)

### **REGULATORY REQUIREMENTS**

A Notification of Intent to Renovate/Demolish form must be filed with the Michigan Department of Environmental Quality- Air Quality Division at least 10 working days prior to any renovation or demolition activities at a site.

The Notification of Intent to Renovate/Demolish form must also be completed and submitted to the MIOASHA-Asbestos Program whenever demolition, encapsulation and/or renovation activities at a site involving greater than ten lineal feet and/or fifteen square feet of ACM will be completed.

Regulated asbestos containing materials per NESHAP (40 CFR Part 61) which falls into any of the following categories are ACM's that must be removed prior to any renovation/demolition activities at the Subject Property.

- Friable asbestos material.
- Category I non-friable ACM that has become friable.
- Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading.
- Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations.

Asbestos abatement should only be performed by a certified asbestos abatement contractor licensed to complete abatement work. The contractor must also follow the standards and requirements set forth per the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61).

Additional information regarding the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61) can be obtained by contacting the associated agency below.

NESHAP Asbestos Program  
Department of Environmental Quality  
Phone: 517-284-6777

MIOASHA-CSHD-Asbestos Program  
State of Michigan  
Phone: 517-284-7680  
Email: asbestos@michigan.gov

Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-24-205-247-0012-00

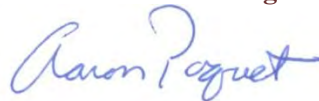
**DISCLAIMER**

Red Cedar Consulting performed destructive testing methods in an attempt to access and inspect all areas of the Building. Unfortunately, due to the age of construction along with multiple additions/renovations that may have been completed on the Building, additional inspections may be required if suspect ACM material not documented within this report is encountered during renovation/demolition activities.

This report was prepared at the request and for exclusive use by the Muskegon County Land Bank and may not be reproduced or sold without written permission from Red Cedar Consulting.

We appreciate the opportunity to provide the requested services. Please contact us at (888) 449-4566 with any questions or concerns.

Sincerely,  
**Red Cedar Consulting**



Aaron Paquet  
Michigan/EPA Certified Asbestos Building Inspector  
(A30955)

Red Cedar Consulting

***Attachment 1***  
***APEX Research Laboratory Analytical Results***



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 325 Iona St.

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69842  
Date Collected: 04/26/17  
Date Received: 04/27/17  
Date Analyzed: 05/03/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69842 - 01 Cust. #: IS-HM-01A Material: Asphalt Siding Location: Appearance: black, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 60% Other - 40%
Lab ID #: 69842 - 02 Cust. #: IS-HM-01B Material: Asphalt Siding Location: Appearance: black, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 60% Other - 40%
Lab ID #: 69842 - 03 Cust. #: IS-HM-02A Material: Roofing Materials Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Other - 70%

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



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## Test Method, Polarized Light Microscopy (PLM)

Project: 325 Iona St.

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Lansing, MI 48901

ARI Report # 17-69842  
Date Collected: 04/26/17  
Date Received: 04/27/17  
Date Analyzed: 05/03/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69842 - 04 Cust. #: IS-HM-02B Material: Roofing Materials Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 69842 - 05 Cust. #: IS-HM-03A Material: 12x12 Blue/White VFT Location: Appearance: blue, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69842 - 05a Cust. #: IS-HM-03A Material: Mastic Location: Appearance: clear, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Robert T. Letarte Jr., Laboratory Director

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ARI Report # 17-69842  
Date Collected: 04/26/17  
Date Received: 04/27/17  
Date Analyzed: 05/03/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69842 - 06 Cust. #: IS-HM-03B Material: 12x12 Blue/White VFT Location: Appearance: blue,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69842 - 06a Cust. #: IS-HM-03B Material: Mastic Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69842 - 07 Cust. #: IS-HM-04A Material: Cream Linoleum Location: Appearance: beige,fibrous,nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Fiberglass - 10% Other - 70%

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Date Collected: 04/26/17  
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Date Analyzed: 05/03/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69842 - 08 Cust. #: IS-HM-04B Material: Cream Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Fiberglass - 10% Other - 70%
Lab ID #: 69842 - 09 Cust. #: IS-HM-05A Material: 1x1 White Smooth Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 95% Other - 5%
Lab ID #: 69842 - 09a Cust. #: IS-HM-05A Material: Glue Pod Location: Appearance: brown, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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Date Received: 04/27/17  
Date Analyzed: 05/03/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69842 - 10 Cust. #: IS-HM-05B Material: 1x1 White Smooth Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 95% Other - 5%
Lab ID #: 69842 - 10a Cust. #: IS-HM-05B Material: Glue Pod Location: Appearance: brown, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69842 - 11 Cust. #: IS-HM-06A Material: Window Glazing Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 10%	Other - 90%

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

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Date Analyzed: 05/03/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69842 - 12 Cust. #: IS-HM-06B Material: Window Glazing Location: Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69842 - 13 Cust. #: IS-HM-07A Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69842 - 14 Cust. #: IS-HM-07B Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%

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Robert T. Letarte Jr., Laboratory Director

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Date Received: 04/27/17  
Date Analyzed: 05/03/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69842 - 15 Cust. #: IS-HS-01A Material: Plaster Texture Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69842 - 15a Cust. #: IS-HS-01A Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 69842 - 16 Cust. #: IS-HS-01B Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 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.



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Date Received: 04/27/17  
Date Analyzed: 05/03/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69842 - 17 Cust. #: IS-HS-01C Material: Plaster Texture Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69842 - 17a Cust. #: IS-HS-01C Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 69842 - 18 Cust. #: IS-HS-01D Material: Plaster/Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%

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

Robert T. Letarte Jr., Laboratory Director

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Date Received: 04/27/17  
Date Analyzed: 05/03/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69842 - 19 Cust. #: IS-HS-01E Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	
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

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NVLAP Lab Code 102118-0

Apex #

69842

1 of 2

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189

Phone: 734-449-9990



E-mail: apexresearch@chartermi.net

Fax: 734-449-9991

Client Name: Red Cedar Consulting

Date of Survey: 4-26-17

Address: PO Box 13216

Project: 325

City, St., Zip: Lansing, MI 48901

Project #: \_\_\_\_\_

Phone: (888) 449-4566 Fax: (888) 448-8739

Contact Person: Aaron Paquet

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. apaquet@redcedarconsulting.net

Rush 24 hour

Asbestos: Bulk  Wipe  Point Count  PCM

48 hour 72 hour

Lead: Bulk  Wipe  Air  Paint  Soil

Other: Slag

Mold: Bulk  Tape  BioSIS  Other  Viable

Other: Slag **TTP** All samples

TEM: AHERA 7400 Bulk/NOB EPA Level II

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	15-HM-01A	Asphalt siding			
2	15-HM-01B	" "			
3	15-HM-02A	Roofing Materials			
4	15-HM-02B	" "			
5	15-HM-03A	12x12 Blue & White VFT			
6	15-HM-03B	" " " "			
7	15-HM-04A	Ceiling Suspenders			
8	15-HM-04B	" " " "			
9	15-HM-05A	1x11 white smooth CT w/ glue pads			
10	15-HM-05B	" " " "			
11	15-HM-06A	Asbestos Slagging			

**RECEIVED**

Relinquished by: [Signature] Received by: UTS

Relinquished by: [Signature] Received by: \_\_\_\_\_

Date: 4-26-17

Date: 4-26-17

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

E-mail: apexresearch@chartermi.net Fax: 734-449-9991



2 of 2

Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4.26.17

Project: 325 *Quartz*

Project #: \_\_\_\_\_

Contact Person: Aaron Paquet

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: 5 days All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
 Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
 Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BioSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
 TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	IS-HM-06B	<i>Windows Blazing</i>			
13	15-HM-07A	<i>Aluminum J.I.</i>			
14	15-HM-07B				
15	15-HS-01A	<i>Plaster</i>			
16	15-HS-01B				
17	15-HS-01C				
18	15-HS-01D				
19	15-HS-01E				

Relinquished by: *[Signature]* Received by: *UTS*

Date: 4.26.17 Date: 4.26.17

Relinquished by: *[Signature]*

Date: 10/45 APR 27 2017

Received by: \_\_\_\_\_

Date: \_\_\_\_\_



***Tables***

**Table 1 - Summary of Hazardous Materials, 325 Iona Ave., Muskegon, Michigan**

<b>Hazardous Materials Description and Location</b>		
<b>Location</b>	<b>Material Description</b>	<b>Quantity</b>
Kitchen	Smoke Detector	1

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 325 Iona Ave., Muskegon, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
IS-HM-01A	Asphalt Siding	No	M	Category I	ND	Exterior	NA
IS-HM-01B	Asphalt Siding	No	M	Category I	ND	Exterior	NA
IS-HM-02A	Roofing Materials	No	M	Category I	ND	Exterior	NA
IS-HM-02B	Roofing Materials	No	M	Category I	ND	Exterior	NA
IS-HM-03A	Blue & White 12x12 Vinyl Floor Tile	No	M	Category I	ND/ND	Kitchen	NA
IS-HM-03B	Blue & White 12x12 Vinyl Floor Tile	No	M	Category I	ND/ND	Kitchen	NA
IS-HM-04A	Cream Linoleum	No	M	Category I	ND	Bathroom	NA
IS-HM-04B	Cream Linoleum	No	M	Category I	ND	Bathroom	NA
IS-HM-05A	White Smooth 1'x1' Ceiling Tile With Glue Pods	Yes	M	Category II	ND/ND	Dining Room	NA
IS-HM-05B	White Smooth 1'x1' Ceiling Tile With Glue Pods	Yes	M	Category II	ND/ND	Kitchen	NA
IS-HM-06A	Window Glazing	Yes	M	Category II	10%CH	Living Room	18 Windows
IS-HM-06B	Window Glazing	Yes	M	Category II	NA	Dining Room	NA
IS-HM-07A	Drywall	No	M	Category II	ND	S Bedroom Ceiling	NA
IS-HM-07B	Drywall	No	M	Category II	ND	S Bedroom Wall	NA
IS-HS-01A	Plaster	No	S	Category II	ND/ND	Living Room Ceiling	NA
IS-HS-01B	Plaster	No	S	Category II	ND	Dining Room Ceiling	NA
IS-HS-01C	Plaster	No	S	Category II	ND/ND	Living Room Wall	NA
IS-HS-01D	Plaster	No	S	Category II	ND	Dining Room Wall	NA
IS-HS-01E	Plaster	No	S	Category II	ND	W Bedroom Wall	NA

**Notes:**

Material Types

M = Miscellaneous building material  
 TSI = Thermal System Insulation  
 S = Surfacing Material  
 PC = Point Count Analysis  
 CH = Chrysotile Asbestos

Abbreviations

NQ = Not quantified  
 NA = Not applicable  
 ND = Not detected. Laboratory result is less than 1 % asbestos  
 lin. ft. = linear feet  
 sq. ft. = square feet

Asbestos Containing Material (ACM) is defined as any material containing more than 1 percent asbestos as determined utilizing Polarized Light Microscopy.

**Table 3 - Summary of Presumed Asbestos Containing Materials, 325 Iona Ave., Muskegon, Michigan**

<b>Asbestos Containing Material Description and Location</b>					
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Condition</b>	<b>Material Type</b>	<b>Approx. Quantity</b>
No Presumed Asbestos Containing Materials Identified					

**Notes:**

Material Types

- M = Miscellaneous building material
- TSI = Thermal System Insulation
- S = Surfacing Material

Abbreviations

- lin. ft. = linear feet
- sq. ft. = square feet

**Table 4 - Summary of All Asbestos Containing Materials, 325 Iona Ave., Muskegon, Michigan**

<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Front Entry (10 windows 25" wide x 50" tall)	Glazing	Yes	10 Windows
Living Room (2 windows 28" wide x 45" tall)	Glazing	Yes	2 Windows
Dining Room (1 window 28" wide x 45" tall)	Glazing	Yes	1 Window
Kitchen (1 window 18" wide x 57" tall)	Glazing	Yes	1 Window
Kitchen (2 windows 28" wide x 45" tall)	Glazing	Yes	2 Windows
Bath (1 window 28" wide x 45" tall)	Glazing	Yes	1 Window
2 <sup>nd</sup> Fl. N Bedroom (1 window 28" wide x 45" tall)	Glazing	Yes	1 Window
	<b>Total</b>		<b>18 Windows</b>

**Notes:**

Abbreviations

lin. ft. = linear feet

sq. ft. = square feet

**Shaded/Bolded** = Friable ACM and any Category I and Category II non-friable ACM that has a high probability of becoming crumbled, pulverized, or reduced to powder by the demolition or renovation activities that must be properly abated prior to commencement of any demolition/renovation activities.

Demolition/renovation activities completed with intact Category I non-friable ACM are regulated by OSHA and must be completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note that a Negative Pressure Enclosure must be utilized during abatement when Site Conditions Warrant. Examples of these conditions include the abatement of Plaster and Vermiculite insulation, HVAC Duct Wrap in Poor Condition, and Air-O-Cell/Mag Pipe Wrap. Conditions outside of these should be assessed on a case by case basis during the Asbestos Abatement Contractors site walk and Work Plan Preparation.



P.O. Box 13216  
Lansing, MI 48901  
Phone: 888.449.4566  
Fax: 888.448.8739  
www.redcedarconsulting.net

May 12, 2017

Mr. Tim Burgess  
Muskegon County Land Bank  
Land Bank Coordinator  
173 E. Apple Avenue, Suite 104  
Muskegon, MI 49442

**RE: *Asbestos Containing Material and Hazardous Materials Inspection***  
***333 Catherine Ave., Muskegon, MI 49442***  
***Parcel ID: 61-24-205-261-0011-00***

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 333 Catherine Ave., Muskegon, Michigan (Subject Property). This inspection was completed at the request of the Muskegon County Land Bank to comply with the United States Environmental Protection Agency (USEPA) requirements for demolition and renovation set forth under the National Emissions Standards for Hazardous Air Pollutants (NESHAP, 40 CFR Part 61). This inspection was also completed to comply with the Occupational Safety and Health Administration (OSHA) Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

### **SUBJECT PROPERTY**

The Subject Property is comprised of a .20 acre residential parcel which contains an approximate 1,184 square foot residential building (the Building) with an unknown construction date. The Building was constructed on a concrete block basement with two aboveground floors. The exterior walls of the Building were finished with Transite siding over wood lap while the roof was sealed with asphalt shingles. The Building can be further divided into a front entry, living room/dining room, kitchen, bath, two bedrooms and a front entry on the first floor while the second floor contains three bedrooms.

### **VISUAL INSPECTION AND SAMPLING**

#### **Asbestos Containing Materials Inspection**

Aaron Paquet and Darrell DeMasters of Red Cedar Consulting (Red Cedar), accredited State Of Michigan/EPA Asbestos Building Inspectors (Accreditation Numbers A30955 and A31159, respectively) who completed training per the Michigan Asbestos Workers Accreditation Act 440, completed an inspection of the Subject Property on May 4, 2017 for suspected asbestos containing building materials.

This inspection, and subsequent sample collection was completed in accordance with the USEPA Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763) assessment and sampling protocol.

During the completion of the inspection, each area of the Subject Property was visually inspected for asbestos containing building materials (ACBM). Following the completion of the visual inspection, Red Cedar staff identified each suspect area of friable and non-friable ACBM and sorted them into one of three homogenous categories for sampling purposes. AHERA defines friable as a material that when dry, may be crumbled, pulverized, or reduced to powder by hand pressure. A homogenous area is defined by OSHA as an area of surfacing, thermal system insulation (TSI) or miscellaneous material that is uniform in color and texture. Surfacing materials are most commonly found in sprayed-on, troweled-on or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members. TSI refers to materials applied to pipes, fittings, boilers, ductwork, or other components to prevent heat loss or gain, or condensation. Any material that does not fall under the surfacing or TSI category, such as floor tile, drywall, and acoustical ceiling tile are placed into the miscellaneous materials category.

Following the completion of the visual inspection, Red Cedar staff identified the following materials as suspect ACBM:

- Asphalt Shingle
- 2'x4' Ceiling Tile
- 12"x12" Vinyl Tile
- Vinyl Flooring
- 12"x12" Ceiling Tile with Glue Pod
- Drywall & Joint Compound
- Glazing
- Plaster
- Texture

Red Cedar staff collected thirty samples of suspect ACBM separated into thirteen distinct homogenous groups for laboratory analysis. Samples were collected and submitted to APEX Research Inc. Laboratories (APEX) (Accreditation Number 102118-0) for laboratory analysis. Analysis was completed utilizing polarized light microscopy (PLM) which is the Environmental Protection Agency (EPA) approved method for analysis of bulk materials for asbestos. PLM analysis completed pursuant to method (EPA 600/M4-82-020) identifies asbestos fiber bundles by the visual properties displayed when the sample is treated with various dispersion staining liquids. The laboratory report completed following the sample analysis indicates if asbestos is present, and at what percentage along with a description and percentage of other fibrous and non-fibrous materials and sample color. Chain-of-custody documentation was followed from sample collection through shipping and receiving of the samples at the designated laboratory. The documentation assures that samples will meet the quality assurance/quality control measures defined by AHERA. The laboratory analytical report prepared by APEX for the thirty samples is included as Attachment A.

## **Hazardous Materials Inspection**

On May 4, 2017 the Subject Property was also inspected for the presence of hazardous materials which include but are not limited to polychlorinated biphenyls (PCBs) and potential mercury containing equipment and any items or containers that may contain or be classified as a hazardous or regulated material. Each material, if identified, was documented along with the approximate location. Any materials identified as hazardous are included in Table 1.

## **INSPECTION RESULTS AND RECOMMENDATIONS**

During the completion of the asbestos inspection, thirty samples of suspect ACM were collected and are documented in Table 2 along with the Red Cedar sample number, description, friability, material type, ACM classification, sample location, material quantity and laboratory analytical results.

ACM, as defined by the USEPA NESHAP is “any material containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763 Section 1, Polarized Light Microscopy”.

Friable ACM is defined by NESHAP as any material containing more than 1 percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Friable ACM is a concern due the ease of unintentionally disturbing the ACM which may result in “visible emissions” which is known as a Fiber Release Episode.

Non-friable asbestos-containing material is defined as “material containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACM’s are separated into Category I and Category II ACM. Category I ACM is any asbestos containing packing’s, gaskets, resilient floor coverings (vinyl floor tile and linoleum are examples of these) and asphalt roofing products. Category II ACM is stated by NESHAP as any material excluding Category I non-friable ACM such as drywall, plaster or fiberboard insulation.

### **Presumed Asbestos Containing Material**

Presumed Asbestos Containing Materials (PACM) are suspect surfacing, TSI and miscellaneous materials found in buildings constructed prior to 1980 which are classified as and due to the age of the structure, are assumed to be ACM and do not require sample collection and analysis. OSHA dictates that PACM may be “rebutted” following a complete inspection pursuant to AHERA protocol.

The HVAC Duct Wrap located in the Building and the Cementitious “Transite” Siding on the Building was classified as PACM due to the age of the structure and samples were not collected.

Table 3 lists the location, material description, friability, condition, material type (surfacing, thermal or miscellaneous) and approximate quantity of all PACM documented at the Subject Property.

Table 4 provides a summary all ACM documented at the Subject Property which includes the material location, description, and approximate quantity.



### **Friable ACM's**

A window glazing sample collected from a window in the Front Entry was found to contain up to 1.5% asbestos following analysis. The assessment to quantify the extent of this material identified four windows at the following locations that would fall into the same homogenous group. The locations of the windows are listed below:

- Front Entry (4 windows 33" wide x 62" tall)

Duct Wrap identified in the building in conjunction with the forced air heating system is classified as friable ACM. The visual assessment to quantify the extent of this material identified HVAC Duct Wrap at the following locations within the basement, first and second floors:

- Living (1 register, 15 sq. ft.)
- Kitchen (1 register, 10 sq. ft.)
- Bathroom (1 register, 10 sq. ft.)
- W Bedroom (1 register, 15 sq. ft.)
- 2nd Fl. E/W Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- Basement (misc. HVAC wrap on Ductwork, 10 sq. ft.)

### **Category I ACM**

One type of resilient floor covering (White 12x12 Vinyl Floor Tile Multilayered) located within the Kitchen was found to contain up to 20% Chrysotile asbestos. The assessment to quantify the extent of this material identified approximately 169 sq. ft. of this material within the Building.

### **Category II ACM**

The cementitious "Transite" siding located on the exterior of the Building was classified as PACM and no samples were collected. The visual assessment to quantify the extent of this material identified 2,300 sq. ft. of cementitious (Transite) siding on the Building.

Glue Pod samples, collected from the Living Room and Kitchen were each found to contain up to 4% asbestos following analysis. The assessment to quantify the extent of this material identified approximately 289 sq. ft. of glue pods within the Building.

## **RECOMMENDATIONS**

### **Asbestos Containing Materials**

HVAC material identified in the Building system and listed below is classified as friable ACM and should be removed prior to any renovation/demolition activities.

- Living (1 register, 15 sq. ft.)
- Kitchen (1 register, 10 sq. ft.)
- Bathroom (1 register, 10 sq. ft.)
- W Bedroom (1 register, 15 sq. ft.)

- 2nd Fl. E/W Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- Basement (misc. HVAC wrap on Ductwork, 10 sq. ft.)

Friable asbestos containing window glazing was identified on four windows throughout the Building. The locations of these windows that should be abated prior to demolition/renovation activities are listed below:

- Front Entry (4 windows 33” wide x 62” tall)

Please note: Other different sized windows are located throughout the Building but these windows were assessed and found to be constructed either without window glazing or were sampled and found to not contain asbestos and therefore are not required to be removed.

Transite siding was identified on the exterior of the Building and must be abated prior to completion of any demolition activities at the Subject Property. In demolition, all cementitious ACM must be removed prior to demolition due to the likelihood of becoming regulated due to the demolition process.

Glue Pods identified on the interior of the Building must be abated prior to completion of any renovation/demolition activities at the Subject Property. Any Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations must be properly abated.

The Category I resilient floor coverings (White 12x12 Vinyl Floor Tile Multilayered) is a non-friable ACM that may be left in place as long as the demolition/renovation activities are completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note: The location of samples obtained during this inspection were in a random fashion and areas that were not identified during this inspection may be damaged or have become damaged since the inspection was completed. If Category I or Category II friable materials are discovered prior to or during the demolition/renovation process, these materials must be abated prior to commencement of any demolition/renovation activities at the Subject Property.

### **Hazardous Materials**

Hazardous Materials identified at the Subject Property and documented in Table 1 which require proper removal and disposal consist of the following items:

- Smoke Detector (3)
- Gallon Container Misc. Paint (4)

### **REGULATORY REQUIREMENTS**

A Notification of Intent to Renovate/Demolish form must be filed with the Michigan Department of Environmental Quality- Air Quality Division at least 10 working days prior to any renovation or demolition activities at a site.

Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-24-205-261-0011-00

The Notification of Intent to Renovate/Demolish form must also be completed and submitted to the MIOSHA-Asbestos Program whenever demolition, encapsulation and/or renovation activities at a site involving greater than ten lineal feet and/or fifteen square feet of ACM will be completed.

Regulated asbestos containing materials per NESHAP (40 CFR Part 61) which falls into any of the following categories are ACM's that must be removed prior to any renovation/demolition activities at the Subject Property.

- Friable asbestos material.
- Category I non-friable ACM that has become friable.
- Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading.
- Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations.

Asbestos abatement should only be performed by a certified asbestos abatement contractor licensed to complete abatement work. The contractor must also follow the standards and requirements set forth per the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61).

Additional information regarding the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61) can be obtained by contacting the associated agency below.

NESHAP Asbestos Program  
Department of Environmental Quality  
Phone: 517-284-6777

MIOSHA-CSHD-Asbestos Program  
State of Michigan  
Phone: 517-284-7680  
Email: [asbestos@michigan.gov](mailto:asbestos@michigan.gov)

Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-24-205-261-0011-00

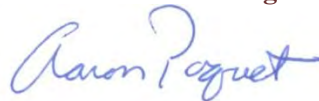
**DISCLAIMER**

Red Cedar Consulting performed destructive testing methods in an attempt to access and inspect all areas of the Building. Unfortunately, due to the age of construction along with multiple additions/renovations that may have been completed on the Building, additional inspections may be required if suspect ACM material not documented within this report is encountered during renovation/demolition activities.

This report was prepared at the request and for exclusive use by the Muskegon County Land Bank and may not be reproduced or sold without written permission from Red Cedar Consulting.

We appreciate the opportunity to provide the requested services. Please contact us at (888) 449-4566 with any questions or concerns.

Sincerely,  
**Red Cedar Consulting**



Aaron Paquet  
Michigan/EPA Certified Asbestos Building Inspector  
(A30955)

Red Cedar Consulting

***Attachment 1***  
***APEX Research Laboratory Analytical Results***



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 333 Catherine Ave

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69941  
Date Collected: 05/04/17  
Date Received: 05/05/17  
Date Analyzed: 05/09/17  
Date Reported: 05/11/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69941 - 01 Cust. #: CA-HM-01A Material: Black Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69941 - 01a Cust. #: CA-HM-01A Material: Vapor Paper Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69941 - 02 Cust. #: CA-HM-01B Material: Black Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> 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: 333 Catherine Ave

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69941  
Date Collected: 05/04/17  
Date Received: 05/05/17  
Date Analyzed: 05/09/17  
Date Reported: 05/11/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69941 - 02a Cust. #: CA-HM-01B Material: Vapor Paper Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69941 - 03 Cust. #: CA-HM-02A Material: Red Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 15% Other - 85%
Lab ID #: 69941 - 03a Cust. #: CA-HM-02A Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 15% Other - 85%

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: 333 Catherine Ave

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69941  
Date Collected: 05/04/17  
Date Received: 05/05/17  
Date Analyzed: 05/09/17  
Date Reported: 05/11/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69941 - 03b Cust. #: CA-HM-02A Material: Vapor Paper Location: Appearance: black, fibrous, homogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 60% Other - 40%
Lab ID #: 69941 - 04 Cust. #: CA-HM-02B Material: Red Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 15% Other - 85%
Lab ID #: 69941 - 04a Cust. #: CA-HM-02B Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 15% Other - 85%

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: 333 Catherine Ave

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69941  
Date Collected: 05/04/17  
Date Received: 05/05/17  
Date Analyzed: 05/09/17  
Date Reported: 05/11/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69941 - 04b Cust. #: CA-HM-02B Material: Vapor Paper Location: Appearance: black, fibrous, homogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 60% Other - 40%
Lab ID #: 69941 - 05 Cust. #: CA-HM-03A Material: Brown 12x12 VFT Location: Appearance: brown, nonfibrous, homogenous Layer: 1 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69941 - 05a Cust. #: CA-HM-03A Material: Glue Location: Appearance: clear, nonfibrous, homogenous Layer: 2 of 4	Asbestos Present: <b>NO</b> 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: 333 Catherine Ave

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69941  
Date Collected: 05/04/17  
Date Received: 05/05/17  
Date Analyzed: 05/09/17  
Date Reported: 05/11/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69941 - 05b Cust. #: CA-HM-03A Material: Floor Tile Location: Appearance: white,nonfibrous,homogenous Layer: 3 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69941 - 05c Cust. #: CA-HM-03A Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 4 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69941 - 06 Cust. #: CA-HM-03B Material: Brown 12x12 VFT Location: Appearance: brown,nonfibrous,homogenous Layer: 1 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Robert T. Letarte Jr., Laboratory Director

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Date Analyzed: 05/09/17  
Date Reported: 05/11/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69941 - 06a Cust. #: CA-HM-03B Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69941 - 06b Cust. #: CA-HM-03B Material: Floor Tile Location: Appearance: white,nonfibrous,homogenous Layer: 3 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69941 - 06c Cust. #: CA-HM-03B Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 4 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Date Reported: 05/11/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69941 - 07 Cust. #: CA-HM-04A Material: White 12x12 VFT Multilayer Location: Appearance: pink,nonfibrous,homogenous Layer: 1 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69941 - 07a Cust. #: CA-HM-04A Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69941 - 07b Cust. #: CA-HM-04A Material: Floor Tile Location: Appearance: brown,nonfibrous,homogenous Layer: 3 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69941 - 07c Cust. #: CA-HM-04A Material: Glue Location: Appearance: clear, nonfibrous, homogenous Layer: 4 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69941 - 07d Cust. #: CA-HM-04A Material: Linoleum Location: Appearance: yellow, fibrous, nonhomogenous Layer: 5 of 5	Asbestos Present: <b>YES</b> Chrysotile - 20%	Other - 80%
Lab ID #: 69941 - 08 Cust. #: CA-HM-04B Material: White 12x12 VFT Multilayer Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69941 - 08a Cust. #: CA-HM-04B Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69941 - 08b Cust. #: CA-HM-04B Material: Floor Tile Location: Appearance: brown,nonfibrous,homogenous Layer: 3 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69941 - 08c Cust. #: CA-HM-04B Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 4 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69941 - 08d Cust. #: CA-HM-04B Material: Linoleum Location: Appearance: Layer: 5 of 5	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69941 - 09 Cust. #: CA-HM-05A Material: Brown/Green 12x12 VFT Location: Appearance: brown, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 69941 - 09a Cust. #: CA-HM-05A Material: Glue Location: Appearance: clear, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69941 - 10 Cust. #: CA-HM-05B Material: Brown/Green 12x12 VFT Location: Appearance: brown,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69941 - 10a Cust. #: CA-HM-05B Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69941 - 11 Cust. #: CA-HM-06A Material: Grey Vinyl Location: Appearance: grey,fibrous,nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69941 - 12 Cust. #: CA-HM-06B Material: Grey Vinyl Location: Appearance: grey, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69941 - 12a Cust. #: CA-HM-06B Material: Flooring Location: Appearance: brown, fibrous, nonhomogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69941 - 13 Cust. #: CA-HM-07A Material: White 12x12 Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69941 - 13a Cust. #: CA-HM-07A Material: Glue Pod Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>YES</b> Chrysotile - 4.00%  POINT COUNT RESULT	Other - 96.00%
Lab ID #: 69941 - 14 Cust. #: CA-HM-07B Material: White 12x12 Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 69941 - 14a Cust. #: CA-HM-07B Material: Glue Pod Location: Appearance: Layer: 2 of 2	Asbestos Present:  NOT ANALYZED	

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69941 - 15 Cust. #: CA-HM-08A Material: Drywall Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69941 - 15a Cust. #: CA-HM-08A Material: Joint Compound/Mesh Location: Appearance: beige, fibrous, nonhomogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 10% Other - 90%
Lab ID #: 69941 - 16 Cust. #: CA-HM-08B Material: Drywall Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%

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Date Reported: 05/11/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69941 - 16a Cust. #: CA-HM-08B Material: Joint Compound/Tape Location: Appearance: white, fibrous, nonhomogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69941 - 17 Cust. #: CA-HM-09A Material: White 2x4 Ceiling Tile Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Mineral Wool - 30% Fiberglass - 10% Perlite - 5% Other - 25%
Lab ID #: 69941 - 18 Cust. #: CA-HM-09B Material: White 2x4 Ceiling Tile Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Mineral Wool - 30% Fiberglass - 10% Perlite - 5% Other - 25%

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Date Reported: 05/11/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69941 - 19 Cust. #: CA-HM-10A Material: Glazing Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 1.50%  POINT COUNT RESULT	Other - 98.50%
Lab ID #: 69941 - 20 Cust. #: CA-HM-10B Material: Glazing Location: Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69941 - 21 Cust. #: CA-HM-11A Material: Glazing Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Date Reported: 05/11/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69941 - 22 Cust. #: CA-HM-11B Material: Glazing Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69941 - 23 Cust. #: CA-HS-01A Material: Plaster Base Coat Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 5% Other - 95%
Lab ID #: 69941 - 24 Cust. #: CA-HS-01B Material: Plaster Texture Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69941 - 24a Cust. #: CA-HS-01B Material: Plaster Base Coat Location: Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: 69941 - 25 Cust. #: CA-HS-01C Material: Plaster Base Coat Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 5% Other - 95%
Lab ID #: 69941 - 26 Cust. #: CA-HS-01D Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69941 - 26a Cust. #: CA-HS-01D Material: Plaster Base Coat Location: Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: 69941 - 27 Cust. #: CA-HS-01E Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69941 - 27a Cust. #: CA-HS-01E Material: Plaster Base Coat Location: Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 2% Other - 98%

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P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69941  
Date Collected: 05/04/17  
Date Received: 05/05/17  
Date Analyzed: 05/09/17  
Date Reported: 05/11/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69941 - 28 Cust. #: CA-HS-02A Material: Plaster Texture Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69941 - 29 Cust. #: CA-HS-02B Material: Plaster Texture Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69941 - 30 Cust. #: CA-HS-02C Material: Plaster Texture Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> 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

**ARPEX Research, Inc.** 11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990  
 E-mail: [apexresearch@chartermi.net](mailto:apexresearch@chartermi.net) Fax: 734-449-9991



Client Name: Red Cedar Consulting

Date of Survey: 5-4-17

Address: PO Box 13216

Project: 333 Catherine Ave

City, St., Zip: Lansing, MI 48901

Project #: \_\_\_\_\_

Phone: (888) 449-4566 Fax: (888) 448-8739

Contact Person: Aaron Paquet

**Turn Around Times:** (Circle One) PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour  
 48 hour 72 hour  
 Other: 5 Day **TTP** All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
 Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
 Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BioSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
 TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab Use Only  
 Log-in: \_\_\_\_\_  
 Report: \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	CA-HM-01A	Black Shingle			
2	CA-HM-01B	" "			
3	CA-HM-02A	Red Shingle			
4	CA-HM-02B	" "			
5	CA-HM-03A	Brown 12x12 VFT			
6	CA-HM-03B	" "			
7	CA-HM-04A	white 12x12 VFT multilayer			
8	CA-HM-04B	" "			
9	CA-HM-05A	Brown 8x8x12 VFT			
10	CA-HM-05B	" "			
11	CA-HM-06A	Grey Vinyl			

Relinquished by: [Signature]  
 Date: 5-4-17

Received by: [Signature]  
 Date: 5-4-17

Relinquished by: \_\_\_\_\_  
 Date: \_\_\_\_\_

Received by: [Signature]  
 Date: MAY 05 2017

69941

pg 2 of 3

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

E-mail: apexresearch@chartermi.net Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 5-4-17

Project: 333 *Catharine Ave*

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: 5 Day All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_

Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_

Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BioSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_

TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	CA-4M-06B	Grey Vinyl			
13	CA-4M-07A	White LxRCS/Glue Pad			
14	CA-4M-07B	" "			
15	CA-4M-08A	Drywall & Compound			
16	CA-4M-08B	" "			
17	CA-4M-09A	White 2x4 Ct			
18	CA-4M-09B	" "			
19	CA-4M-10A	Overlays			
20	CA-4M-10B	" "			
21	CA-4M-11A	" "			
22	CA-4M-11B	" "			

Relinquished by: [Signature] Date: 5-4-17

Received by: [Signature] Date: 5-4-17

Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_

Received by: [Signature] Date: MAY 05 2017

RECEIVED

69941

pg 3 of 3

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990  
E-mail: apexresearch@chartermi.net Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 5-4-17

Project: 333 Catharine Ave

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log-In: \_\_\_\_\_  
Report: \_\_\_\_\_

## Turn Around Times: (Circle One)

PJM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: SDay All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BIOSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
23	CA-HS-01A	Plaster			
24	CA-HS-01B				
25	CA-HS-01C				
26	CA-HS-01B				
27	CA-HS-01E				
28	CA-HS-02A	Texture			
29	CA-HS-02B				
30	CA-HS-02C				

Relinquished by: [Signature] Received by: [Signature]

Date: 5-4-17 Date: 5-4-17

Relinquished by: \_\_\_\_\_ Received by: [Signature]

Date: \_\_\_\_\_ Date: 5/5/2017

***Tables***

**Table 1 - Summary of Hazardous Materials, 333 Catherine Ave., Muskegon, Michigan**

<b>Hazardous Materials Description and Location</b>		
<b>Location</b>	<b>Material Description</b>	<b>Quantity</b>
2 <sup>nd</sup> Fl. N Bedroom	Smoke Detector	1
W Bedroom	Smoke Detector	1
N Bedroom	Smoke Detector	1
Basement	Gallon Container Misc. Paint	4

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 333 Catherine Ave., Muskegon, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
CA-HM-01A	Black Shingle	No	M	Category I	ND/ND	Exterior	NA
CA-HM-01B	Black Shingle	No	M	Category I	ND/ND	Exterior	NA
CA-HM-02A	Red Shingle	No	M	Category I	ND/ND/ND	Exterior	NA
CA-HM-02B	Red Shingle	No	M	Category I	ND/ND/ND	Exterior	NA
CA-HM-03A	Brown 12x12 Vinyl Floor Tile	No	M	Category I	ND/ND/ND/ND	Living/Dining Room	NA
CA-HM-03B	Brown 12x12 Vinyl Floor Tile	No	M	Category I	ND/ND/ND/ND	Living/Dining Room	NA
CA-HM-04A	White 12x12 Vinyl Floor Tile Multilayered	No	M	Category I	ND/ND/ND/ND/ 20%CH	Kitchen	169 sq. ft.
CA-HM-04B	White 12x12 Vinyl Floor Tile Multilayered	No	M	Category I	ND/ND/ND/ ND/NA	Kitchen	NA
CA-HM-05A	Brown & Green 12x12 Vinyl Floor Tile	No	M	Category I	ND/ND	Bathroom	NA
CA-HM-05B	Brown & Green 12x12 Vinyl Floor Tile	No	M	Category I	ND/ND	Bathroom	NA
CA-HM-06A	Gray Vinyl	No	M	Category I	ND	Rear Entry	NA
CA-HM-06B	Gray Vinyl	No	M	Category I	ND/ND	Rear Entry	NA
CA-HM-07A	White 12x12 Ceiling Tile/Glue Pod	Yes	M	Category II	ND/ 4.00%CH-PC	Bathroom	289 sq. ft.
CA-HM-07B	White 12x12 Ceiling Tile/Glue Pod	Yes	M	Category II	ND/NA	Kitchen	NA
CA-HM-08A	Drywall & Joint Compound	No	M	Category II	ND/ND	Living Room Wall	NA
CA-HM-08B	Drywall & Joint Compound	No	M	Category II	ND/ND	Living Room Wall	NA
CA-HM-09A	White 2'x4' Ceiling Tile	Yes	M	Category II	ND	Bathroom	NA
CA-HM-09B	White 2'x4' Ceiling Tile	Yes	M	Category II	ND	Bathroom	NA
CA-HM-10A	Glazing	Yes	M	Category II	1.50%CH-PC	Front Entry	4 Windows
CA-HM-10B	Glazing	Yes	M	Category II	NA	Front Entry	NA
CA-HM-11A	Glazing	Yes	M	Category II	ND	Living Room	NA
CA-HM-11B	Glazing	Yes	M	Category II	ND	Living Room	NA
CA-HS-01A	Plaster	No	S	Category II	ND	Kitchen Ceiling	NA
CA-HS-01B	Plaster	No	S	Category II	ND/ND	Living Room Wall	NA
CA-HS-01C	Plaster	No	S	Category II	ND	Bathroom Wall	NA
CA-HS-01D	Plaster	No	S	Category II	ND/ND	N Bedroom Ceiling	NA

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 333 Catherine Ave., Muskegon, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
CA-HS-01E	Plaster	No	S	Category II	ND/ND	Landing Wall	NA
CA-HS-02A	Texture	No	S	Category II	ND	Living Room Ceiling	NA
CA-HS-02B	Texture	No	S	Category II	ND	Living Room Ceiling	NA
CA-HS-02C	Texture	No	S	Category II	ND	Kitchen Ceiling	NA

**Notes:**

Material Types

M = Miscellaneous building material  
 TSI = Thermal System Insulation  
 S = Surfacing Material  
 PC = Point Count Analysis  
 CH = Chrysotile Asbestos

Abbreviations

NQ = Not quantified  
 NA = Not applicable  
 ND = Not detected. Laboratory result is less than 1 % asbestos  
 lin. ft. = linear feet  
 sq. ft. = square feet

Asbestos Containing Material (ACM) is defined as any material containing more than 1 percent asbestos as determined utilizing Polarized Light Microscopy.



**Table 3 - Summary of Presumed Asbestos Containing Materials, 333 Catherine Ave., Muskegon, Michigan**

<b>Asbestos Containing Material Description and Location</b>					
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Condition</b>	<b>Material Type</b>	<b>Approx. Quantity</b>
Building Exterior	Transite Siding	No	Fair	M	2,300 sq. ft.
Living (1 register, 15 sq. ft.) Kitchen (1 register, 10 sq. ft.) Bathroom (1 register, 10 sq. ft.) W Bedroom (1 register, 15 sq. ft.) 2 <sup>nd</sup> Fl. E/W Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) Basement (misc. HVAC wrap on Ductwork, 10 sq. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	95 sq. ft.

**Notes:**

Material Types

- M = Miscellaneous building material
- TSI = Thermal System Insulation
- S = Surfacing Material

Abbreviations

- lin. ft. = linear feet
- sq. ft. = square feet

**Table 4 - Summary of All Asbestos Containing Materials, 333 Catherine Ave., Muskegon, Michigan**

<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Kitchen	White 12x12 Vinyl Floor Tile Multilayered	No	169 sq. ft.
	<b>Total</b>		<b>169 sq. ft.</b>
<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Living (1 register, 15 sq. ft.) Kitchen (1 register, 10 sq. ft.) Bathroom (1 register, 10 sq. ft.) W Bedroom (1 register, 15 sq. ft.) 2 <sup>nd</sup> Fl. E/W Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) Basement (misc. HVAC wrap on Ductwork, 10 sq. ft.)	HVAC Duct Wrap	Yes	95 sq. ft.
	<b>Total</b>		<b>95 sq. ft.</b>
<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Front Entry (4 windows 33" wide x 62" tall)	Glazing	Yes	4 Windows
	<b>Total</b>		<b>4 Windows</b>
<b>Exterior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Building Exterior	Transite Siding	No	2,300 sq. ft.
	<b>Total</b>		<b>2,300 sq. ft.</b>
<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Living	Glue Pods	No	169 sq. ft.
Kitchen	Glue Pods	No	120 sq. ft.
	<b>Total</b>		<b>289 sq. ft.</b>

**Table 4 - Summary of All Asbestos Containing Materials, 333 Catherine Ave., Muskegon, Michigan**

**Notes:**

Abbreviations

lin. ft. = linear feet

sq. ft. = square feet

**Shaded/Bolded** = Friable ACM and any Category I and Category II non-friable ACM that has a high probability of becoming crumbled, pulverized, or reduced to powder by the demolition or renovation activities that must be properly abated prior to commencement of any demolition/renovation activities.

Demolition/renovation activities completed with intact Category I non-friable ACM are regulated by OSHA and must be completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note that a Negative Pressure Enclosure must be utilized during abatement when Site Conditions Warrant. Examples of these conditions include the abatement of Plaster and Vermiculite insulation, HVAC Duct Wrap in Poor Condition, and Air-O-Cell/Mag Pipe Wrap. Conditions outside of these should be assessed on a case by case basis during the Asbestos Abatement Contractors site walk and Work Plan Preparation.



P.O. Box 13216  
Lansing, MI 48901  
Phone: 888.449.4566  
Fax: 888.448.8739  
www.redcedarconsulting.net

May 8, 2017

Mr. Tim Burgess  
Muskegon County Land Bank  
Land Bank Coordinator  
173 E. Apple Avenue, Suite 104  
Muskegon, MI 49442

***RE: Asbestos Containing Material and Hazardous Materials Inspection  
409 E Barney Ave., Muskegon Heights, MI 49444  
Parcel ID: 61-26-185-103-0023-10***

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 409 E Barney Ave., Muskegon Heights, Michigan (Subject Property). This inspection was completed at the request of the Muskegon County Land Bank to comply with the United States Environmental Protection Agency (USEPA) requirements for demolition and renovation set forth under the National Emissions Standards for Hazardous Air Pollutants (NESHAP, 40 CFR Part 61). This inspection was also completed to comply with the Occupational Safety and Health Administration (OSHA) Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

### **SUBJECT PROPERTY**

The Subject Property is comprised of a .05 acre residential parcel which contains an approximate 638 square foot residential building (the Building) constructed in 1920. The Building was constructed on a concrete block basement with one aboveground floor. The exterior walls of the Building were finished with Transite siding and wood lap while the roof was sealed with asphalt shingles. The Building can be further divided into a living room, dining room, kitchen, bath, and two bedrooms.

### **VISUAL INSPECTION AND SAMPLING**

#### **Asbestos Containing Materials Inspection**

Aaron Paquet and Darrell DeMasters of Red Cedar Consulting (Red Cedar), accredited State Of Michigan/EPA Asbestos Building Inspectors (Accreditation Numbers A30955 and A31159, respectively) who completed training per the Michigan Asbestos Workers Accreditation Act 440, completed an inspection of the Subject Property on April 20, 2017 for suspected asbestos containing building materials.

This inspection, and subsequent sample collection was completed in accordance with the USEPA Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763) assessment and sampling protocol.

During the completion of the inspection, each area of the Subject Property was visually inspected for asbestos containing building materials (ACBM). Following the completion of the visual inspection, Red Cedar staff identified each suspect area of friable and non-friable ACBM and sorted them into one of three homogenous categories for sampling purposes. AHERA defines friable as a material that when dry, may be crumbled, pulverized, or reduced to powder by hand pressure. A homogenous area is defined by OSHA as an area of surfacing, thermal system insulation (TSI) or miscellaneous material that is uniform in color and texture. Surfacing materials are most commonly found in sprayed-on, troweled-on or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members. TSI refers to materials applied to pipes, fittings, boilers, ductwork, or other components to prevent heat loss or gain, or condensation. Any material that does not fall under the surfacing or TSI category, such as floor tile, drywall, and acoustical ceiling tile are placed into the miscellaneous materials category.

Following the completion of the visual inspection, Red Cedar staff identified the following materials as suspect ACBM:

- Roofing Materials
- Vapor Barrier
- Linoleum
- 1'x1' Ceiling Tile
- 16"x16" Ceiling Tile
- 12"x12" Vinyl Tile
- Drywall & Joint Compound
- Glazing
- Plaster

Red Cedar staff collected twenty five samples of suspect ACBM separated into eleven distinct homogenous groups for laboratory analysis. Samples were collected and submitted to APEX Research Inc. Laboratories (APEX) (Accreditation Number 102118-0) for laboratory analysis. Analysis was completed utilizing polarized light microscopy (PLM) which is the Environmental Protection Agency (EPA) approved method for analysis of bulk materials for asbestos. PLM analysis completed pursuant to method (EPA 600/M4-82-020) identifies asbestos fiber bundles by the visual properties displayed when the sample is treated with various dispersion staining liquids. The laboratory report completed following the sample analysis indicates if asbestos is present, and at what percentage along with a description and percentage of other fibrous and non-fibrous materials and sample color. Chain-of-custody documentation was followed from sample collection through shipping and receiving of the samples at the designated laboratory. The documentation assures that samples will meet the quality assurance/quality control measures defined by AHERA. The laboratory analytical report prepared by APEX for the twenty five samples is included as Attachment A.

## **Hazardous Materials Inspection**

On April 20, 2017 the Subject Property was also inspected for the presence of hazardous materials which include but are not limited to polychlorinated biphenyls (PCBs) and potential mercury containing equipment and any items or containers that may contain or be classified as a hazardous or regulated material. Each material, if identified, was documented along with the approximate location. Any materials identified as hazardous are included in Table 1.

## **INSPECTION RESULTS AND RECOMMENDATIONS**

During the completion of the asbestos inspection, twenty five samples of suspect ACM were collected and are documented in Table 2 along with the Red Cedar sample number, description, friability, material type, ACM classification, sample location, material quantity and laboratory analytical results.

ACM, as defined by the USEPA NESHAP is “any material containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763 Section 1, Polarized Light Microscopy”.

Friable ACM is defined by NESHAP as any material containing more than 1 percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Friable ACM is a concern due the ease of unintentionally disturbing the ACM which may result in “visible emissions” which is known as a Fiber Release Episode.

Non-friable asbestos-containing material is defined as “material containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACM’s are separated into Category I and Category II ACM. Category I ACM is any asbestos containing packing’s, gaskets, resilient floor coverings (vinyl floor tile and linoleum are examples of these) and asphalt roofing products. Category II ACM is stated by NESHAP as any material excluding Category I non-friable ACM such as drywall, plaster or fiberboard insulation.

### **Presumed Asbestos Containing Material**

Presumed Asbestos Containing Materials (PACM) are suspect surfacing, TSI and miscellaneous materials found in buildings constructed prior to 1980 which are classified as and due to the age of the structure, are assumed to be ACM and do not require sample collection and analysis. OSHA dictates that PACM may be “rebutted” following a complete inspection pursuant to AHERA protocol.

The HVAC Duct Wrap located in the Building and the Cementitious “Transite” Siding on the Building was classified as PACM due to the age of the structure and samples were not collected.

Table 3 lists the location, material description, friability, condition, material type (surfacing, thermal or miscellaneous) and approximate quantity of all PACM documented at the Subject Property.

Table 4 provides a summary all ACM documented at the Subject Property which includes the material location, description, and approximate quantity.

### **Friable ACM's**

Duct Wrap identified in the building in conjunction with the forced air heating system is classified as friable ACM. The visual assessment to quantify the extent of this material identified HVAC Duct Wrap at the following locations within the basement and first floor:

- Living/N Bedroom (1 register, 25 sq. ft.)
- Kitchen/Dining (1 register, 25 sq. ft.)

### **Category I ACM**

No Category I ACM was identified during the completion of this inspection.

### **Category II ACM**

The cementitious "Transite" siding located on the exterior of the Building was classified as PACM and no samples were collected. The visual assessment to quantify the extent of this material identified 756 sq. ft. of cementitious (Transite) siding on the Building.

Drywall Compound samples, collected from the S Bedroom were found to contain up to 2.25% asbestos following analysis. The assessment to quantify the extent of this material identified approximately 368 sq. ft. of drywall compound within the Building.

## **RECOMMENDATIONS**

### **Asbestos Containing Materials**

HVAC material identified in the Building system and listed below is classified as friable ACM and should be removed prior to any renovation/demolition activities.

- Living/N Bedroom (1 register, 25 sq. ft.)
- Kitchen/Dining (1 register, 25 sq. ft.)

Transite siding was identified on the exterior of the Building and must be abated prior to completion of any demolition activities at the Subject Property. In demolition, all cementitious ACM must be removed prior to demolition due to the likelihood of becoming regulated due to the demolition process.

Drywall Compound identified on the interior of the Building must be abated prior to completion of any renovation/demolition activities at the Subject Property. Any Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations must be properly abated.

Please note: The location of samples obtained during this inspection were in a random fashion and areas that were not identified during this inspection may be damaged or have become damaged since the inspection was completed. If Category I or Category II friable materials are discovered prior to or during the demolition/renovation process, these materials must be abated prior to commencement of any demolition/renovation activities at the Subject Property.

Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-26-185-103-0023-10

## **Hazardous Materials**

Hazardous Materials identified at the Subject Property and documented in Table 1 which require proper removal and disposal consist of the following items:

- Smoke Detector (2)
- Automobile Tires (4)

## **REGULATORY REQUIREMENTS**

A Notification of Intent to Renovate/Demolish form must be filed with the Michigan Department of Environmental Quality- Air Quality Division at least 10 working days prior to any renovation or demolition activities at a site.

The Notification of Intent to Renovate/Demolish form must also be completed and submitted to the MIOASHA-Asbestos Program whenever demolition, encapsulation and/or renovation activities at a site involving greater than ten lineal feet and/or fifteen square feet of ACM will be completed.

Regulated asbestos containing materials per NESHAP (40 CFR Part 61) which falls into any of the following categories are ACM's that must be removed prior to any renovation/demolition activities at the Subject Property.

- Friable asbestos material.
- Category I non-friable ACM that has become friable.
- Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading.
- Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations.

Asbestos abatement should only be performed by a certified asbestos abatement contractor licensed to complete abatement work. The contractor must also follow the standards and requirements set forth per the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61).

Additional information regarding the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61) can be obtained by contacting the associated agency below.

NESHAP Asbestos Program  
Department of Environmental Quality  
Phone: 517-284-6777

MIOASHA-CSHD-Asbestos Program  
State of Michigan  
Phone: 517-284-7680  
Email: asbestos@michigan.gov



Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-26-185-103-0023-10

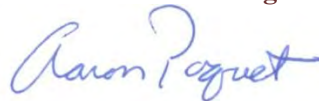
**DISCLAIMER**

Red Cedar Consulting performed destructive testing methods in an attempt to access and inspect all areas of the Building. Unfortunately, due to the age of construction along with multiple additions/renovations that may have been completed on the Building, additional inspections may be required if suspect ACM material not documented within this report is encountered during renovation/demolition activities.

This report was prepared at the request and for exclusive use by the Muskegon County Land Bank and may not be reproduced or sold without written permission from Red Cedar Consulting.

We appreciate the opportunity to provide the requested services. Please contact us at (888) 449-4566 with any questions or concerns.

Sincerely,  
**Red Cedar Consulting**



Aaron Paquet  
Michigan/EPA Certified Asbestos Building Inspector  
(A30955)

Red Cedar Consulting

***Attachment 1***  
***APEX Research Laboratory Analytical Results***



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 409 Barney Ave

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69712  
Date Collected: 04/20/17  
Date Received: 04/21/17  
Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69712 - 01 Cust. #: BA-HM-01A Material: Roofing Material Location: Appearance: black, fibrous, homogenous Layer: 1 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69712 - 01a Cust. #: BA-HM-01A Material: White Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69712 - 01b Cust. #: BA-HM-01A Material: Green Shingle Location: Appearance: black, fibrous, homogenous Layer: 3 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%

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: 409 Barney Ave

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ARI Report # 17-69712  
Date Collected: 04/20/17  
Date Received: 04/21/17  
Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69712 - 01c Cust. #: BA-HM-01A Material: Green Shingle Location: Appearance: black, fibrous, homogenous Layer: 4 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69712 - 02 Cust. #: BA-HM-01B Material: Roofing Material Location: Appearance: black, fibrous, homogenous Layer: 1 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69712 - 02a Cust. #: BA-HM-01B Material: White Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%

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Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69712 - 02b Cust. #: BA-HM-01B Material: Green Shingle Location: Appearance: black, fibrous, homogenous Layer: 3 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69712 - 02c Cust. #: BA-HM-01B Material: Green Shingle Location: Appearance: black, fibrous, homogenous Layer: 4 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69712 - 03 Cust. #: BA-HM-02A Material: Brown 12x12 VFT Location: Appearance: brown, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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ARI Report # 17-69712  
Date Collected: 04/20/17  
Date Received: 04/21/17  
Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69712 - 03a Cust. #: BA-HM-02B Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69712 - 04 Cust. #: BA-HM-02A Material: Brown 12x12 VFT Location: Appearance: brown,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 69712 - 04a Cust. #: BA-HM-02B Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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ARI Report # 17-69712  
Date Collected: 04/20/17  
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Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69712 - 05 Cust. #: BA-HM-03A Material: Tan Vinyl Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 69712 - 06 Cust. #: BA-HM-03B Material: Tan Vinyl Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 69712 - 07 Cust. #: BA-HM-04A Material: White Vinyl Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%

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ARI Report # 17-69712  
Date Collected: 04/20/17  
Date Received: 04/21/17  
Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69712 - 08 Cust. #: BA-HM-04B Material: White Vinyl Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 69712 - 09 Cust. #: BA-HM-05A Material: Vapor Barrier Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 60% Other - 40%
Lab ID #: 69712 - 10 Cust. #: BA-HM-05B Material: Vapor Barrier Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 60% Other - 40%

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Robert T. Letarte Jr., Laboratory Director

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Date Collected: 04/20/17  
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Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69712 - 11 Cust. #: BA-HM-06A Material: 1x1 White Smooth Ceiling Tile, Painted Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 69712 - 12 Cust. #: BA-HM-06B Material: 1x1 White Smooth Ceiling Tile, Painted Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 69712 - 13 Cust. #: BA-HM-07A Material: 16"x16" White Ceiling Tile, Painted Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%

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Date Collected: 04/20/17  
Date Received: 04/21/17  
Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69712 - 14 Cust. #: BA-HM-07B Material: 16"x16" White Ceiling Tile, Painted Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 69712 - 15 Cust. #: BA-HM-08A Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 25% Other - 75%
Lab ID #: 69712 - 15a Cust. #: BA-HM-08A Material: Joint Compound Location: Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>YES</b> Chrysotile - 2.25%  <b>POINT COUNT RESULT</b>	Other - 97.25%

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ARI Report # 17-69712  
Date Collected: 04/20/17  
Date Received: 04/21/17  
Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69712 - 16 Cust. #: BA-HM-08B Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 25% Other - 75%
Lab ID #: 69712 - 16a Cust. #: BA-HM-08B Material: Joint Compound Location: Appearance: Layer: 2 of 2	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69712 - 17 Cust. #: BA-HM-09A Material: Window Glazing Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> Chrysotile - 0.50%  POINT COUNT RESULT	Other - 99.50%

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ARI Report # 17-69712  
Date Collected: 04/20/17  
Date Received: 04/21/17  
Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69712 - 18 Cust. #: BA-HM-09B Material: Window Glazing Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> Chrysotile - Trace  POINT COUNT RESULT	Other - 100%
Lab ID #: 69712 - 19 Cust. #: BA-HM-10A Material: Red Linoleum Location: Appearance: red, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 69712 - 20 Cust. #: BA-HM-10B Material: Red Linoleum Location: Appearance: red, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 50% Other - 50%

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Date Collected: 04/20/17  
Date Received: 04/21/17  
Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69712 - 21 Cust. #: BA-HS-01A Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69712 - 21a Cust. #: BA-HS-01A Material: Plaster Base Coat Location: Appearance: grey, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 69712 - 22 Cust. #: BA-HS-01B Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69712 - 22a Cust. #: BA-HS-01B Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Vermiculite - 15% Other - 84%
Lab ID #: 69712 - 23 Cust. #: BA-HS-01C Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69712 - 23a Cust. #: BA-HS-01C Material: Plaster Base Coat Location: Appearance: grey, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Vermiculite - 15% Other - 84%

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Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69712 - 24 Cust. #: BA-HS-01D Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69712 - 24a Cust. #: BA-HS-01D Material: Plaster Base Coat Location: Appearance: grey, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Vermiculite - 10% Other - 90%
Lab ID #: 69712 - 25 Cust. #: BA-HS-01E Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69712 - 25a Cust. #: BA-HS-01E Material: Plaster Base Coat Location: Appearance: grey,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

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NVLAP Lab Code 102118-0



Apex #

69712

1 of 3

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189

Phone: 734-449-9990



E-mail: apexresearch@chartermi.net

Fax: 734-449-9991

Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM.

Rush 24 hour

48 hour 72 hour

Other: 5 day All Samples

Asbestos: Bulk  Wipe  Point Count  PCM

Lead: Bulk  Wipe  Air  Paint  Soil

Mold: Bulk  Tape  BioSIS  Other  Viable

TEM: AHERA 7400 Bulk/NOB EPA Level II

Date of Survey: 4-20-17  
Project: 409 Brewery Ave  
Project #: \_\_\_\_\_

Contact Person: Aaron Paquet

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	BA-HM-01A	Roofing Materials			
2	BA-HM-01B	" "			
3	BA-HM-02A	Brown 12x12 VGT			
4	BA-HM-02B	" "			
5	BA-HM-03A	tan Vinyl			
6	BA-HM-03B	" "			
7	BA-HM-04A	White Vinyl			
8	BA-HM-04B	" "			
9	BA-HM-05A	Taper Barrier			
10	BA-HM-05B	" "			
11	BA-HM-06A	1x1 White smooth CT (Painted)			

Relinquished by: [Signature] Received by: UPS  
Date: 4-20-17 Date: 4-20-17

Relinquished by: [Signature] Received by: \_\_\_\_\_  
Date: 1000 Date: APR 21 2017

**RECEIVED**

69712

2 of 3

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189

Phone: 734-449-9990



E-mail: [apexresearch@chartermi.net](mailto:apexresearch@chartermi.net)

Fax: 734-449-9991

Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-20-17

Project: 409 Bakery Ave

Project #:

Contact Person: Aaron Paquet

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: 5 days  TTP All Samples

Asbestos: Bulk  Wipe  Point Count  PCM

Lead: Bulk  Wipe  Air  Paint  Soil

Mold: Bulk  Tape  BioSIS  Other  Viable

TEM: AHERA 7400  Bulk/NOB  EPA Level II

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	BA-HM-06B	1x1 white panel (Paint)			
13	BA-HM-07A	16" x 16" white CT (Paint)			
14	BA-HM-07B	" " " " " "			
15	BA-HM-08A	Regwall to Spout compound			
16	BA-HM-08B	" " " " " "			
17	BA-HM-09A	Window Siding			
18	BA-HM-09B	" " " " " "			
19	BA-HM-10A	Red Siding			
20	BA-HM-10B	" " " " " "			
21	BA-HS-01A	Plaster			
22	BA-HS-01B	" " " " " "			

RECEIVED

Relinquished by: *[Signature]* Received by: UPS

Date: 4-20-17 Date: 4-20-17

Relinquished by: *[Signature]* Received by: *[Signature]*

Date: APR 21 2017 Date: \_\_\_\_\_

69712

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

E-mail: [apexresearch@chartermi.net](mailto:apexresearch@chartermi.net)

Fax: 734-449-9991



3 of 3

Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-20-17

Project: 409 Barry Ave

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log-in \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: 5 day   All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BIOSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
23	BA-45-01C	Plaster			
24	BA-45-01D				
25	BA-45-01E	↓			

RECEIVED

Relinquished by: *[Signature]* Received by: *[Signature]*

Date: 4-20-17 Date: 4-20-17

Relinquished by: *[Signature]*

Date: \_\_\_\_\_

Received by: \_\_\_\_\_

Date: \_\_\_\_\_

***Tables***

**Table 1 - Summary of Hazardous Materials, 409 E Barney Ave., Muskegon Heights, Michigan**

<b>Hazardous Materials Description and Location</b>		
<b>Location</b>	<b>Material Description</b>	<b>Quantity</b>
N Bedroom	Smoke Detector	1
S Bedroom	Smoke Detector	1
Dining Room	Automobile Tires	4

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 409 E Barney Ave., Muskegon Heights, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
BA-HM-01A	Roofing Material	No	M	Category I	ND/ND/ND/ND	Exterior	NA
BA-HM-01B	Roofing Material	No	M	Category I	ND/ND/ND/ND	Exterior	NA
BA-HM-02A	Brown 12x12 Vinyl Tile	No	M	Category I	ND/ND	Dining Room	NA
BA-HM-02B	Brown 12x12 Vinyl Tile	No	M	Category I	ND/ND	Dining Room	NA
BA-HM-03A	Tan Vinyl	No	M	Category I	ND	Kitchen	NA
BA-HM-03B	Tan Vinyl	No	M	Category I	ND	Kitchen	NA
BA-HM-04A	White Vinyl	No	M	Category I	ND	Kitchen	NA
BA-HM-04B	White Vinyl	No	M	Category I	ND	Kitchen	NA
BA-HM-05A	Vapor Barrier	Yes	M	Category II	ND	Exterior	NA
BA-HM-05B	Vapor Barrier	Yes	M	Category II	ND	Exterior	NA
BA-HM-06A	White 1'x1' Smooth Ceiling Tile	Yes	M	Category II	ND	Living Room	NA
BA-HM-06B	White 1'x1' Smooth Ceiling Tile	Yes	M	Category II	ND	Living Room	NA
BA-HM-07A	White Painted 16"x16" Ceiling Tile	Yes	M	Category II	ND	Bathroom	NA
BA-HM-07B	White Painted 16"x16" Ceiling Tile	Yes	M	Category II	ND	Bathroom	NA
BA-HM-08A	Drywall & Joint Compound	No	M	Category II	ND/2.25%CH	S Bedroom Ceiling	368 sq. ft.
BA-HM-08B	Drywall & Joint Compound	No	M	Category II	ND/NA	S Bedroom Wall	NA
BA-HM-09A	Window Glazing	Yes	M	Category II	0.50%CH-PC	Living Room	NA
BA-HM-09B	Window Glazing	Yes	M	Category II	Trace CH-PC	Dining Room	NA
BA-HM-10A	Red Linoleum	No	M	Category I	ND	Basement	NA
BA-HM-10B	Red Linoleum	No	M	Category I	ND	Basement	NA
BA-HS-01A	Plaster	No	S	Category II	ND/ND	Dining Room Ceiling	NA
BA-HS-01B	Plaster	No	S	Category II	ND/ND	Kitchen Ceiling	NA
BA-HS-01C	Plaster	No	S	Category II	ND/ND	N Bedroom Wall	NA
BA-HS-01D	Plaster	No	S	Category II	ND/ND	Kitchen Wall	NA
BA-HS-01E	Plaster	No	S	Category II	ND/ND	Living Room Wall	NA

**Notes:**

Material Types

Abbreviations

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 409 E Barney Ave., Muskegon Heights, Michigan**

M = Miscellaneous building material  
TSI = Thermal System Insulation  
S = Surfacing Material  
PC = Point Count Analysis  
CH = Chrysotile Asbestos

NQ = Not quantified  
NA = Not applicable  
ND = Not detected. Laboratory result is less than 1 % asbestos  
lin. ft. = linear feet  
sq. ft. = square feet

Asbestos Containing Material (ACM) is defined as any material containing more than 1 percent asbestos as determined utilizing Polarized Light Microscopy.

**Table 3 - Summary of Presumed Asbestos Containing Materials, 409 E Barney Ave., Muskegon Heights, Michigan**

<b>Asbestos Containing Material Description and Location</b>					
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Condition</b>	<b>Material Type</b>	<b>Approx. Quantity</b>
Building Exterior	Transite Siding	No	Fair	M	756 sq. ft.
Living/N Bedroom (1 register, 25 sq. ft.) Kitchen/Dining (1 register, 25 sq. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	50 sq. ft.

**Notes:**

Material Types

- M = Miscellaneous building material
- TSI = Thermal System Insulation
- S = Surfacing Material

Abbreviations

- lin. ft. = linear feet
- sq. ft. = square feet



**Table 4 - Summary of All Asbestos Containing Materials, 409 E Barney Ave., Muskegon Heights, Michigan**

<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Living/N Bedroom (1 register, 25 sq. ft.)	HVAC Duct Wrap	Yes	50 sq. ft.
Kitchen/Dining (1 register, 25 sq. ft.)			
<b>Total</b>			<b>50 sq. ft.</b>
<b>Exterior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Building Exterior	Transite Siding	No	756 sq. ft.
<b>Total</b>			<b>756 sq. ft.</b>
<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
S Bedroom Ceiling	Drywall Compound	No	80 sq. ft.
S Bedroom Walls	Drywall Compound	No	288 sq. ft.
<b>Total</b>			<b>368 sq. ft.</b>

**Notes:**

Abbreviations

lin. ft. = linear feet  
 sq. ft. = square feet

**Shaded/Bolded** = Friable ACM and any Category I and Category II non-friable ACM that has a high probability of becoming crumbled, pulverized, or reduced to powder by the demolition or renovation activities that must be properly abated prior to commencement of any demolition/renovation activities.

Demolition/renovation activities completed with intact Category I non-friable ACM are regulated by OSHA and must be completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note that a Negative Pressure Enclosure must be utilized during abatement when Site Conditions Warrant. Examples of these conditions include the abatement of Plaster and Vermiculite insulation, HVAC Duct Wrap in Poor Condition, and Air-O-Cell/Mag Pipe Wrap. Conditions outside of these should be assessed on a case by case basis during the Asbestos Abatement Contractors site walk and Work Plan Preparation.



P.O. Box 13216  
Lansing, MI 48901  
Phone: 888.449.4566  
Fax: 888.448.8739  
www.redcedarconsulting.net

May 12, 2017

Mr. Tim Burgess  
Muskegon County Land Bank  
Land Bank Coordinator  
173 E. Apple Avenue, Suite 104  
Muskegon, MI 49442

**RE: *Asbestos Containing Material and Hazardous Materials Inspection***  
***430 Allen Ave., Muskegon, MI 49442***  
***Parcel ID: 61-24-205-055-0011-00***

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 430 Allen Ave., Muskegon, Michigan (Subject Property). This inspection was completed at the request of the Muskegon County Land Bank to comply with the United States Environmental Protection Agency (USEPA) requirements for demolition and renovation set forth under the National Emissions Standards for Hazardous Air Pollutants (NESHAP, 40 CFR Part 61). This inspection was also completed to comply with the Occupational Safety and Health Administration (OSHA) Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

### **SUBJECT PROPERTY**

The Subject Property is comprised of a .30 acre residential parcel which contains an approximate 836 square foot residential building (the Building) constructed in 1926. The Building was constructed on a concrete block basement with one aboveground floor. The exterior walls of the Building were finished with vinyl and asphalt siding while the roof was sealed with asphalt shingles. The Building can be further divided into a living room, dining room, kitchen, bath, and three bedrooms on the first floor.

### **VISUAL INSPECTION AND SAMPLING**

#### **Asbestos Containing Materials Inspection**

Aaron Paquet and Darrell DeMasters of Red Cedar Consulting (Red Cedar), accredited State Of Michigan/EPA Asbestos Building Inspectors (Accreditation Numbers A30955 and A31159, respectively) who completed training per the Michigan Asbestos Workers Accreditation Act 440, completed an inspection of the Subject Property on April 26, 2017 for suspected asbestos containing building materials.

This inspection, and subsequent sample collection was completed in accordance with the USEPA Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763) assessment and sampling protocol.

During the completion of the inspection, each area of the Subject Property was visually inspected for asbestos containing building materials (ACBM). Following the completion of the visual inspection, Red Cedar staff identified each suspect area of friable and non-friable ACBM and sorted them into one of three homogenous categories for sampling purposes. AHERA defines friable as a material that when dry, may be crumbled, pulverized, or reduced to powder by hand pressure. A homogenous area is defined by OSHA as an area of surfacing, thermal system insulation (TSI) or miscellaneous material that is uniform in color and texture. Surfacing materials are most commonly found in sprayed-on, troweled-on or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members. TSI refers to materials applied to pipes, fittings, boilers, ductwork, or other components to prevent heat loss or gain, or condensation. Any material that does not fall under the surfacing or TSI category, such as floor tile, drywall, and acoustical ceiling tile are placed into the miscellaneous materials category.

Following the completion of the visual inspection, Red Cedar staff identified the following materials as suspect ACBM:

- Asphalt Siding
- Asphalt Shingle
- Vapor Barrier
- Linoleum
- 1'x1' Ceiling Tile
- 2'x2' Ceiling Tile
- Drywall & Joint Compound
- Glazing
- Popcorn Textured Surfacing
- Plaster

Red Cedar staff collected thirty two samples of suspect ACBM separated into thirteen distinct homogenous groups for laboratory analysis. Samples were collected and submitted to APEX Research Inc. Laboratories (APEX) (Accreditation Number 102118-0) for laboratory analysis. Analysis was completed utilizing polarized light microscopy (PLM) which is the Environmental Protection Agency (EPA) approved method for analysis of bulk materials for asbestos. PLM analysis completed pursuant to method (EPA 600/M4-82-020) identifies asbestos fiber bundles by the visual properties displayed when the sample is treated with various dispersion staining liquids. The laboratory report completed following the sample analysis indicates if asbestos is present, and at what percentage along with a description and percentage of other fibrous and non-fibrous materials and sample color. Chain-of-custody documentation was followed from sample collection through shipping and receiving of the samples at the designated laboratory. The documentation assures that samples will meet the quality assurance/quality control measures defined by AHERA. The laboratory analytical report prepared by APEX for the thirty two samples is included as Attachment A.

## **Hazardous Materials Inspection**

On April 26, 2017 the Subject Property was also inspected for the presence of hazardous materials which include but are not limited to polychlorinated biphenyls (PCBs) and potential mercury containing equipment and any items or containers that may contain or be classified as a hazardous or regulated material. Each material, if identified, was documented along with the approximate location. Any materials identified as hazardous are included in Table 1.

## **INSPECTION RESULTS AND RECOMMENDATIONS**

During the completion of the asbestos inspection, thirty two samples of suspect ACM were collected and are documented in Table 2 along with the Red Cedar sample number, description, friability, material type, ACM classification, sample location, material quantity and laboratory analytical results.

ACM, as defined by the USEPA NESHAP is “any material containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763 Section 1, Polarized Light Microscopy”.

Friable ACM is defined by NESHAP as any material containing more than 1 percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Friable ACM is a concern due the ease of unintentionally disturbing the ACM which may result in “visible emissions” which is known as a Fiber Release Episode.

Non-friable asbestos-containing material is defined as “material containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACM’s are separated into Category I and Category II ACM. Category I ACM is any asbestos containing packing’s, gaskets, resilient floor coverings (vinyl floor tile and linoleum are examples of these) and asphalt roofing products. Category II ACM is stated by NESHAP as any material excluding Category I non-friable ACM such as drywall, plaster or fiberboard insulation.

### **Presumed Asbestos Containing Material**

Presumed Asbestos Containing Materials (PACM) are suspect surfacing, TSI and miscellaneous materials found in buildings constructed prior to 1980 which are classified as and due to the age of the structure, are assumed to be ACM and do not require sample collection and analysis. OSHA dictates that PACM may be “rebutted” following a complete inspection pursuant to AHERA protocol.

The HVAC Duct Wrap located in the Building was classified as PACM due to the age of the structure and samples were not collected.

Table 3 lists the location, material description, friability, condition, material type (surfacing, thermal or miscellaneous) and approximate quantity of all PACM documented at the Subject Property.

Table 4 provides a summary all ACM documented at the Subject Property which includes the material location, description, and approximate quantity.

### **Friable ACM's**

A window glazing sample collected from a window in the Basement was found to contain up to 1.5% asbestos following analysis. The assessment to quantify the extent of this material identified six windows at the following locations that would fall into the same homogenous group. The locations of the windows are listed below:

- Basement (2 windows 29" wide x 14 tall)
- Basement (4 windows 29" wide x 20" tall)

Duct Wrap identified in the building in conjunction with the forced air heating system is classified as friable ACM. The visual assessment to quantify the extent of this material identified HVAC Duct Wrap at the following locations within the basement, first and second floors:

- Living (2 registers, 30 sq. ft.)
- Dining (2 registers, 30 sq. ft.)
- Kitchen (1 register, 15 sq. ft.)
- Bathroom (1 register, 15 sq. ft.)
- NE Bedroom (1 register, 15 sq. ft.)
- Basement (misc. HVAC wrap on Cold Air Return Ductwork, 25 sq. ft.)
- Basement (12 in. dia. HVAC Wrapped Ductwork, 8 lin. ft.)

### **Category I ACM**

No Category I ACM was identified during the completion of this inspection.

### **Category II ACM**

No Category II non-friable ACM was identified during the completion of this inspection.

## **RECOMMENDATIONS**

### **Asbestos Containing Materials**

HVAC material identified in the Building system and listed below is classified as friable ACM and should be removed prior to any renovation/demolition activities.

- Living (2 registers, 30 sq. ft.)
- Dining (2 registers, 30 sq. ft.)
- Kitchen (1 register, 15 sq. ft.)
- Bathroom (1 register, 15 sq. ft.)
- NE Bedroom (1 register, 15 sq. ft.)
- Basement (misc. HVAC wrap on Cold Air Return Ductwork, 25 sq. ft.)
- Basement (12 in. dia. HVAC Wrapped Ductwork, 8 lin. ft.)

Friable asbestos containing window glazing was identified on six windows throughout the Building. The locations of these windows that should be abated prior to demolition/renovation activities are listed below:

- Basement (2 windows 29" wide x 14 tall)
- Basement (4 windows 29" wide x 20" tall)

Please note: Other different sized windows are located throughout the Building but these windows were assessed and found to be constructed either without window glazing or were sampled and found to not contain asbestos and therefore are not required to be removed.

Please note: The location of samples obtained during this inspection were in a random fashion and areas that were not identified during this inspection may be damaged or have become damaged since the inspection was completed. If Category I or Category II friable materials are discovered prior to or during the demolition/renovation process, these materials must be abated prior to commencement of any demolition/renovation activities at the Subject Property.

### **Hazardous Materials**

Hazardous Materials identified at the Subject Property and documented in Table 1 which require proper removal and disposal consist of the following items:

- Smoke Detector (1)
- Gallon Container Misc. Paint (4)

### **REGULATORY REQUIREMENTS**

A Notification of Intent to Renovate/Demolish form must be filed with the Michigan Department of Environmental Quality- Air Quality Division at least 10 working days prior to any renovation or demolition activities at a site.

The Notification of Intent to Renovate/Demolish form must also be completed and submitted to the MIOASHA-Asbestos Program whenever demolition, encapsulation and/or renovation activities at a site involving greater than ten lineal feet and/or fifteen square feet of ACM will be completed.

Regulated asbestos containing materials per NESHAP (40 CFR Part 61) which falls into any of the following categories are ACM's that must be removed prior to any renovation/demolition activities at the Subject Property.

- Friable asbestos material.
- Category I non-friable ACM that has become friable.
- Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading.
- Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations.

Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-24-205-055-0011-00

Asbestos abatement should only be performed by a certified asbestos abatement contractor licensed to complete abatement work. The contractor must also follow the standards and requirements set forth per the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61).

Additional information regarding the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61) can be obtained by contacting the associated agency below.

NESHAP Asbestos Program  
Department of Environmental Quality  
Phone: 517-284-6777

MIOSHA-CSHD-Asbestos Program  
State of Michigan  
Phone: 517-284-7680  
Email: asbestos@michigan.gov

**DISCLAIMER**

Red Cedar Consulting performed destructive testing methods in an attempt to access and inspect all areas of the Building. Unfortunately, due to the age of construction along with multiple additions/renovations that may have been completed on the Building, additional inspections may be required if suspect ACM material not documented within this report is encountered during renovation/demolition activities.

This report was prepared at the request and for exclusive use by the Muskegon County Land Bank and may not be reproduced or sold without written permission from Red Cedar Consulting.

We appreciate the opportunity to provide the requested services. Please contact us at (888) 449-4566 with any questions or concerns.

Sincerely,  
**Red Cedar Consulting**



Aaron Paquet  
Michigan/EPA Certified Asbestos Building Inspector  
(A30955)

Red Cedar Consulting

***Attachment 1***  
***APEX Research Laboratory Analytical Results***





# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 430 Allen Ave

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69838  
Date Collected: 04/26/17  
Date Received: 04/27/17  
Date Analyzed: 05/03/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69838 - 01 Cust. #: AA-HM-01A Material: Asphalt Siding Location: Appearance: black, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 69838 - 02 Cust. #: AA-HM-01B Material: Asphalt Siding Location: Appearance: black, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 69838 - 03 Cust. #: AA-HM-02A Material: Roofing Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 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: 430 Allen Ave

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69838  
Date Collected: 04/26/17  
Date Received: 04/27/17  
Date Analyzed: 05/03/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69838 - 03a Cust. #: AA-HM-02A Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 20% Other - 80%
Lab ID #: 69838 - 03b Cust. #: AA-HM-02A Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 69838 - 04 Cust. #: AA-HM-02B Material: Roofing Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 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: 430 Allen Ave

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69838  
Date Collected: 04/26/17  
Date Received: 04/27/17  
Date Analyzed: 05/03/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69838 - 04a Cust. #: AA-HM-02B Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 20% Other - 80%
Lab ID #: 69838 - 04b Cust. #: AA-HM-02B Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 69838 - 05 Cust. #: AA-HM-03A Material: 1x1 White Smooth Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 95% Other - 5%

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: 430 Allen Ave

**Report To:**  
Mr. Aaron Paquet  
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P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69838  
Date Collected: 04/26/17  
Date Received: 04/27/17  
Date Analyzed: 05/03/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69838 - 06 Cust. #: AA-HM-03B Material: 1x1 White Smooth Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 95% Other - 5%
Lab ID #: 69838 - 07 Cust. #: AA-HM-04A Material: 2x2 White CT w/ Pinholes, Fissures Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 65% Mineral Wool - 30% Other - 5%
Lab ID #: 69838 - 08 Cust. #: AA-HM-04B Material: 2x2 White CT w/ Pinholes, Fissures Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 65% Mineral Wool - 30% Other - 5%

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 430 Allen Ave

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69838  
Date Collected: 04/26/17  
Date Received: 04/27/17  
Date Analyzed: 05/03/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69838 - 09 Cust. #: AA-HM-05A Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Fiberglass - 5% Other - 80%
Lab ID #: 69838 - 09a Cust. #: AA-HM-05A Material: Joint Compound Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69838 - 10 Cust. #: AA-HM-05B Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Fiberglass - 5% Other - 80%

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

Robert T. Letarte Jr., Laboratory Director

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# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 430 Allen Ave

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69838  
Date Collected: 04/26/17  
Date Received: 04/27/17  
Date Analyzed: 05/03/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69838 - 10a Cust. #: AA-HM-05B Material: Joint Compound Location: Appearance: white,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69838 - 11 Cust. #: AA-HM-06A Material: Window Glazing Location: Main Rooms Appearance: beige,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69838 - 12 Cust. #: AA-HM-06B Material: Window Glazing Location: Main Rooms Appearance: beige,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 430 Allen Ave

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69838  
Date Collected: 04/26/17  
Date Received: 04/27/17  
Date Analyzed: 05/03/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69838 - 13 Cust. #: AA-HM-07A Material: Window Glazing Location: Rear Entry Appearance: beige,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69838 - 14 Cust. #: AA-HM-07B Material: Window Glazing Location: Rear Entry Appearance: beige,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69838 - 15 Cust. #: AA-HM-08A Material: Vapor Barrier Location: Appearance: brown,fibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 95% Other - 5%

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

Robert T. Letarte Jr., Laboratory Director

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P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69838  
Date Collected: 04/26/17  
Date Received: 04/27/17  
Date Analyzed: 05/03/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69838 - 16 Cust. #: AA-HM-08B Material: Vapor Barrier Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 95% Other - 5%
Lab ID #: 69838 - 17 Cust. #: AA-HM-09A Material: Yellow Striped Linoleum Location: Appearance: yellow, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Fiberglass - 10% Other - 70%
Lab ID #: 69838 - 18 Cust. #: AA-HM-09B Material: Yellow Striped Linoleum Location: Appearance: yellow, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Fiberglass - 10% Other - 70%

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

Robert T. Letarte Jr., Laboratory Director

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Project: 430 Allen Ave

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69838  
Date Collected: 04/26/17  
Date Received: 04/27/17  
Date Analyzed: 05/03/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69838 - 19 Cust. #: AA-HM-10A Material: Black/Brown Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 65% Other - 35%
Lab ID #: 69838 - 20 Cust. #: AA-HM-10B Material: Black/Brown Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 65% Other - 35%
Lab ID #: 69838 - 21 Cust. #: AA-HM-11A Material: Window Glazing Location: Basement Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 1.50%  <b>POINT COUNT RESULT</b>	Other - 98.50%

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

Robert T. Letarte Jr., Laboratory Director

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## Test Method, Polarized Light Microscopy (PLM)

Project: 430 Allen Ave

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P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69838  
Date Collected: 04/26/17  
Date Received: 04/27/17  
Date Analyzed: 05/03/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69838 - 22 Cust. #: AA-HM-11B Material: Window Glazing Location: Basement Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69838 - 23 Cust. #: AA-HS-01A Material: Popcorn Texture Surfacing Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Vermiculite - 5% Other - 95%
Lab ID #: 69838 - 24 Cust. #: AA-HS-01B Material: Popcorn Texture Surfacing Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Vermiculite - 5% Other - 95%

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 430 Allen Ave

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69838  
Date Collected: 04/26/17  
Date Received: 04/27/17  
Date Analyzed: 05/03/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69838 - 25 Cust. #: AA-HS-01C Material: Popcorn Texture Surfacing Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Vermiculite - 5% Other - 95%
Lab ID #: 69838 - 26 Cust. #: AA-HS-02A Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69838 - 26a Cust. #: AA-HS-02A Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%

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

Robert T. Letarte Jr., Laboratory Director

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# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 430 Allen Ave

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69838  
Date Collected: 04/26/17  
Date Received: 04/27/17  
Date Analyzed: 05/03/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69838 - 27 Cust. #: AA-HS-02B Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 69838 - 28 Cust. #: AA-HS-02C Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 69838 - 29 Cust. #: AA-HS-02D Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 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: 430 Allen Ave

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69838  
Date Collected: 04/26/17  
Date Received: 04/27/17  
Date Analyzed: 05/03/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69838 - 30 Cust. #: AA-HS-02E Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 69838 - 31 Cust. #: AA-HS-02F Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 69838 - 32 Cust. #: AA-HS-02G Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0

Apex # **69838**

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

E-mail: apexresearch@chartermi.net Fax: 734-449-9991



1 of 3

Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-26-17

Project: 430 *Alban Cove*

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: 5 days All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BioSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	AA-HM-01A	Asphalt Sealing			
2	AA-HM-01B	..			
3	AA-HM-02A	Roofing Shingle			
4	AA-HM-02B	..			
5	AA-HM-03A	1x1 White Smooth CT			
6	AA-HM-03B	..			
7	AA-HM-04A	2x2 White CT w/primary primer			
8	AA-HM-04B	..			
9	AA-HM-05A	Acryllic Sp. Joint Compound			
10	AA-HM-05B	..			
11	AA-HM-06A	Windows Sliding Glass Panels			

Relinquished by: *Alexandra* Received by: *UPS*

Date: 4-26-17 Date: 4-26-17

Relinquished by: Received by: \_\_\_\_\_

Date: 4-26-17 Date: APR 27 2017

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

E-mail: apexresearch@chartermi.net

Fax: 734-449-9991



2 of 3

Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-26-17

Project: 430 Allen Lane

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: Slab  TTP All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
 Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
 Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BioSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
 TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	AA-HY-06B	Asbestos Slagging - Main Room			
13	AA-HY-07A	Asbestos Slagging - Restroom			
14	AA-HM-07B	" " " " " "			
15	AA-HM-08A	Vapor Barrier			
16	AA-HM-08B	" " " " " "			
17	AA-HM-09A	Yellow Stripped Insulation			
18	AA-HM-09B	" " " " " "			
19	AA-HM-10A	Black + Brown Insulation			
20	AA-HM-10B	" " " " " "			
21	AA-HM-11A	Asbestos Slagging - Restroom			
22	AA-HY-11B	" " " " " "			

Relinquished by: [Signature] Received by: URS

Date: 4-26-17

Date: 4-26-17

Relinquished by: [Signature] Received by: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

RECEIVED  
APR 27 2017

69838

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189  
Phone: 734-449-9990  
E-mail: apexresearch@chartermi.net  
Fax: 734-449-9991



3013

Client Name: Red Cedar Consulting

Address: PO Box 13216  
Lansing, MI 48901

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-26-17

Project: 430 Allen Ave

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: Seley All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BioSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
<del>23</del>	AA-145-01A	Plaster Textured Ceiling			
<del>24</del>	AA-145-01B	..			
<del>25</del>	AA-145-01C	..			
<del>26</del>	AA-145-02A	Plaster			
<del>27</del>	AA-145-02B				
<del>28</del>	AA-145-02C				
<del>29</del>	AA-145-02D				
<del>30</del>	AA-145-02E				
<del>31</del>	AA-145-02F				
<del>32</del>	AA-145-02G				

Relinquished by: *[Signature]* Received by: *[Signature]*

Date: 4-26-17 Date: 4-26-17

Relinquished by: *[Signature]*

Date: APR 27 2017

Received by: \_\_\_\_\_

Date: \_\_\_\_\_



***Tables***

**Table 1 - Summary of Hazardous Materials, 430 Allen Ave., Muskegon Heights, Michigan**

<b>Hazardous Materials Description and Location</b>		
<b>Location</b>	<b>Material Description</b>	<b>Quantity</b>
Basement	Gallon Container Misc. Paint	4
Basement	Smoke Detector	1

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 430 Allen Ave., Muskegon, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
AA-HM-01A	Asphalt Siding	No	M	Category I	ND	Exterior	NA
AA-HM-01B	Asphalt Siding	No	M	Category I	ND	Exterior	NA
AA-HM-02A	Asphalt Siding	No	M	Category I	ND/ND/ND	Exterior	NA
AA-HM-02B	Asphalt Siding	No	M	Category I	ND/ND/ND	Exterior	NA
AA-HM-03A	White Smooth 1'x1' Ceiling Tile	Yes	M	Category II	ND	NE Bedroom Ceilings	NA
AA-HM-03B	White Smooth 1'x1' Ceiling Tile	Yes	M	Category II	ND	NE Bedroom Ceilings	NA
AA-HM-04A	White 2'x 2' Ceiling Tile with Pinholes & Fissures	Yes	M	Category II	ND	Bathroom Ceilings	NA
AA-HM-04B	White 2'x 2' Ceiling Tile with Pinholes & Fissures	Yes	M	Category II	ND	Bathroom Ceilings	NA
AA-HM-05A	Drywall & Joint Compound	No	M	Category II	ND/ND	SE Bedroom Walls	NA
AA-HM-05B	Drywall & Joint Compound	No	M	Category II	ND/ND	E Bedroom Walls	NA
AA-HM-06A	Window Glazing-Main Rooms	Yes	M	Category II	ND	Living Room Windows	NA
AA-HM-06B	Window Glazing-Main Rooms	Yes	M	Category II	ND	Dining Room Windows	NA
AA-HM-07A	Window Glazing-Rear Entry	Yes	M	Category II	ND	Rear Entry Windows	NA
AA-HM-07B	Window Glazing-Rear Entry	Yes	M	Category II	ND	Rear Entry Windows	NA
AA-HM-08A	Vapor Barrier	Yes	M	Category II	ND	Exterior Under Wood Siding	NA
AA-HM-08B	Vapor Barrier	Yes	M	Category II	ND	Exterior Under Wood Siding	NA
AA-HM-09A	Yellow Striped Linoleum	No	M	Category I	ND	Basement	NA
AA-HM-09B	Yellow Striped Linoleum	No	M	Category I	ND	Basement	NA
AA-HM-10A	Black & Brown Linoleum	No	M	Category I	ND	Attic	NA
AA-HM-10B	Black & Brown Linoleum	No	M	Category I	ND	Attic	NA
AA-HM-11A	Window Glazing-Basement	Yes	M	Category II	1.50%CH-PC	Basement Windows	6 Windows
AA-HM-11B	Window Glazing-Basement	Yes	M	Category II	NA	Basement Windows	NA
AA-HS-01A	Popcorn Textured Surfacing	Yes	S	Category II	ND	E Bedroom Ceilings	NA
AA-HS-01B	Popcorn Textured Surfacing	Yes	S	Category II	ND	Dining Room ceilings	NA
AA-HS-01C	Popcorn Textured Surfacing	Yes	S	Category II	ND	SE Bedroom Ceilings	NA
AA-HS-02A	Plaster	No	S	Category II	ND/ND	Dining Room Ceilings	NA

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 430 Allen Ave., Muskegon, Michigan**

<b>Sample Number</b>	<b>Sample Description</b>	<b>Friable</b>	<b>Material Type</b>	<b>Material Classification</b>	<b>% Asbestos Laboratory Result</b>	<b>Sample Location</b>	<b>Approx. Material Quantity</b>
AA-HS-02B	Plaster	No	S	Category II	ND	Living Room Ceilings	NA
AA-HS-02C	Plaster	No	S	Category II	ND	E Bedroom Ceilings	NA
AA-HS-02D	Plaster	No	S	Category II	ND	SE Bedroom Walls	NA
AA-HS-02E	Plaster	No	S	Category II	ND	Living Room Walls	NA
AA-HS-02F	Plaster	No	S	Category II	ND	Dining Room Walls	NA
AA-HS-02G	Plaster	No	S	Category II	ND	NE Bedroom Walls	NA

**Notes:**

Material Types

- M = Miscellaneous building material
- TSI = Thermal System Insulation
- S = Surfacing Material
- PC = Point Count Analysis
- CH = Chrysotile Asbestos

Abbreviations

- NQ = Not quantified
- NA = Not applicable
- ND = Not detected. Laboratory result is less than 1 % asbestos
- lin. ft. = linear feet
- sq. ft. = square feet

Asbestos Containing Material (ACM) is defined as any material containing more than 1 percent asbestos as determined utilizing Polarized Light Microscopy.

**Table 3 - Summary of Presumed Asbestos Containing Materials, 430 Allen Ave., Muskegon, Michigan**

<b>Asbestos Containing Material Description and Location</b>					
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Condition</b>	<b>Material Type</b>	<b>Approx. Quantity</b>
Living (2 registers, 30 sq. ft.) Dining (2 registers, 30 sq. ft.) Kitchen (1 register, 15 sq. ft.) Bathroom (1 register, 15 sq. ft.) NE Bedroom (1 register, 15 sq. ft.) Basement (misc. HVAC wrap on Cold Air Return Ductwork, 25 sq. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	130 sq. ft.
Basement (12 in. dia. HVAC Wrapped Ductwork, 8 lin. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	8 lin. ft.

**Notes:**

Material Types

- M = Miscellaneous building material
- TSI = Thermal System Insulation
- S = Surfacing Material

Abbreviations

- lin. ft. = linear feet
- sq. ft. = square feet

**Table 4 - Summary of All Asbestos Containing Materials, 430 Allen Ave., Muskegon, Michigan**

<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Living (2 registers, 30 sq. ft.) Dining (2 registers, 30 sq. ft.) Kitchen (1 register, 15 sq. ft.) Bathroom (1 register, 15 sq. ft.) NE Bedroom (1 register, 15 sq. ft.) Basement (misc. HVAC wrap on Cold Air Return Ductwork, 25 sq. ft.)	HVAC Duct Wrap	Yes	130 sq. ft.
<b>Total</b>			<b>130 sq. ft.</b>
<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Basement (12 in. dia. HVAC Wrapped Ductwork, 8 lin. ft.)	HVAC Duct Wrap	Yes	8 lin. ft.
<b>Total</b>			<b>8 lin. ft.</b>
<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Basement (2 windows 29" wide x 14 tall)	Glazing	Yes	2 Windows
Basement (4 windows 29" wide x 20" tall)	Glazing	Yes	4 Windows
<b>Total</b>			<b>6 Windows</b>

**Notes:**

Abbreviations

lin. ft. = linear feet  
sq. ft. = square feet

**Shaded/Bolded** = Friable ACM and any Category I and Category II non-friable ACM that has a high probability of becoming crumbled, pulverized, or reduced to powder by the demolition or renovation activities that must be properly abated prior to commencement of any demolition/renovation activities.

Demolition/renovation activities completed with intact Category I non-friable ACM are regulated by OSHA and must be completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note that a Negative Pressure Enclosure must be utilized during abatement when Site Conditions Warrant. Examples of these conditions include the abatement of Plaster and Vermiculite insulation, HVAC Duct Wrap in Poor Condition, and Air-O-Cell/Mag Pipe Wrap. Conditions outside of these should be assessed on a case by case basis during the Asbestos Abatement Contractors site walk and Work Plan Preparation.



P.O. Box 13216  
Lansing, MI 48901  
Phone: 888.449.4566  
Fax: 888.448.8739  
www.redcedarconsulting.net

May 11, 2017

Mr. Tim Burgess  
Muskegon County Land Bank  
Land Bank Coordinator  
173 E. Apple Avenue, Suite 104  
Muskegon, MI 49442

**RE: *Asbestos Containing Material and Hazardous Materials Inspection***  
***618 Catawba Ave., Muskegon, MI 49442***  
***Parcel ID: 24-205-090-0014-00***

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 618 Catawba Ave., Muskegon, Michigan (Subject Property). This inspection was completed at the request of the Muskegon County Land Bank to comply with the United States Environmental Protection Agency (USEPA) requirements for demolition and renovation set forth under the National Emissions Standards for Hazardous Air Pollutants (NESHAP, 40 CFR Part 61). This inspection was also completed to comply with the Occupational Safety and Health Administration (OSHA) Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

### **SUBJECT PROPERTY**

The Subject Property is comprised of a .10 acre residential parcel which contains an unknown square foot residential building (the Building) with an unknown construction date. The Building was constructed on a concrete block basement with one aboveground floor. The exterior walls of the Building were finished with Transite siding over felt paper while the roof was sealed with asphalt shingles. The Building can be further divided into a living room, dining room, kitchen, bath and two bedrooms.

### **VISUAL INSPECTION AND SAMPLING**

#### **Asbestos Containing Materials Inspection**

Aaron Paquet and Darrell DeMasters of Red Cedar Consulting (Red Cedar), accredited State Of Michigan/EPA Asbestos Building Inspectors (Accreditation Numbers A30955 and A31159, respectively) who completed training per the Michigan Asbestos Workers Accreditation Act 440, completed an inspection of the Subject Property on May 4, 2017 for suspected asbestos containing building materials.

This inspection, and subsequent sample collection was completed in accordance with the USEPA Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763) assessment and sampling protocol.

During the completion of the inspection, each area of the Subject Property was visually inspected for asbestos containing building materials (ACBM). Following the completion of the visual inspection, Red Cedar staff identified each suspect area of friable and non-friable ACBM and sorted them into one of three homogenous categories for sampling purposes. AHERA defines friable as a material that when dry, may be crumbled, pulverized, or reduced to powder by hand pressure. A homogenous area is defined by OSHA as an area of surfacing, thermal system insulation (TSI) or miscellaneous material that is uniform in color and texture. Surfacing materials are most commonly found in sprayed-on, troweled-on or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members. TSI refers to materials applied to pipes, fittings, boilers, ductwork, or other components to prevent heat loss or gain, or condensation. Any material that does not fall under the surfacing or TSI category, such as floor tile, drywall, and acoustical ceiling tile are placed into the miscellaneous materials category.

Following the completion of the visual inspection, Red Cedar staff identified the following materials as suspect ACBM:

- Asphalt Shingle
- Felt Paper
- Linoleum
- Drywall & Joint Compound
- Glazing
- Plaster
- Texture

Red Cedar staff collected twenty samples of suspect ACBM separated into nine distinct homogenous groups for laboratory analysis. Samples were collected and submitted to APEX Research Inc. Laboratories (APEX) (Accreditation Number 102118-0) for laboratory analysis. Analysis was completed utilizing polarized light microscopy (PLM) which is the Environmental Protection Agency (EPA) approved method for analysis of bulk materials for asbestos. PLM analysis completed pursuant to method (EPA 600/M4-82-020) identifies asbestos fiber bundles by the visual properties displayed when the sample is treated with various dispersion staining liquids. The laboratory report completed following the sample analysis indicates if asbestos is present, and at what percentage along with a description and percentage of other fibrous and non-fibrous materials and sample color. Chain-of-custody documentation was followed from sample collection through shipping and receiving of the samples at the designated laboratory. The documentation assures that samples will meet the quality assurance/quality control measures defined by AHERA. The laboratory analytical report prepared by APEX for the twenty samples is included as Attachment A.



## **Hazardous Materials Inspection**

On May 4, 2017 the Subject Property was also inspected for the presence of hazardous materials which include but are not limited to polychlorinated biphenyls (PCBs) and potential mercury containing equipment and any items or containers that may contain or be classified as a hazardous or regulated material. Each material, if identified, was documented along with the approximate location. Any materials identified as hazardous are included in Table 1.

## **INSPECTION RESULTS AND RECOMMENDATIONS**

During the completion of the asbestos inspection, twenty samples of suspect ACM were collected and are documented in Table 2 along with the Red Cedar sample number, description, friability, material type, ACM classification, sample location, material quantity and laboratory analytical results.

ACM, as defined by the USEPA NESHAP is “any material containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763 Section 1, Polarized Light Microscopy”.

Friable ACM is defined by NESHAP as any material containing more than 1 percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Friable ACM is a concern due the ease of unintentionally disturbing the ACM which may result in “visible emissions” which is known as a Fiber Release Episode.

Non-friable asbestos-containing material is defined as “material containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACM’s are separated into Category I and Category II ACM. Category I ACM is any asbestos containing packing’s, gaskets, resilient floor coverings (vinyl floor tile and linoleum are examples of these) and asphalt roofing products. Category II ACM is stated by NESHAP as any material excluding Category I non-friable ACM such as drywall, plaster or fiberboard insulation.

## **Presumed Asbestos Containing Material**

Presumed Asbestos Containing Materials (PACM) are suspect surfacing, TSI and miscellaneous materials found in buildings constructed prior to 1980 which are classified as and due to the age of the structure, are assumed to be ACM and do not require sample collection and analysis. OSHA dictates that PACM may be “rebutted” following a complete inspection pursuant to AHERA protocol.

The HVAC Duct Wrap located in the Building and the Cementitious “Transite” Siding on the Building was classified as PACM due to the age of the structure and samples were not collected.

Table 3 lists the location, material description, friability, condition, material type (surfacing, thermal or miscellaneous) and approximate quantity of all PACM documented at the Subject Property.

Table 4 provides a summary all ACM documented at the Subject Property which includes the material location, description, and approximate quantity.

### **Friable ACM's**

A window glazing sample collected from a window in the Kitchen was found to contain up to 10% asbestos following analysis. The assessment to quantify the extent of this material identified seven windows at the following locations that would fall into the same homogenous group. The locations of the windows are listed below:

- Kitchen (1 window 40" wide x 24" tall)
- Basement Stairwell (1 window 20" wide x 14" tall)
- S Bedroom (2 windows 28" wide x 62" tall)
- Attic (3 window 30" wide x 34" tall)

Duct Wrap identified in the building in conjunction with the forced air heating system is classified as friable ACM. The visual assessment to quantify the extent of this material identified HVAC Duct Wrap at the following locations within the basement and first floor:

- Living (1 register, 15 sq. ft.)
- Dining (1 register, 10 sq. ft.)
- Kitchen (1 register, 10 sq. ft.)
- N Bedroom (1 register, 10 sq. ft.)
- S Bedroom (1 register, 10 sq. ft.)
- Basement (misc. HVAC wrap on Cold Air Return Ductwork, 25 sq. ft.)
- Basement (12 in. dia. HVAC Wrapped Ductwork, 40 lin. ft.)

### **Category I ACM**

One type of resilient floor covering (Beige Linoleum) located within the kitchen and basement stairwell was found to contain up to 30% Chrysotile asbestos. The assessment to quantify the extent of this material identified approximately 156 sq. ft. of this material within the Building.

### **Category II ACM**

The cementitious "Transite" siding located on the exterior of the Building was classified as PACM and no samples were collected. The visual assessment to quantify the extent of this material identified 2,300 sq. ft. of cementitious (Transite) siding on the Building.

Plaster samples, collected from the N Bedroom were found to contain up to 1.5% asbestos following analysis. The assessment to quantify the extent of this material identified approximately 600 sq. ft. of plaster within the Building.

## **RECOMMENDATIONS**

### **Asbestos Containing Materials**

HVAC material identified in the Building system and listed below is classified as friable ACM and should be removed prior to any renovation/demolition activities.

- Living (1 register, 15 sq. ft.)
- Dining (1 register, 10 sq. ft.)
- Kitchen (1 register, 10 sq. ft.)
- N Bedroom (1 register, 10 sq. ft.)
- S Bedroom (1 register, 10 sq. ft.)
- Basement (misc. HVAC wrap on Cold Air Return Ductwork, 25 sq. ft.)
- Basement (12 in. dia. HVAC Wrapped Ductwork, 40 lin. ft.)

Friable asbestos containing window glazing was identified on seven windows throughout the Building. The locations of these windows that should be abated prior to demolition/renovation activities are listed below:

- Kitchen (1 window 40" wide x 24" tall)
- Basement Stairwell (1 window 20" wide x 14" tall)
- S Bedroom (2 windows 28" wide x 62" tall)
- Attic (3 window 30" wide x 34" tall)

Please note: Other different sized windows are located throughout the Building but these windows were assessed and found to be constructed either without window glazing or were sampled and found to not contain asbestos and therefore are not required to be removed.

Transite siding was identified on the exterior of the Building and must be abated prior to completion of any demolition activities at the Subject Property. In demolition, all cementitious ACM must be removed prior to demolition due to the likelihood of becoming regulated due to the demolition process.

Plaster identified on the interior of the Building must be abated prior to completion of any renovation/demolition activities at the Subject Property. Any Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations must be properly abated.

The Category I resilient floor covering (Beige Linoleum) is a non-friable ACM that may be left in place as long as the demolition/renovation activities are completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note: The location of samples obtained during this inspection were in a random fashion and areas that were not identified during this inspection may be damaged or have become damaged since the inspection was completed. If Category I or Category II friable materials are discovered prior to or during the demolition/renovation process, these materials must be abated prior to commencement of any demolition/renovation activities at the Subject Property.

## **Hazardous Materials**

Hazardous Materials identified at the Subject Property and documented in Table 1 which require proper removal and disposal consist of the following items:

- Quart Misc. Paint/Oil (4)
- Smoke Detector (1)
- 4' Fluorescent Light (Fixture and Ballast Only) (1)
- 4' Fluorescent Bulb (2)
- Television (7)

## **REGULATORY REQUIREMENTS**

A Notification of Intent to Renovate/Demolish form must be filed with the Michigan Department of Environmental Quality- Air Quality Division at least 10 working days prior to any renovation or demolition activities at a site.

The Notification of Intent to Renovate/Demolish form must also be completed and submitted to the MIOSHA-Asbestos Program whenever demolition, encapsulation and/or renovation activities at a site involving greater than ten lineal feet and/or fifteen square feet of ACM will be completed.

Regulated asbestos containing materials per NESHAP (40 CFR Part 61) which falls into any of the following categories are ACM's that must be removed prior to any renovation/demolition activities at the Subject Property.

- Friable asbestos material.
- Category I non-friable ACM that has become friable.
- Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading.
- Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations.

Asbestos abatement should only be performed by a certified asbestos abatement contractor licensed to complete abatement work. The contractor must also follow the standards and requirements set forth per the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61).

Additional information regarding the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61) can be obtained by contacting the associated agency below.

NESHAP Asbestos Program  
Department of Environmental Quality  
Phone: 517-284-6777

MIOSHA-CSHD-Asbestos Program  
State of Michigan  
Phone: 517-284-7680  
Email: asbestos@michigan.gov

Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 24-205-090-0014-00

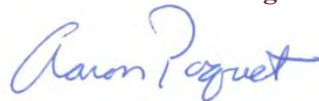
**DISCLAIMER**

Red Cedar Consulting performed destructive testing methods in an attempt to access and inspect all areas of the Building. Unfortunately, due to the age of construction along with multiple additions/renovations that may have been completed on the Building, additional inspections may be required if suspect ACM material not documented within this report is encountered during renovation/demolition activities.

This report was prepared at the request and for exclusive use by the Muskegon County Land Bank and may not be reproduced or sold without written permission from Red Cedar Consulting.

We appreciate the opportunity to provide the requested services. Please contact us at (888) 449-4566 with any questions or concerns.

Sincerely,  
**Red Cedar Consulting**



Aaron Paquet  
Michigan/EPA Certified Asbestos Building Inspector  
(A30955)

Red Cedar Consulting

***Attachment 1***  
***APEX Research Laboratory Analytical Results***



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 618 Catawba Ave

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69942  
Date Collected: 05/04/17  
Date Received: 05/05/17  
Date Analyzed: 05/09/17  
Date Reported: 05/11/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69942 - 01 Cust. #: CT-HM-01A Material: Black Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69942 - 01a Cust. #: CT-HM-01A Material: Black Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69942 - 02 Cust. #: CT-HM-01B Material: Black Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%

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: 618 Catawba Ave

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69942  
Date Collected: 05/04/17  
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Date Analyzed: 05/09/17  
Date Reported: 05/11/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69942 - 02a Cust. #: CT-HM-01B Material: Black Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69942 - 03 Cust. #: CT-HM-02A Material: Felt Paper Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 69942 - 04 Cust. #: CT-HM-02B Material: Felt Paper Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 50% Other - 50%

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

Robert T. Letarte Jr., Laboratory Director

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# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 618 Catawba Ave

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69942  
Date Collected: 05/04/17  
Date Received: 05/05/17  
Date Analyzed: 05/09/17  
Date Reported: 05/11/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69942 - 05 Cust. #: CT-HM-03A Material: Grey Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 30% Other - 70%
Lab ID #: 69942 - 05a Cust. #: CT-HM-03A Material: Black Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 30% Other - 70%
Lab ID #: 69942 - 06 Cust. #: CT-HM-03B Material: Grey Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 30% Other - 70%

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: 618 Catawba Ave

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P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69942  
Date Collected: 05/04/17  
Date Received: 05/05/17  
Date Analyzed: 05/09/17  
Date Reported: 05/11/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69942 - 06a Cust. #: CT-HM-03B Material: Black Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 30% Other - 70%
Lab ID #: 69942 - 07 Cust. #: CT-HM-04A Material: Beige Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>YES</b> Chrysotile - 30%	Other - 70%
Lab ID #: 69942 - 07a Cust. #: CT-HM-04A Material: Fiberboard Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 70% Other - 30%

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: 618 Catawba Ave

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69942  
Date Collected: 05/04/17  
Date Received: 05/05/17  
Date Analyzed: 05/09/17  
Date Reported: 05/11/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69942 - 08 Cust. #: CT-HM-04B Material: Beige Linoleum Location: Appearance: Layer: 1 of 2	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69942 - 08a Cust. #: CT-HM-04B Material: Fiberboard Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 70% Other - 30%
Lab ID #: 69942 - 09 Cust. #: CT-HM-05A Material: White Linoleum Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Fiberglass - 5% 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: 618 Catawba Ave

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Lansing, MI 48901

ARI Report # 17-69942  
Date Collected: 05/04/17  
Date Received: 05/05/17  
Date Analyzed: 05/09/17  
Date Reported: 05/11/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69942 - 10 Cust. #: CT-HM-05B Material: White Linoleum Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Fiberglass - 5% Other - 80%
Lab ID #: 69942 - 11 Cust. #: CT-HM-06A Material: Drywall Location: Appearance: white, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69942 - 11a Cust. #: CT-HM-06A Material: Compound Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> 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: 618 Catawba Ave

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69942  
Date Collected: 05/04/17  
Date Received: 05/05/17  
Date Analyzed: 05/09/17  
Date Reported: 05/11/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69942 - 12 Cust. #: CT-HM-06B Material: Drywall Location: Appearance: white, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69942 - 12a Cust. #: CT-HM-06B Material: Compound Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69942 - 13 Cust. #: CT-HM-07A Material: Glazing Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 10%	Other - 90%

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 618 Catawba Ave

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Mr. Aaron Paquet  
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Lansing, MI 48901

ARI Report # 17-69942  
Date Collected: 05/04/17  
Date Received: 05/05/17  
Date Analyzed: 05/09/17  
Date Reported: 05/11/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69942 - 14 Cust. #: CT-HM-07B Material: Glazing Location: Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69942 - 15 Cust. #: CT-HS-01A Material: Plaster Finish Coat Location: Appearance: grey, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>YES</b> Chrysotile - 1.50%  POINT COUNT RESULT	Other - 98.50%
Lab ID #: 69942 - 15a Cust. #: CT-HS-01A Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 5% Other - 95%

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: 618 Catawba Ave

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69942  
Date Collected: 05/04/17  
Date Received: 05/05/17  
Date Analyzed: 05/09/17  
Date Reported: 05/11/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69942 - 16 Cust. #: CT-HS-01B Material: Plaster Finish Coat Location: Appearance: Layer: 1 of 2	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69942 - 16a Cust. #: CT-HS-01B Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 5% Other - 95%
Lab ID #: 69942 - 17 Cust. #: CT-HS-01C Material: Plaster Finish Coat Location: Appearance: Layer: 1 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: 618 Catawba Ave

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69942  
Date Collected: 05/04/17  
Date Received: 05/05/17  
Date Analyzed: 05/09/17  
Date Reported: 05/11/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69942 - 17a Cust. #: CT-HS-01C Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 5% Other - 95%
Lab ID #: 69942 - 18 Cust. #: CT-HS-02A Material: Texture Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 69942 - 19 Cust. #: CT-HS-02B Material: Texture Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	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: 618 Catawba Ave

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69942  
Date Collected: 05/04/17  
Date Received: 05/05/17  
Date Analyzed: 05/09/17  
Date Reported: 05/11/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69942 - 20 Cust. #: CT-HS-02C Material: Texture Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	
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

**69942**

PS of 2

**ARXA Research, Inc.**

11054 Hi Tech Drive, Whitmore Lake, MI 48189  
 Phone: 734-449-9990  
 E-mail: apexresearch@chartermi.net  
 Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216  
 Lansing, MI 48901

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

**Turn Around Times:** (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM.  
 apaquet@redcedarconsulting.net

Rush 24 hour

48 hour 72 hour

Other: Stay All Samples

Date of Survey: 5-4-17

Project: 618 Catawba Ave.

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
 Log-In \_\_\_\_\_  
 Report \_\_\_\_\_

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
 Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
 Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BiosIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
 TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	CT-14M-01A	Black Shingle			
2	CT-14M-01B	" "			
3	CT-14M-02A	Felt Paper			
4	CT-14M-02B	" "			
5	CT-14M-03A	Grey Shingle			
6	CT-14M-03B	" "			
7	CT-14M-04A	Beige Linoleum			
8	CT-14M-04B	" "			
9	CT-14M-05A	White Linoleum			
10	CT-14M-05B	" "			
11	CT-14M-06A	Drywall & Compound			

Relinquished by: [Signature]  
 Date: 5-4-17

Received by: [Signature]  
 Date: 5-4-17

Relinquished by: \_\_\_\_\_  
 Date: \_\_\_\_\_

Received by: [Signature]  
 Date: MAY 05 2017

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69942

PS 2 of 2

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189  
Phone: 734-449-9990  
E-mail: apexresearch@chartermi.net  
Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216  
Lansing, MI 48901

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 5-4-17

Project: 618 Catawba Ave.

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log-in \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: 5 Day All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BIOSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	CT-HM-06B	Drywall & compound			
13	CT-HM-07A	Glazing			
14	CT-HM-07B	"			
15	CT-HS-01A	Plaster			
16	CT-HS-01B	"			
17	CT-HS-01C	"			
18	CT-HS-02A	texture			
19	CT-HS-02B	"			
20	CT-HS-02C	"			

Relinquished by: [Signature] Date: 5-4-17  
Received by: [Signature] Date: 5-4-17

Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_  
Received by: [Signature] Date: 05 2017

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***Tables***

**Table 1 - Summary of Hazardous Materials, 618 Catawba Ave., Muskegon Heights, Michigan**

<b>Hazardous Materials Description and Location</b>		
<b>Location</b>	<b>Material Description</b>	<b>Quantity</b>
Attic	Television	3
Kitchen	Quart Container Misc. Paint/Oil	4
Basement	Smoke Detector	1
Basement	4' Fluorescent Light (Fixture and Ballast Only)	1
Basement	4' Fluorescent Bulb	2
Exterior Shed	Television	4

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 618 Catawba Ave., Muskegon Heights, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
CT-HM-01A	Black Shingle	No	M	Category I	ND/ND	Exterior	NA
CT-HM-01B	Black Shingle	No	M	Category I	ND/ND	Exterior	NA
CT-HM-02A	Felt Paper	Yes	M	Category II	ND	Exterior	NA
CT-HM-02B	Felt Paper	Yes	M	Category II	ND	Exterior	NA
CT-HM-03A	Gray Shingle	No	M	Category I	ND/ND	Exterior	NA
CT-HM-03B	Gray Shingle	No	M	Category I	ND/ND	Exterior	NA
CT-HM-04A	Beige Linoleum	No	M	Category I	30%CH/ND	Kitchen	156 sq. ft.
CT-HM-04B	Beige Linoleum	No	M	Category I	NA/ND	Basement Stairwell	NA
CT-HM-05A	White Linoleum	No	M	Category I	ND	Bathroom	NA
CT-HM-05B	White Linoleum	No	M	Category I	ND	Bathroom	NA
CT-HM-06A	Drywall & Joint Compound	No	M	Category II	ND/ND	Living Room Ceiling	NA
CT-HM-06B	Drywall & Joint Compound	No	M	Category II	ND/ND	Kitchen Wall	NA
CT-HM-07A	Glazing	Yes	M	Category II	10%CH	Kitchen	7 Windows
CT-HM-07B	Glazing	Yes	M	Category II	NA	Kitchen	NA
CT-HS-01A	Plaster	No	S	Category II	1.50%CH-PC/ND	N Bedroom Ceiling	600 sq. ft.
CT-HS-01B	Plaster	No	S	Category II	NA/ND	N Bedroom Wall	NA
CT-HS-01C	Plaster	No	S	Category II	NA/ND	N Bedroom Wall	NA
CT-HS-02A	Texture	No	S	Category II	ND	Kitchen Ceiling	NA
CT-HS-02B	Texture	No	S	Category II	ND	N Bedroom Ceiling	NA
CT-HS-02C	Texture	No	S	Category II	ND	Dining Room Ceiling	NA

**Notes:**

Material Types

M = Miscellaneous building material  
 TSI = Thermal System Insulation  
 S = Surfacing Material  
 PC = Point Count Analysis  
 CH = Chrysotile Asbestos

Abbreviations

NQ = Not quantified  
 NA = Not applicable  
 ND = Not detected. Laboratory result is less than 1 % asbestos  
 lin. ft. = linear feet  
 sq. ft. = square feet

Asbestos Containing Material (ACM) is defined as any material containing more than 1 percent asbestos as determined utilizing Polarized Light Microscopy.

**Table 3 - Summary of Presumed Asbestos Containing Materials, 618 Catawba Ave., Muskegon Heights, Michigan**

Asbestos Containing Material Description and Location					
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity
Building Exterior	Transite Siding	No	Fair	M	2,300 sq. ft.
Living (1 register, 15 sq. ft.) Dining (1 register, 10 sq. ft.) Kitchen (1 register, 10 sq. ft.) N Bedroom (1 register, 10 sq. ft.) S Bedroom (1 register, 10 sq. ft.) Basement (misc. HVAC wrap on Cold Air Return Ductwork, 25 sq. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	80 sq. ft.
Basement (12 in. dia. HVAC Wrapped Ductwork, 40 lin. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	40 lin. ft.

**Notes:**

Material Types

- M = Miscellaneous building material
- TSI = Thermal System Insulation
- S = Surfacing Material

Abbreviations

- lin. ft. = linear feet
- sq. ft. = square feet

**Table 4 - Summary of All Asbestos Containing Materials, 618 Catawba Ave., Muskegon Heights, Michigan**

<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Kitchen	Beige Linoleum	No	108 sq. ft.
Basement Stairwell	Beige Linoleum	No	48 sq. ft.
<b>Total</b>			<b>156 sq. ft.</b>
<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Living (1 register, 15 sq. ft.) Dining (1 register, 10 sq. ft.) Kitchen (1 register, 10 sq. ft.) N Bedroom (1 register, 10 sq. ft.) S Bedroom (1 register, 10 sq. ft.) Basement (misc. HVAC wrap on Cold Air Return Ductwork, 25 sq. ft.)	HVAC Duct Wrap	Yes	80 sq. ft.
<b>Total</b>			<b>80 sq. ft.</b>
<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Basement (12 in. dia. HVAC Wrapped Ductwork, 40 lin. ft.)	HVAC Duct Wrap	Yes	40 lin. ft.
<b>Total</b>			<b>40 lin. ft.</b>
<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Kitchen (1 window 40" wide x 24" tall) Basement Stairwell (1 window 20" wide x 14" tall) S Bedroom (2 windows 28" wide x 62" tall) Attic (3 window 30" wide x 34" tall)	Glazing	Yes	1 Window
	Glazing	Yes	1 Window
	Glazing	Yes	2 Windows
	Glazing	Yes	3 Windows
<b>Total</b>			<b>7 Windows</b>
<b>Exterior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Building Exterior	Transite Siding	No	2,300 sq. ft.
<b>Total</b>			<b>2,300 sq. ft.</b>



**Table 4 - Summary of All Asbestos Containing Materials, 618 Catawba Ave., Muskegon Heights, Michigan**

<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
N Bedroom	Wall Plaster	No	450 sq. ft.
N Bedroom	Ceiling Plaster	No	150 sq. ft.
		<b>Total</b>	<b>600 sq. ft.</b>

**Notes:**

Abbreviations

lin. ft. = linear feet

sq. ft. = square feet

**Shaded/Bolded** = Friable ACM and any Category I and Category II non-friable ACM that has a high probability of becoming crumbled, pulverized, or reduced to powder by the demolition or renovation activities that must be properly abated prior to commencement of any demolition/renovation activities.

Demolition/renovation activities completed with intact Category I non-friable ACM are regulated by OSHA and must be completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note that a Negative Pressure Enclosure must be utilized during abatement when Site Conditions Warrant. Examples of these conditions include the abatement of Plaster and Vermiculite insulation, HVAC Duct Wrap in Poor Condition, and Air-O-Cell/Mag Pipe Wrap. Conditions outside of these should be assessed on a case by case basis during the Asbestos Abatement Contractors site walk and Work Plan Preparation.



P.O. Box 13216  
Lansing, MI 48901  
Phone: 888.449.4566  
Fax: 888.448.8739  
www.redcedarconsulting.net

May 12, 2017

Mr. Tim Burgess  
Muskegon County Land Bank  
Land Bank Coordinator  
173 E. Apple Avenue, Suite 104  
Muskegon, MI 49442

**RE: *Asbestos Containing Material and Hazardous Materials Inspection***  
***862 Stevens St., Muskegon, MI 49442***  
***Parcel ID: 61-24-121-300-0089-00***

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 862 Stevens St., Muskegon, Michigan (Subject Property). This inspection was completed at the request of the Muskegon County Land Bank to comply with the United States Environmental Protection Agency (USEPA) requirements for demolition and renovation set forth under the National Emissions Standards for Hazardous Air Pollutants (NESHAP, 40 CFR Part 61). This inspection was also completed to comply with the Occupational Safety and Health Administration (OSHA) Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

### **SUBJECT PROPERTY**

The Subject Property is comprised of a .20 acre residential parcel which contains an approximate 1,014 square foot residential building (the Building) constructed in 1923. The Building was constructed on a concrete block basement with one aboveground floor. The exterior walls of the Building were finished with wood lap over a vapor barrier while the roof was sealed with asphalt shingles. The Building can be further divided into a front entry, living room, dining room, kitchen, bath, and two bedrooms.

### **VISUAL INSPECTION AND SAMPLING**

#### **Asbestos Containing Materials Inspection**

Aaron Paquet and Darrell DeMasters of Red Cedar Consulting (Red Cedar), accredited State Of Michigan/EPA Asbestos Building Inspectors (Accreditation Numbers A30955 and A31159, respectively) who completed training per the Michigan Asbestos Workers Accreditation Act 440, completed an inspection of the Subject Property on April 26, 2017 for suspected asbestos containing building materials.

This inspection, and subsequent sample collection was completed in accordance with the USEPA Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763) assessment and sampling protocol.

During the completion of the inspection, each area of the Subject Property was visually inspected for asbestos containing building materials (ACBM). Following the completion of the visual inspection, Red Cedar staff identified each suspect area of friable and non-friable ACBM and sorted them into one of three homogenous categories for sampling purposes. AHERA defines friable as a material that when dry, may be crumbled, pulverized, or reduced to powder by hand pressure. A homogenous area is defined by OSHA as an area of surfacing, thermal system insulation (TSI) or miscellaneous material that is uniform in color and texture. Surfacing materials are most commonly found in sprayed-on, troweled-on or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members. TSI refers to materials applied to pipes, fittings, boilers, ductwork, or other components to prevent heat loss or gain, or condensation. Any material that does not fall under the surfacing or TSI category, such as floor tile, drywall, and acoustical ceiling tile are placed into the miscellaneous materials category.

Following the completion of the visual inspection, Red Cedar staff identified the following materials as suspect ACBM:

- Asphalt Shingle
- Vapor Barrier
- Vinyl Flooring
- Linoleum
- 4" square Vinyl Flooring
- 1'x1' Ceiling Tile
- 12"x12" Vinyl Tile
- 9"x9" Vinyl Tile
- Drywall & Joint Compound
- Glazing
- Plaster

Red Cedar staff collected thirty three samples of suspect ACBM separated into fifteen distinct homogenous groups for laboratory analysis. Samples were collected and submitted to APEX Research Inc. Laboratories (APEX) (Accreditation Number 102118-0) for laboratory analysis. Analysis was completed utilizing polarized light microscopy (PLM) which is the Environmental Protection Agency (EPA) approved method for analysis of bulk materials for asbestos. PLM analysis completed pursuant to method (EPA 600/M4-82-020) identifies asbestos fiber bundles by the visual properties displayed when the sample is treated with various dispersion staining liquids. The laboratory report completed following the sample analysis indicates if asbestos is present, and at what percentage along with a description and percentage of other fibrous and non-fibrous materials and sample color. Chain-of-custody documentation was followed from sample collection through shipping and receiving of the samples at the designated laboratory. The documentation assures that samples will meet the quality assurance/quality control measures defined by AHERA. The laboratory analytical report prepared by APEX for the thirty three samples is included as Attachment A.

## **Hazardous Materials Inspection**

On April 26, 2017 the Subject Property was also inspected for the presence of hazardous materials which include but are not limited to polychlorinated biphenyls (PCBs) and potential mercury containing equipment and any items or containers that may contain or be classified as a hazardous or regulated material. Each material, if identified, was documented along with the approximate location. Any materials identified as hazardous are included in Table 1.

## **INSPECTION RESULTS AND RECOMMENDATIONS**

During the completion of the asbestos inspection, thirty three samples of suspect ACM were collected and are documented in Table 2 along with the Red Cedar sample number, description, friability, material type, ACM classification, sample location, material quantity and laboratory analytical results.

ACM, as defined by the USEPA NESHAP is “any material containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763 Section 1, Polarized Light Microscopy”.

Friable ACM is defined by NESHAP as any material containing more than 1 percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Friable ACM is a concern due the ease of unintentionally disturbing the ACM which may result in “visible emissions” which is known as a Fiber Release Episode.

Non-friable asbestos-containing material is defined as “material containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACM’s are separated into Category I and Category II ACM. Category I ACM is any asbestos containing packing’s, gaskets, resilient floor coverings (vinyl floor tile and linoleum are examples of these) and asphalt roofing products. Category II ACM is stated by NESHAP as any material excluding Category I non-friable ACM such as drywall, plaster or fiberboard insulation.

## **Presumed Asbestos Containing Material**

Presumed Asbestos Containing Materials (PACM) are suspect surfacing, TSI and miscellaneous materials found in buildings constructed prior to 1980 which are classified as and due to the age of the structure, are assumed to be ACM and do not require sample collection and analysis. OSHA dictates that PACM may be “rebutted” following a complete inspection pursuant to AHERA protocol.

No PACM was identified during the completion of this inspection. All suspect materials identified were sampled and analyzed for ACM.

Table 3 lists the location, material description, friability, condition, material type (surfacing, thermal or miscellaneous) and approximate quantity of all PACM documented at the Subject Property.

Table 4 provides a summary all ACM documented at the Subject Property which includes the material location, description, and approximate quantity.

### **Friable ACM's**

No friable ACM's were identified during the completion of this inspection.

### **Category I ACM**

Two types of resilient floor covering (Red & Brown Layered Linoleum and 12x12 Woodgrain Vinyl Floor Tile/Layered) located within the Dining Room and Bathroom, respectively, were found to contain up to 5% Chrysotile asbestos. The assessment to quantify the extent of this material identified approximately 232 sq. ft. of this material within the Building.

### **Category II ACM**

No Category II non-friable ACM was identified during the completion of this inspection.

## **RECOMMENDATIONS**

### **Asbestos Containing Materials**

The Category I resilient floor coverings (Red & Brown Layered Linoleum and 12x12 Woodgrain Vinyl Floor Tile/Layered) are non-friable ACM's that may be left in place as long as the demolition/renovation activities are completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note: The location of samples obtained during this inspection were in a random fashion and areas that were not identified during this inspection may be damaged or have become damaged since the inspection was completed. If Category I or Category II friable materials are discovered prior to or during the demolition/renovation process, these materials must be abated prior to commencement of any demolition/renovation activities at the Subject Property.

### **Hazardous Materials**

Hazardous Materials identified at the Subject Property and documented in Table 1 which require proper removal and disposal consist of the following items:

- Smoke Detector (2)
- Thermostat (1)

## **REGULATORY REQUIREMENTS**

A Notification of Intent to Renovate/Demolish form must be filed with the Michigan Department of Environmental Quality- Air Quality Division at least 10 working days prior to any renovation or demolition activities at a site.

The Notification of Intent to Renovate/Demolish form must also be completed and submitted to the MIOSHA-Asbestos Program whenever demolition, encapsulation and/or renovation activities at a site involving greater than ten lineal feet and/or fifteen square feet of ACM will be completed.

Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-24-121-300-0089-00

Regulated asbestos containing materials per NESHAP (40 CFR Part 61) which falls into any of the following categories are ACM's that must be removed prior to any renovation/demolition activities at the Subject Property.

- Friable asbestos material.
- Category I non-friable ACM that has become friable.
- Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading.
- Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations.

Asbestos abatement should only be performed by a certified asbestos abatement contractor licensed to complete abatement work. The contractor must also follow the standards and requirements set forth per the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61).

Additional information regarding the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61) can be obtained by contacting the associated agency below.

NESHAP Asbestos Program  
Department of Environmental Quality  
Phone: 517-284-6777

MIOSHA-CSHD-Asbestos Program  
State of Michigan  
Phone: 517-284-7680  
Email: [asbestos@michigan.gov](mailto:asbestos@michigan.gov)

Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-24-121-300-0089-00

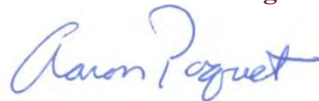
**DISCLAIMER**

Red Cedar Consulting performed destructive testing methods in an attempt to access and inspect all areas of the Building. Unfortunately, due to the age of construction along with multiple additions/renovations that may have been completed on the Building, additional inspections may be required if suspect ACM material not documented within this report is encountered during renovation/demolition activities.

This report was prepared at the request and for exclusive use by the Muskegon County Land Bank and may not be reproduced or sold without written permission from Red Cedar Consulting.

We appreciate the opportunity to provide the requested services. Please contact us at (888) 449-4566 with any questions or concerns.

Sincerely,  
**Red Cedar Consulting**



Aaron Paquet  
Michigan/EPA Certified Asbestos Building Inspector  
(A30955)

Red Cedar Consulting

***Attachment 1***  
***APEX Research Laboratory Analytical Results***





# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 862 Stevens St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69839  
Date Collected: 04/26/17  
Date Received: 04/27/17  
Date Analyzed: 05/03/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69839 - 01 Cust. #: SS-HM-01A Material: Vapor Barrier Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 70% Other - 30%
Lab ID #: 69839 - 02 Cust. #: SS-HM-01B Material: Vapor Barrier Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 70% Other - 30%
Lab ID #: 69839 - 03 Cust. #: SS-HM-02A Material: Roofing Materials Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> 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



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Date Analyzed: 05/03/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69839 - 04 Cust. #: SS-HM-02B Material: Roofing Materials Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69839 - 05 Cust. #: SS-HM-03A Material: Diamond Cream, Grey Vinyl Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Fiberglass - 5% Other - 80%
Lab ID #: 69839 - 06 Cust. #: SS-HM-03B Material: Diamond Cream, Grey Vinyl Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Fiberglass - 5% Other - 80%

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Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69839 - 07 Cust. #: SS-HM-04A Material: Foam Location: Appearance: yellow,nonfibrous,homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69839 - 07a Cust. #: SS-HM-04A Material: Glue Location: Appearance: brown,fibrous,homogenous Layer: 2 of 3	Asbestos Present: <b>YES</b> Chrysotile - 5%	Other - 95%
Lab ID #: 69839 - 07b Cust. #: SS-HM-04A Material: Red/Brown Layered Linoleum Location: Appearance: grey,fibrous,nonhomogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Other - 70%

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Date Analyzed: 05/03/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69839 - 08 Cust. #: SS-HM-04B Material: Foam Location: Appearance: yellow, nonfibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69839 - 08a Cust. #: SS-HM-04B Material: Glue Location: Appearance: Layer: 2 of 3	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69839 - 08b Cust. #: SS-HM-04B Material: Red/Brown Layered Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Other - 70%

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Date Collected: 04/26/17  
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Date Analyzed: 05/03/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69839 - 09 Cust. #: SS-HM-05A Material: 4" Square Cream/Grey Vinyl Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Fiberglass - 5% Other - 80%
Lab ID #: 69839 - 10 Cust. #: SS-HM-05B Material: 4" Square Cream/Grey Vinyl Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Fiberglass - 5% Other - 80%
Lab ID #: 69839 - 11 Cust. #: SS-HM-06A Material: 12x12 Woodgrain VFT Location: Appearance: brown, nonfibrous, homogenous Layer: 1 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Robert T. Letarte Jr., Laboratory Director

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Date Analyzed: 05/03/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69839 - 11a Cust. #: SS-HM-06A Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69839 - 11b Cust. #: SS-HM-06A Material: Floor Tile Location: Appearance: white,nonfibrous,homogenous Layer: 3 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69839 - 11c Cust. #: SS-HM-06A Material: Mastic Location: Appearance: brown,fibrous,nonhomogenous Layer: 4 of 4	Asbestos Present: <b>YES</b> Chrysotile - 5%	Other - 95%

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Date Analyzed: 05/03/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69839 - 12 Cust. #: SS-HM-06B Material: 12x12 Woodgrain VFT Location: Appearance: brown,nonfibrous,homogenous Layer: 1 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69839 - 12a Cust. #: SS-HM-06B Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69839 - 12b Cust. #: SS-HM-06B Material: Floor Tile Location: Appearance: white,nonfibrous,homogenous Layer: 3 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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Date Analyzed: 05/03/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69839 - 12c Cust. #: SS-HM-06B Material: Mastic Location: Appearance: Layer: 4 of 4	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69839 - 13 Cust. #: SS-HM-07A Material: White/Gold Linoleum Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69839 - 14 Cust. #: SS-HM-07B Material: White/Gold Linoleum Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%

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

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ARI Report # 17-69839  
Date Collected: 04/26/17  
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Date Analyzed: 05/03/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69839 - 15 Cust. #: SS-HM-08A Material: 1x1 White Smooth Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 70% Other - 30%
Lab ID #: 69839 - 16 Cust. #: SS-HM-08B Material: 1x1 White Smooth Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 70% Other - 30%
Lab ID #: 69839 - 17 Cust. #: SS-HM-09A Material: Drywall Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%

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

Robert T. Letarte Jr., Laboratory Director

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Date Analyzed: 05/03/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69839 - 17a Cust. #: SS-HM-09A Material: Joint Compound Location: Appearance: white,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69839 - 18 Cust. #: SS-HM-09B Material: Drywall Location: Appearance: beige,fibrous,nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69839 - 18a Cust. #: SS-HM-09B Material: Joint Compound Location: Appearance: white,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69839 - 19 Cust. #: SS-HM-10A Material: Window Glazing Location: Appearance: beige,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69839 - 20 Cust. #: SS-HM-10B Material: Window Glazing Location: Appearance: beige,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69839 - 21 Cust. #: SS-HM-11A Material: 12x12 Black Marble VFT Location: Appearance: black,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Date Analyzed: 05/03/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69839 - 22 Cust. #: SS-HM-11B Material: 12x12 Black Marble VFT Location: Appearance: black,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69839 - 23 Cust. #: SS-HM-12A Material: 9x9 Red VFT Location: Appearance: red,fibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 69839 - 23a Cust. #: SS-HM-12A Material: Glue Location: Appearance: beige,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69839  
Date Collected: 04/26/17  
Date Received: 04/27/17  
Date Analyzed: 05/03/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69839 - 24 Cust. #: SS-HM-12B Material: 9x9 Red VFT Location: Appearance: red, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 69839 - 24a Cust. #: SS-HM-12B Material: Glue Location: Appearance: beige, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69839 - 25 Cust. #: SS-HM-13A Material: 9x9 Black VFT Location: Appearance: red, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 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: 862 Stevens St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69839  
Date Collected: 04/26/17  
Date Received: 04/27/17  
Date Analyzed: 05/03/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69839 - 25a Cust. #: SS-HM-13A Material: Glue Location: Appearance: beige, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69839 - 26 Cust. #: SS-HM-13B Material: 9x9 Black VFT Location: Appearance: red, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 69839 - 26a Cust. #: SS-HM-13B Material: Glue Location: Appearance: beige, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> 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: 862 Stevens St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69839  
Date Collected: 04/26/17  
Date Received: 04/27/17  
Date Analyzed: 05/03/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69839 - 27 Cust. #: SS-HM-14A Material: Basement Window Glazing Location: Appearance: beige,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69839 - 28 Cust. #: SS-HM-14B Material: Basement Window Glazing Location: Appearance: beige,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69839 - 29 Cust. #: SS-HS-01A Material: Plaster Finish Coat Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> 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: 862 Stevens St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69839  
Date Collected: 04/26/17  
Date Received: 04/27/17  
Date Analyzed: 05/03/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69839 - 29a Cust. #: SS-HS-01A Material: Plaster Base Coat Location: Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Hair - 2% Other - 96%
Lab ID #: 69839 - 30 Cust. #: SS-HS-01B Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69839 - 30a Cust. #: SS-HS-01B Material: Plaster Base Coat Location: Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Hair - 2% Other - 96%

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: 862 Stevens St

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69839  
Date Collected: 04/26/17  
Date Received: 04/27/17  
Date Analyzed: 05/03/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69839 - 31 Cust. #: SS-HS-01C Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69839 - 31a Cust. #: SS-HS-01C Material: Plaster Base Coat Location: Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Hair - 2% Other - 96%
Lab ID #: 69839 - 32 Cust. #: SS-HS-01D Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> 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: 862 Stevens St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69839  
Date Collected: 04/26/17  
Date Received: 04/27/17  
Date Analyzed: 05/03/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69839 - 32a Cust. #: SS-HS-01D Material: Plaster Base Coat Location: Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Hair - 2% Other - 96%
Lab ID #: 69839 - 33 Cust. #: SS-HS-01E Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69839 - 33a Cust. #: SS-HS-01E Material: Plaster Base Coat Location: Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 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

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189  
 Phone: 734-449-9990  
 Fax: 734-449-9991  
 E-mail: apexresearch@chartermi.net



Apex # **69839**

143

Client Name: Red Cedar Consulting

Address: PO Box 13216  
 Lansing, MI 48901

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-26-17

Project: 842 Stevens St

Project #: \_\_\_\_\_

Contact Person: Aaron Paquet

Lab Use Only  
 Log-In: \_\_\_\_\_  
 Report: \_\_\_\_\_

**Turn Around Times:** (Circle One) PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour  
 48 hour 72 hour  
 Other: Sdey **(TTP)** All Samples  
 Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
 Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
 Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BioSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
 TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	SS-HM-01A	Topsoil			
2	SS-HM-01B	" "			
3	SS-HM-02A	Roofing Materials			
4	SS-HM-02B	" "			
5	SS-HM-03A	Hammered Screws & Heavy Nails			
6	SS-HM-03B	" "			
7	SS-HM-04A	Reddy Brown Sealed Enclosure			
8	SS-HM-04B	" "			
9	SS-HM-05A	4" square clean & heavy Nails			
10	SS-HM-05B	" "			
11	SS-HM-06A	12x16 plywood in VT Sealed			

**RECEIVED**

Relinquished by: [Signature] Received by: [Signature]  
 Date: 4-26-17 Date: 4-26-17

Relinquished by: [Signature] Received by: [Signature]  
 Date: 4-26-17 Date: 4-26-17

69839

1 of 3

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

E-mail: apexresearch@chartermi.net Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-26-17

Project: 862 Stevens St

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

P1M EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: 5 days  TTP All samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_

Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_

Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BiosIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_

TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	55-HM-06B	12x12 Chalkboard VT / Sealed			
13	55-HM-07A	White & Gold Bookcase			
14	55-HM-07B	" " "			
15	55-HM-08A	1x1 White Bench CT			
16	55-HM-08B	" " "			
17	55-HM-09A	Aggravant + Spout Compound			
18	55-HM-09B	" " "			
19	55-HM-10A	Window - Blazing			
20	55-HM-10B	" " "			
21	55-HM-11A	12x12 Black Marble VT			
22	55-HM-11B	" " "			

Relinquished by: [Signature] Received by: UPS  
Date: 4-26-17 Date: 4-26-17

Relinquished by: [Signature] Received by: \_\_\_\_\_  
Date: APR 27 2017 Date: \_\_\_\_\_

69839

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189  
Phone: 734-449-9990  
E-mail: apexresearch@chartermi.net Fax: 734-449-9991



3673

Client Name: Red Cedar Consulting

Address: PO Box 13216  
Lansing, MI 48901

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-26-17

Project: 862 Stevens St

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log-in \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: Slag **(TTP)** All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BioSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
23	SS-HM-12A	9x9 Red VST			
24	SS-HM-12B	" " "			
25	SS-HM-13A	9x9 Black VST			
26	SS-HM-13B	" " "			
27	SS-HM14A	Basement Window Slaying			
28	SS-HM-14B	" " "			
29	SS-HS-01A	Plaster			
30	SS-HS-01B	" " "			
31	SS-HS-01C	" " "			
32	SS-HS-01D	" " "			
33	SS-HS-01E	" " "			

RECEIVED

Relinquished by: [Signature] Received by: US

Date: 4-26-17 Date: 4-26-17

Relinquished by: [Signature] Received by: \_\_\_\_\_

Date: \_\_\_\_\_ Date: \_\_\_\_\_

***Tables***

**Table 1 - Summary of Hazardous Materials, 862 Stevens St., Muskegon, Michigan**

<b>Hazardous Materials Description and Location</b>		
<b>Location</b>	<b>Material Description</b>	<b>Quantity</b>
Living Room	Thermostat	1
Living Room	Smoke Detector	1
Dining Room	Smoke Detector	1

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 862 Stevens St., Muskegon, Michigan**

<b>Sample Number</b>	<b>Sample Description</b>	<b>Friable</b>	<b>Material Type</b>	<b>Material Classification</b>	<b>% Asbestos Laboratory Result</b>	<b>Sample Location</b>	<b>Approx. Material Quantity</b>
SS-HM-01A	Vapor Barrier	Yes	M	Category II	ND	Exterior	NA
SS-HM-01B	Vapor Barrier	Yes	M	Category II	ND	Exterior	NA
SS-HM-02A	Roofing Material	No	M	Category I	ND	Exterior	NA
SS-HM-02B	Roofing Material	No	M	Category I	ND	Exterior	NA
SS-HM-03A	Diamond Cream & Gray Vinyl	No	M	Category I	ND	Front Entry	NA
SS-HM-03B	Diamond Cream & Gray Vinyl	No	M	Category I	ND	Front Entry	NA
SS-HM-04A	Red & Brown Layered Linoleum	No	M	Category I	ND/5%CH/ND	Dining Room	182 sq. ft.
SS-HM-04B	Red & Brown Layered Linoleum	No	M	Category I	ND/NA/ND	Dining Room	NA
SS-HM-05A	4" Square Cream & Gray Vinyl	No	M	Category I	ND	Kitchen	NA
SS-HM-05B	4" Square Cream & Gray Vinyl	No	M	Category I	ND	Kitchen	NA
SS-HM-06A	12x12 Woodgrain Vinyl Floor Tile/Layered	No	M	Category I	ND/ND/ND/ 5%CH	Bathroom	50 sq. ft.
SS-HM-06B	12x12 Woodgrain Vinyl Floor Tile/Layered	No	M	Category I	ND/ND/ND/ NA	Bathroom	NA
SS-HM-07A	White & Gold Linoleum	No	M	Category I	ND	NE Bedroom	NA
SS-HM-07B	White & Gold Linoleum	No	M	Category I	ND	NE Bedroom	NA
SS-HM-08A	White Smooth 1'x1' Ceiling Tile	Yes	M	Category II	ND	Bathroom	NA
SS-HM-08B	White Smooth 1'x1' Ceiling Tile	Yes	M	Category II	ND	Bathroom	NA
SS-HM-09A	Drywall & Joint Compound	No	M	Category II	ND/ND	Kitchen Wall	NA
SS-HM-09B	Drywall & Joint Compound	No	M	Category II	ND/ND	Kitchen Wall	NA
SS-HM-10A	Window Glazing	Yes	M	Category II	ND	Living Room	NA
SS-HM-10B	Window Glazing	Yes	M	Category II	ND	NE Bedroom	NA
SS-HM-11A	12x12 Black Marble Vinyl Floor Tile	No	M	Category I	ND	Stairway	NA
SS-HM-11B	12x12 Black Marble Vinyl Floor Tile	No	M	Category I	ND	Stairway	NA
SS-HM-12A	9"x9" Red Vinyl Floor Tile	No	M	Category I	ND/ND	Basement Living Room	NA
SS-HM-12B	9"x9" Red Vinyl Floor Tile	No	M	Category I	ND/ND	Basement Living Room	NA
SS-HM-13A	9"x9" Black Vinyl Floor Tile	Yes	M	Category II	ND/ND	Basement Living Room	NA
SS-HM-13B	9"x9" Black Vinyl Floor Tile	Yes	M	Category II	ND/ND	Basement Living Room	NA



**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 862 Stevens St., Muskegon, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
SS-HM-14A	Basement Window Glazing	Yes	M	Category II	ND	Basement	NA
SS-HM-14B	Basement Window Glazing	Yes	M	Category II	ND	Basement	NA
SS-HS-01A	Plaster	No	S	Category II	ND/ND	Dining Room Ceiling	NA
SS-HS-01B	Plaster	No	S	Category II	ND/ND	NE Bedroom Ceiling	NA
SS-HS-01C	Plaster	No	S	Category II	ND/ND	Dining Room Wall	NA
SS-HS-01D	Plaster	No	S	Category II	ND/ND	NE Bedroom Wall	NA
SS-HS-01E	Plaster	No	S	Category II	ND/ND	NW Bedroom Wall	NA

**Notes:**

Material Types

- M = Miscellaneous building material
- TSI = Thermal System Insulation
- S = Surfacing Material
- PC = Point Count Analysis
- CH = Chrysotile Asbestos

Abbreviations

- NQ = Not quantified
- NA = Not applicable
- ND = Not detected. Laboratory result is less than 1 % asbestos
- lin. ft. = linear feet
- sq. ft. = square feet

Asbestos Containing Material (ACM) is defined as any material containing more than 1 percent asbestos as determined utilizing Polarized Light Microscopy.

**Table 3 - Summary of Presumed Asbestos Containing Materials, 862 Stevens St., Muskegon, Michigan**

<b>Asbestos Containing Material Description and Location</b>					
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Condition</b>	<b>Material Type</b>	<b>Approx. Quantity</b>
No Presumed Asbestos Containing Materials Identified					

**Notes:**

Material Types

- M = Miscellaneous building material
- TSI = Thermal System Insulation
- S = Surfacing Material

Abbreviations

- lin. ft. = linear feet
- sq. ft. = square feet

**Table 4 - Summary of All Asbestos Containing Materials, 862 Stevens St., Muskegon, Michigan**

<b>Interior - Asbestos Containing Materials</b>				
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>	
Dining Room	Red & Brown Layered Linoleum	No	182 sq. ft.	
Bathroom	12x12 Woodgrain Vinyl Floor Tile/Layered	No	50 sq. ft.	
<b>Total</b>			<b>232 sq. ft.</b>	

**Notes:**

Abbreviations

lin. ft. = linear feet

sq. ft. = square feet

**Shaded/Bolded** = Friable ACM and any Category I and Category II non-friable ACM that has a high probability of becoming crumbled, pulverized, or reduced to powder by the demolition or renovation activities that must be properly abated prior to commencement of any demolition/renovation activities.

Demolition/renovation activities completed with intact Category I non-friable ACM are regulated by OSHA and must be completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note that a Negative Pressure Enclosure must be utilized during abatement when Site Conditions Warrant. Examples of these conditions include the abatement of Plaster and Vermiculite insulation, HVAC Duct Wrap in Poor Condition, and Air-O-Cell/Mag Pipe Wrap. Conditions outside of these should be assessed on a case by case basis during the Asbestos Abatement Contractors site walk and Work Plan Preparation.



P.O. Box 13216  
Lansing, MI 48901  
Phone: 888.449.4566  
Fax: 888.448.8739  
www.redcedarconsulting.net

May 8, 2017

Mr. Tim Burgess  
Muskegon County Land Bank  
Land Bank Coordinator  
173 E. Apple Avenue, Suite 104  
Muskegon, MI 49442

**RE: *Asbestos Containing Material and Hazardous Materials Inspection***  
***2010 7th St., Muskegon Heights, MI 49444***  
***Parcel ID: 61-26-230-016-0018-00***

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 2010 7th St., Muskegon Heights, Michigan (Subject Property). This inspection was completed at the request of the Muskegon County Land Bank to comply with the United States Environmental Protection Agency (USEPA) requirements for demolition and renovation set forth under the National Emissions Standards for Hazardous Air Pollutants (NESHAP, 40 CFR Part 61). This inspection was also completed to comply with the Occupational Safety and Health Administration (OSHA) Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

### **SUBJECT PROPERTY**

The Subject Property is comprised of a .11 acre residential parcel which contains an approximate 816 square foot residential building (the Building) constructed in 1935. The Building was constructed on a concrete block basement with one aboveground floor. The exterior walls of the Building were finished with wood lap while the roof was sealed with asphalt shingles. The Building can be further divided into a living room, dining room, kitchen, bathroom and two bedrooms.

### **VISUAL INSPECTION AND SAMPLING**

#### **Asbestos Containing Materials Inspection**

Aaron Paquet and Darrell DeMasters of Red Cedar Consulting (Red Cedar), accredited State Of Michigan/EPA Asbestos Building Inspectors (Accreditation Numbers A30955 and A31159, respectively) who completed training per the Michigan Asbestos Workers Accreditation Act 440, completed an inspection of the Subject Property on April 11, 2017 for suspected asbestos containing building materials.

This inspection, and subsequent sample collection was completed in accordance with the USEPA Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763) assessment and sampling protocol.

During the completion of the inspection, each area of the Subject Property was visually inspected for asbestos containing building materials (ACBM). Following the completion of the visual inspection, Red Cedar staff identified each suspect area of friable and non-friable ACBM and sorted them into one of three homogenous categories for sampling purposes. AHERA defines friable as a material that when dry, may be crumbled, pulverized, or reduced to powder by hand pressure. A homogenous area is defined by OSHA as an area of surfacing, thermal system insulation (TSI) or miscellaneous material that is uniform in color and texture. Surfacing materials are most commonly found in sprayed-on, troweled-on or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members. TSI refers to materials applied to pipes, fittings, boilers, ductwork, or other components to prevent heat loss or gain, or condensation. Any material that does not fall under the surfacing or TSI category, such as floor tile, drywall, and acoustical ceiling tile are placed into the miscellaneous materials category.

Following the completion of the visual inspection, Red Cedar staff identified the following materials as suspect ACBM:

- Asphalt Shingle
- Vapor Barrier
- Multi-Layer Flooring
- Linoleum
- 1'x1' Ceiling Tile
- Drywall & Joint Compound
- Glazing
- Plaster

Red Cedar staff collected twenty seven samples of suspect ACBM separated into twelve distinct homogenous groups for laboratory analysis. Samples were collected and submitted to APEX Research Inc. Laboratories (APEX) (Accreditation Number 102118-0) for laboratory analysis. Analysis was completed utilizing polarized light microscopy (PLM) which is the Environmental Protection Agency (EPA) approved method for analysis of bulk materials for asbestos. PLM analysis completed pursuant to method (EPA 600/M4-82-020) identifies asbestos fiber bundles by the visual properties displayed when the sample is treated with various dispersion staining liquids. The laboratory report completed following the sample analysis indicates if asbestos is present, and at what percentage along with a description and percentage of other fibrous and non-fibrous materials and sample color. Chain-of-custody documentation was followed from sample collection through shipping and receiving of the samples at the designated laboratory. The documentation assures that samples will meet the quality assurance/quality control measures defined by AHERA. The laboratory analytical report prepared by APEX for the twenty seven samples is included as Attachment A.

## **Hazardous Materials Inspection**

On April 11, 2017 the Subject Property was also inspected for the presence of hazardous materials which include but are not limited to polychlorinated biphenyls (PCBs) and potential mercury containing equipment and any items or containers that may contain or be classified as a hazardous or regulated material. Each material, if identified, was documented along with the approximate location. Any materials identified as hazardous are included in Table 1.

## **INSPECTION RESULTS AND RECOMMENDATIONS**

During the completion of the asbestos inspection, twenty seven samples of suspect ACM were collected and are documented in Table 2 along with the Red Cedar sample number, description, friability, material type, ACM classification, sample location, material quantity and laboratory analytical results.

ACM, as defined by the USEPA NESHAP is “any material containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763 Section 1, Polarized Light Microscopy”.

Friable ACM is defined by NESHAP as any material containing more than 1 percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Friable ACM is a concern due the ease of unintentionally disturbing the ACM which may result in “visible emissions” which is known as a Fiber Release Episode.

Non-friable asbestos-containing material is defined as “material containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACM’s are separated into Category I and Category II ACM. Category I ACM is any asbestos containing packing’s, gaskets, resilient floor coverings (vinyl floor tile and linoleum are examples of these) and asphalt roofing products. Category II ACM is stated by NESHAP as any material excluding Category I non-friable ACM such as drywall, plaster or fiberboard insulation.

## **Presumed Asbestos Containing Material**

Presumed Asbestos Containing Materials (PACM) are suspect surfacing, TSI and miscellaneous materials found in buildings constructed prior to 1980 which are classified as and due to the age of the structure, are assumed to be ACM and do not require sample collection and analysis. OSHA dictates that PACM may be “rebutted” following a complete inspection pursuant to AHERA protocol.

No PACM was identified during the completion of this inspection. All suspect materials identified were sampled and analyzed for ACM.

Table 3 lists the location, material description, friability, condition, material type (surfacing, thermal or miscellaneous) and approximate quantity of all PACM documented at the Subject Property.

Table 4 provides a summary all ACM documented at the Subject Property which includes the material location, description, and approximate quantity.

### **Friable ACM's**

A window glazing sample collected from a window in the Living Room was found to contain up to 10% asbestos following analysis. The assessment to quantify the extent of this material identified three windows at the following locations that would fall into the same homogenous group. The locations of the windows are listed below:

- Dining Room (2 windows 24" wide x 58" tall)
- Living Room (1 window 40" wide x 58" tall)

### **Category I ACM**

Four types of resilient floor covering (Gray Multi-Layer Flooring, Dark Gray Layer Flooring, Gold Pebble Linoleum and Red Linoleum) located within the Kitchen, Hallway, E Bedroom and NE Bedroom, respectively, were found to contain up to 30% Chrysotile asbestos. The assessment to quantify the extent of this material identified approximately 412 sq. ft. of this material within the Building.

### **Category II ACM**

No Category II non-friable ACM was identified during the completion of this inspection.

## **RECOMMENDATIONS**

### **Asbestos Containing Materials**

Friable asbestos containing window glazing was identified on three windows throughout the Building. The locations of these windows that should be abated prior to demolition/renovation activities are listed below:

- Dining Room (2 windows 24" wide x 58" tall)
- Living Room (1 window 40" wide x 58" tall)

Please note: Other different sized windows are located throughout the Building but these windows were assessed and found to be constructed either without window glazing or were sampled and found to not contain asbestos and therefore are not required to be removed.

The Category I resilient floor coverings (Gray Multi-Layer Flooring, Dark Gray Layer Flooring, Gold Pebble Linoleum and Red Linoleum) are non-friable ACM's that may be left in place as long as the demolition/renovation activities are completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note: The location of samples obtained during this inspection were in a random fashion and areas that were not identified during this inspection may be damaged or have become damaged since the inspection was completed. If Category I or Category II friable materials are discovered prior to or during the demolition/renovation process, these materials must be abated prior to commencement of any demolition/renovation activities at the Subject Property.

Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-26-230-016-0018-00

## **Hazardous Materials**

Hazardous Materials identified at the Subject Property and documented in Table 1 which require proper removal and disposal consist of the following items:

- Smoke Detector (2)
- Thermostat (1)
- Television (1)

## **REGULATORY REQUIREMENTS**

A Notification of Intent to Renovate/Demolish form must be filed with the Michigan Department of Environmental Quality- Air Quality Division at least 10 working days prior to any renovation or demolition activities at a site.

The Notification of Intent to Renovate/Demolish form must also be completed and submitted to the MIOSHA-Asbestos Program whenever demolition, encapsulation and/or renovation activities at a site involving greater than ten lineal feet and/or fifteen square feet of ACM will be completed.

Regulated asbestos containing materials per NESHAP (40 CFR Part 61) which falls into any of the following categories are ACM's that must be removed prior to any renovation/demolition activities at the Subject Property.

- Friable asbestos material.
- Category I non-friable ACM that has become friable.
- Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading.
- Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations.

Asbestos abatement should only be performed by a certified asbestos abatement contractor licensed to complete abatement work. The contractor must also follow the standards and requirements set forth per the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61).

Additional information regarding the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61) can be obtained by contacting the associated agency below.

NESHAP Asbestos Program  
Department of Environmental Quality  
Phone: 517-284-6777

MIOSHA-CSHD-Asbestos Program  
State of Michigan  
Phone: 517-284-7680  
Email: asbestos@michigan.gov



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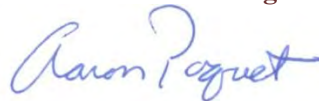
**DISCLAIMER**

Red Cedar Consulting performed destructive testing methods in an attempt to access and inspect all areas of the Building. Unfortunately, due to the age of construction along with multiple additions/renovations that may have been completed on the Building, additional inspections may be required if suspect ACM material not documented within this report is encountered during renovation/demolition activities.

This report was prepared at the request and for exclusive use by the Muskegon County Land Bank and may not be reproduced or sold without written permission from Red Cedar Consulting.

We appreciate the opportunity to provide the requested services. Please contact us at (888) 449-4566 with any questions or concerns.

Sincerely,  
**Red Cedar Consulting**



Aaron Paquet  
Michigan/EPA Certified Asbestos Building Inspector  
(A30955)

Red Cedar Consulting

***Attachment 1***  
***APEX Research Laboratory Analytical Results***



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 2010 7th St

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69584  
Date Collected: 04/11/17  
Date Received: 04/12/17  
Date Analyzed: 04/14/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69584 - 01 Cust. #: VS-HM-01A Material: Roofing Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 30% Other - 70%
Lab ID #: 69584 - 01a Cust. #: VS-HM-01A Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 69584 - 02 Cust. #: VS-HM-01B Material: Roofing Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 30% Other - 70%

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



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Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69584 - 02a Cust. #: VS-HM-01B Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 69584 - 03 Cust. #: VS-HM-02A Material: Grey Multilayer Floor Tile Location: Appearance: grey, nonfibrous, homogenous Layer: 1 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69584 - 03a Cust. #: VS-HM-02A Material: Glue Location: Appearance: clear, nonfibrous, homogenous Layer: 2 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Date Collected: 04/11/17  
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Date Analyzed: 04/14/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69584 - 03b Cust. #: VS-HM-02A Material: Brown Floor Tile Location: Appearance: brown, fibrous, homogenous Layer: 3 of 5	Asbestos Present: <b>YES</b> Chrysotile - 5%	Other - 95%
Lab ID #: 69584 - 03c Cust. #: VS-HM-02A Material: Mastic Location: Appearance: black, nonfibrous, homogenous Layer: 4 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69584 - 03d Cust. #: VS-HM-02A Material: Linoleum Location: Appearance: red, fibrous, nonhomogenous Layer: 5 of 5	Asbestos Present: <b>YES</b> Chrysotile - 30%	Other - 70%

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Date Collected: 04/11/17  
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Date Analyzed: 04/14/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69584 - 04 Cust. #: VS-HM-02B Material: Grey Multilayer Floor Tile Location: Appearance: grey,nonfibrous,homogenous Layer: 1 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69584 - 04a Cust. #: VS-HM-02B Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69584 - 04b Cust. #: VS-HM-02B Material: Brown Floor Tile Location: Appearance: Layer: 3 of 5	Asbestos Present:  NOT ANALYZED	

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Date Analyzed: 04/14/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69584 - 04c Cust. #: VS-HM-02B Material: Mastic Location: Appearance: black,nonfibrous,homogenous Layer: 4 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 69584 - 04d Cust. #: VS-HM-02B Material: Linoleum Location: Appearance: Layer: 5 of 5	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69584 - 05 Cust. #: VS-HM-03A Material: 1x1 White Smooth Ceiling Tile Location: Appearance: brown,fibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%

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Robert T. Letarte Jr., Laboratory Director

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ARI Report # 17-69584  
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Date Analyzed: 04/14/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69584 - 06 Cust. #: VS-HM-03B Material: 1x1 White Smooth Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 69584 - 07 Cust. #: VS-HM-04A Material: Multilayer Bathroom Flooring Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 10% Other - 90%
Lab ID #: 69584 - 08 Cust. #: VS-HM-04B Material: Multilayer Bathroom Flooring Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 10% Other - 90%

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Robert T. Letarte Jr., Laboratory Director

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Date Analyzed: 04/14/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69584 - 09 Cust. #: VS-HM-05A Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Fiberglass - 5% Other - 75%
Lab ID #: 69584 - 09a Cust. #: VS-HM-05A Material: Joint Compound Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69584 - 10 Cust. #: VS-HM-05B Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Fiberglass - 5% Other - 75%

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

Robert T. Letarte Jr., Laboratory Director

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ARI Report # 17-69584  
Date Collected: 04/11/17  
Date Received: 04/12/17  
Date Analyzed: 04/14/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69584 - 11 Cust. #: VS-HM-06A Material: Dark Grey Layer Flooring/Floor Tile Location: Hall Appearance: brown,nonfibrous,homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69584 - 11a Cust. #: VS-HM-06A Material: Glue Location: Hall Appearance: clear,nonfibrous,homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69584 - 11b Cust. #: VS-HM-06A Material: Linoleum Location: Hall Appearance: green,fibrous,nonhomogenous Layer: 3 of 3	Asbestos Present: <b>YES</b> Chrysotile - 25%	Other - 75%

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

Robert T. Letarte Jr., Laboratory Director

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ARI Report # 17-69584  
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Date Analyzed: 04/14/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69584 - 12 Cust. #: VS-HM-06B Material: Dark Grey Layer Flooring/Floor Tile Location: Hall Appearance: brown,nonfibrous,homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69584 - 12a Cust. #: VS-HM-06B Material: Glue Location: Hall Appearance: clear,nonfibrous,homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69584 - 12b Cust. #: VS-HM-06B Material: Linoleum Location: Hall Appearance: Layer: 3 of 3	Asbestos Present:  NOT ANALYZED	

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

Robert T. Letarte Jr., Laboratory Director

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Date Analyzed: 04/14/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69584 - 13 Cust. #: VS-HM-07A Material: Gold Pebble Linoleum Location: Appearance: green, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 25%	Other - 75%
Lab ID #: 69584 - 14 Cust. #: VS-HM-07B Material: Gold Pebble Linoleum Location: Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69584 - 15 Cust. #: VS-HM-08A Material: Vapor Barrier Location: House Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 70% Other - 30%

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

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Date Analyzed: 04/14/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69584 - 16 Cust. #: VS-HM-08B Material: Vapor Barrier Location: House Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 69584 - 17 Cust. #: VS-HM-09A Material: Window Glazing Location: House Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 10%	Other - 90%
Lab ID #: 69584 - 18 Cust. #: VS-HM-09B Material: Window Glazing Location: House Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	

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NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 2010 7th St

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69584  
Date Collected: 04/11/17  
Date Received: 04/12/17  
Date Analyzed: 04/14/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69584 - 19 Cust. #: VS-HM-10A Material: Window Glazing Location: Sun Porch Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69584 - 20 Cust. #: VS-HM-10B Material: Window Glazing Location: Sun Porch Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69584 - 21 Cust. #: VS-HM-11A Material: Red Linoleum Location: Appearance: red,fibrous,nonhomogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 30%	Other - 70%

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.



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Date Received: 04/12/17  
Date Analyzed: 04/14/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69584 - 22 Cust. #: VS-HM-11B Material: Red Linoleum Location: Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69584 - 23 Cust. #: VS-HS-01A Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Hair - 2% Other - 97%
Lab ID #: 69584 - 24 Cust. #: VS-HS-01B Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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Date Analyzed: 04/14/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69584 - 24a Cust. #: VS-HS-01B Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 1% Other - 99%
Lab ID #: 69584 - 25 Cust. #: VS-HS-01C Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69584 - 25a Cust. #: VS-HS-01C Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Hair - 2% Other - 96%

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

Robert T. Letarte Jr., Laboratory Director

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Project: 2010 7th St

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Lansing, MI 48901

ARI Report # 17-69584  
Date Collected: 04/11/17  
Date Received: 04/12/17  
Date Analyzed: 04/14/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69584 - 26 Cust. #: VS-HS-01D Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69584 - 26a Cust. #: VS-HS-01D Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Hair - 1% Other - 98%
Lab ID #: 69584 - 27 Cust. #: VS-HS-01E Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> 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.



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ARI Report # 17-69584  
Date Collected: 04/11/17  
Date Received: 04/12/17  
Date Analyzed: 04/14/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69584 - 27a Cust. #: VS-HS-01E Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Hair - 2% Other - 97%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	
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

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NVLAP Lab Code 102118-0

**APEX Research, Inc.**

11054 HI Tech Drive, Whitmore Lake, MI 48189  
 Phone: 734-449-9990  
 E-mail: apexresearch@chartermi.net  
 Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216  
 Lansing, MI 48901

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM.  
 apaquet@redcedarconsulting.net

Date of Survey: 4-11-17

Project: 2010 7th St

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
 Log-In \_\_\_\_\_  
 Report \_\_\_\_\_

Rush 24 hour  
 48 hour 72 hour  
 Other: 5 days

TTP All Samples  
 Molds  
 TEM:

Asbestos: Bulk  Wipe  Point Count  PCM   
 Lead: Bulk  Wipe  Air  Paint  Soil   
 Bulk/NOB  Tape  BioSIS  Other  Viable   
 AHERA 7400  EPA Level II

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	V5-HH-01A	Roofing Shingle + Vapor Barrier			
2	V5-HH-01B	" " " " " "			
3	V5-HH-02A	Heavy Multi Layer Flooring			
4	V5-HH-02B	" " " " " "			
5	V5-HH-03A	1 x 1 White Suede CT			
6	V5-HH-03B	" " " " " "			
7	V5-HH-04A	Multi Layer Bathroom Flooring			
8	V5-HH-04B	" " " " " "			
9	V5-HH-05A	Drywall + Joint Compound			
10	V5-HH-05B	" " " " " "			
11	V5-HH-06A	Dark Gray Layer Flooring (Hall)			

Relinquished by: [Signature] Received by: UPS  
 Date: 4-11-17 Date: 4-11-17

Relinquished by: \_\_\_\_\_ Received by: \_\_\_\_\_  
 Date: \_\_\_\_\_ Date: \_\_\_\_\_

**RECEIVED**

APR 12 2017

69584

2 of 3

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189  
E-mail: [apexresearch@charterni.net](mailto:apexresearch@charterni.net)  
Phone: 734-449-9990  
Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216  
Lansing, MI 48901

City, St., Zip: Phone: (888) 449-4566 Fax: (888) 448-8739

Turn Around Times: (Circle One) PLM EPA 600, PC all samples with a detection of <5% ACM.

Rush 24 hour  
48 hour 72 hour  
Other: 5 day

Asbestos: Bulk  Wipe  Point Count  PCM

Lead: Bulk  Wipe  Air  Paint  Soil

Mold: Bulk  Tape  Other  Viable

TEM: AHERA 7400 Bulk/NOB EPA Level II

Date of Survey: 4-11-17

Project: 2012 724 SF

Project #: Contact Person: Aaron Paquet

apaguete@redcedarconsulting.net

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	VS-HH-02B	Dark Gray Layer Flooring (H)			
13	VS-HH-07A	Cold Pebble Limestone			
14	VS-HH-07B	" "			
15	VS-HH-08A	Vapor Barrier (House)			
16	VS-HH-08B	" "			
17	VS-HH-09A	Window Glazing (House)			
18	VS-HH-09B	" "			
19	VS-HH-10A	Window Glazing (Sun Porch)			
20	VS-HH-10B	" "			
21	VS-HH-11A	Red Limestone			
22	VS-HH-11B	" "			

Relinquished by: [Signature] Received by: UPS

Date: 4-11-17 Date: 4-11-17

Relinquished by: \_\_\_\_\_

Date: \_\_\_\_\_

Received by: [Signature]

Date: APR 12 2017

69584

3 of 3

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

E-mail: [apexresearch@chartermi.net](mailto:apexresearch@chartermi.net)

Fax: 734-449-9991



Client Name: Red Cedar Consulting

Date of Survey: 4-11-17

Address: PO Box 13216

Project: 2012 7th Street

City, St., Zip: Lansing, MI 48901

Project #: \_\_\_\_\_

Phone: (888) 449-4566 Fax: (888) 448-8739

Contact Person: Aaron Paquet

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: 5 day

TTP All Samples

Mold: Bulk \_\_\_\_\_  
Asbestos: Bulk  \_\_\_\_\_  
Lead: Bulk \_\_\_\_\_  
Wipe: \_\_\_\_\_  
Air: \_\_\_\_\_  
Paint: \_\_\_\_\_  
Soil: \_\_\_\_\_

Tape \_\_\_\_\_  
Biosis \_\_\_\_\_  
Other \_\_\_\_\_  
Viable \_\_\_\_\_

TEM: AHERA 7400 \_\_\_\_\_  
Bulk/NOB \_\_\_\_\_  
EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
23	VS-HS-01A	Plaster			
24	VS-HS-01B	}			
25	VS-HS-01C				
26	VS-HS-01D				
27	VS-HS-01E				

Relinquished by: Alexander Received by: VPB  
Date: 4-11-17 Date: 4-11-17

Relinquished by: \_\_\_\_\_ Received by: \_\_\_\_\_  
Date: \_\_\_\_\_ Date: APR 12 2017

***Tables***

**Table 1 - Summary of Hazardous Materials, 2010 7th St., Muskegon Heights, Michigan**

<b>Hazardous Materials Description and Location</b>		
<b>Location</b>	<b>Material Description</b>	<b>Quantity</b>
Dining Room	Thermostat	1
E Bedroom	Smoke Detector	1
NE Bedroom	Smoke Detector	1
Basement	Television	1

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2010 7th St., Muskegon Heights, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
VS-HM-01A	Asphalt Shingle & Vapor Barrier	No	M	Category I	ND/ND	Exterior	NA
VS-HM-01B	Asphalt Shingle & Vapor Barrier	No	M	Category I	ND/ND	Exterior	NA
VS-HM-02A	Gray Multi-Layer Flooring	No	M	Category I	ND/ND/5% CH/ND/30% CH	Kitchen	120 sq. ft.
VS-HM-02B	Gray Multi-Layer Flooring	No	M	Category I	ND/ND/NA/ND/ NA	Kitchen	NA
VS-HM-03A	White 1'x1' Smooth Ceiling Tile	Yes	M	Category II	ND	Kitchen	NA
VS-HM-03B	White 1'x1' Smooth Ceiling Tile	Yes	M	Category II	ND	Kitchen	NA
VS-HM-04A	Multi-Layer Bathroom Flooring	No	M	Category I	ND	Bathroom	NA
VS-HM-04B	Multi-Layer Bathroom Flooring	No	M	Category I	ND	Bathroom	NA
VS-HM-05A	Drywall & Joint Compound	No	M	Category II	ND/ND	Bathroom Ceiling	NA
VS-HM-05B	Drywall & Joint Compound	No	M	Category II	ND	Bathroom Wall	NA
VS-HM-06A	Dark Gray Layer Flooring (Hall)	No	M	Category I	ND/ND/25% CH	Hallway	30 sq. ft.
VS-HM-06B	Dark Gray Layer Flooring (Hall)	No	M	Category I	ND/ND/NA	Hallway	NA
VS-HM-07A	Gold Pebble Linoleum	No	M	Category I	25% CH	E Bedroom	120 sq. ft.
VS-HM-07B	Gold Pebble Linoleum	No	M	Category I	NA	E Bedroom	NA
VS-HM-08A	Vapor Barrier	Yes	M	Category II	ND	Exterior	NA
VS-HM-08B	Vapor Barrier	Yes	M	Category II	ND	Exterior	NA
VS-HM-09A	Glazing – House	Yes	M	Category II	10% CH	Living Room	3 Windows
VS-HM-09B	Glazing – House	Yes	M	Category II	NA	Kitchen	NA
VS-HM-10A	Glazing – Sun Porch	Yes	M	Category II	ND	Sun Porch	NA
VS-HM-10B	Glazing – Sun Porch	Yes	M	Category II	ND	Sun Porch	NA
VS-HM-11A	Red Linoleum	No	M	Category I	30% CH	NE Bedroom	142 sq. ft.
VS-HM-11B	Red Linoleum	No	M	Category I	NA	NE Bedroom	NA
VS-HS-01A	Plaster	No	S	Category II	ND	Living Room Ceiling	NA
VS-HS-01B	Plaster	No	S	Category II	ND/ND	Kitchen Wall	NA
VS-HS-01C	Plaster	No	S	Category II	ND/ND	E Bedroom Ceiling	NA
VS-HS-01D	Plaster	No	S	Category II	ND/ND	E Bedroom Wall	NA
VS-HS-01E	Plaster	No	S	Category II	ND/ND	Living Room Wall	NA



**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2010 7th St., Muskegon Heights, Michigan**

**Notes:**

Material Types

M = Miscellaneous building material  
TSI = Thermal System Insulation  
S = Surfacing Material  
PC = Point Count Analysis  
CH = Chrysotile Asbestos

Abbreviations

NQ = Not quantified  
NA = Not applicable  
ND = Not detected. Laboratory result is less than 1 % asbestos  
lin. ft. = linear feet  
sq. ft. = square feet

Asbestos Containing Material (ACM) is defined as any material containing more than 1 percent asbestos as determined utilizing Polarized Light Microscopy.

**Table 3 - Summary of Presumed Asbestos Containing Materials, 2010 7th St., Muskegon Heights, Michigan**

<b>Asbestos Containing Material Description and Location</b>					
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Condition</b>	<b>Material Type</b>	<b>Approx. Quantity</b>
No Presumed Asbestos Containing Materials Identified					

**Notes:**

Material Types

- M = Miscellaneous building material
- TSI = Thermal System Insulation
- S = Surfacing Material

Abbreviations

- lin. ft. = linear feet
- sq. ft. = square feet

**Table 4 - Summary of All Asbestos Containing Materials, 2010 7th St., Muskegon Heights, Michigan**

<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Kitchen	Gray Multi-Layer Flooring	No	120 sq. ft.
Hallway	Dark Gray Layer Flooring	No	30 sq. ft.
E Bedroom	Gold Pebble Linoleum	No	120 sq. ft.
NE Bedroom	Red Linoleum	No	142 sq. ft.
<b>Total</b>			<b>412 sq. ft.</b>
<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Living (1 window 40" wide x 58" tall)	Glazing	Yes	1 Window
Dining Room (2 windows 24" wide x 58" tall)	Glazing	Yes	2 Windows
<b>Total</b>			<b>3 Windows</b>

**Notes:**

Abbreviations

lin. ft. = linear feet  
 sq. ft. = square feet

**Shaded/Bolded** = Friable ACM and any Category I and Category II non-friable ACM that has a high probability of becoming crumbled, pulverized, or reduced to powder by the demolition or renovation activities that must be properly abated prior to commencement of any demolition/renovation activities.

Demolition/renovation activities completed with intact Category I non-friable ACM are regulated by OSHA and must be completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note that a Negative Pressure Enclosure must be utilized during abatement when Site Conditions Warrant. Examples of these conditions include the abatement of Plaster and Vermiculite insulation, HVAC Duct Wrap in Poor Condition, and Air-O-Cell/Mag Pipe Wrap. Conditions outside of these should be assessed on a case by case basis during the Asbestos Abatement Contractors site walk and Work Plan Preparation.



P.O. Box 13216  
Lansing, MI 48901  
Phone: 888.449.4566  
Fax: 888.448.8739  
www.redcedarconsulting.net

May 8, 2017

Mr. Tim Burgess  
Muskegon County Land Bank  
Land Bank Coordinator  
173 E. Apple Avenue, Suite 104  
Muskegon, MI 49442

**RE: *Asbestos Containing Material and Hazardous Materials Inspection***  
***2037 Elwood St., Muskegon Heights, MI 49444***  
***Parcel ID: 61-26-650-012-0017-00***

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 2037 Elwood St., Muskegon Heights, Michigan (Subject Property). This inspection was completed at the request of the Muskegon County Land Bank to comply with the United States Environmental Protection Agency (USEPA) requirements for demolition and renovation set forth under the National Emissions Standards for Hazardous Air Pollutants (NESHAP, 40 CFR Part 61). This inspection was also completed to comply with the Occupational Safety and Health Administration (OSHA) Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

### **SUBJECT PROPERTY**

The Subject Property is comprised of a .22 acre residential parcel which contains a 621 sq. ft. attached garage and approximate 999 square foot residential building (the Building) constructed in 1953. The Building was constructed on a concrete block basement with one aboveground floor. The exterior walls of the Building were finished with aluminum and concrete block while the roof was sealed with asphalt shingles. The Building can be further divided into a living room, dining room, kitchen, bath, and a bedroom.

### **VISUAL INSPECTION AND SAMPLING**

#### **Asbestos Containing Materials Inspection**

Aaron Paquet and Darrell DeMasters of Red Cedar Consulting (Red Cedar), accredited State Of Michigan/EPA Asbestos Building Inspectors (Accreditation Numbers A30955 and A31159, respectively) who completed training per the Michigan Asbestos Workers Accreditation Act 440, completed an inspection of the Subject Property on April 20, 2017 for suspected asbestos containing building materials.

This inspection, and subsequent sample collection was completed in accordance with the USEPA Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763) assessment and sampling protocol.

During the completion of the inspection, each area of the Subject Property was visually inspected for asbestos containing building materials (ACBM). Following the completion of the visual inspection, Red Cedar staff identified each suspect area of friable and non-friable ACBM and sorted them into one of three homogenous categories for sampling purposes. AHERA defines friable as a material that when dry, may be crumbled, pulverized, or reduced to powder by hand pressure. A homogenous area is defined by OSHA as an area of surfacing, thermal system insulation (TSI) or miscellaneous material that is uniform in color and texture. Surfacing materials are most commonly found in sprayed-on, troweled-on or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members. TSI refers to materials applied to pipes, fittings, boilers, ductwork, or other components to prevent heat loss or gain, or condensation. Any material that does not fall under the surfacing or TSI category, such as floor tile, drywall, and acoustical ceiling tile are placed into the miscellaneous materials category.

Following the completion of the visual inspection, Red Cedar staff identified the following materials as suspect ACBM:

- Roofing Materials
- Linoleum
- Drywall and Joint Compound
- Glazing
- Surfacing Material

Red Cedar staff collected eleven samples of suspect ACBM separated into five distinct homogenous groups for laboratory analysis. Samples were collected and submitted to APEX Research Inc. Laboratories (APEX) (Accreditation Number 102118-0) for laboratory analysis. Analysis was completed utilizing polarized light microscopy (PLM) which is the Environmental Protection Agency (EPA) approved method for analysis of bulk materials for asbestos. PLM analysis completed pursuant to method (EPA 600/M4-82-020) identifies asbestos fiber bundles by the visual properties displayed when the sample is treated with various dispersion staining liquids. The laboratory report completed following the sample analysis indicates if asbestos is present, and at what percentage along with a description and percentage of other fibrous and non-fibrous materials and sample color. Chain-of-custody documentation was followed from sample collection through shipping and receiving of the samples at the designated laboratory. The documentation assures that samples will meet the quality assurance/quality control measures defined by AHERA. The laboratory analytical report prepared by APEX for the eleven samples is included as Attachment A.

### **Hazardous Materials Inspection**

On April 20, 2017 the Subject Property was also inspected for the presence of hazardous materials which include but are not limited to polychlorinated biphenyls (PCBs) and potential mercury containing equipment and any items or containers that may contain or be classified as a hazardous or regulated material. Each material, if identified, was documented along with the approximate location. Any materials identified as hazardous are included in Table 1.

## **INSPECTION RESULTS AND RECOMMENDATIONS**

During the completion of the asbestos inspection, eleven samples of suspect ACM were collected and are documented in Table 2 along with the Red Cedar sample number, description, friability, material type, ACM classification, sample location, material quantity and laboratory analytical results.

ACM, as defined by the USEPA NESHAP is “any material containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763 Section 1, Polarized Light Microscopy”.

Friable ACM is defined by NESHAP as any material containing more than 1 percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Friable ACM is a concern due the ease of unintentionally disturbing the ACM which may result in “visible emissions” which is known as a Fiber Release Episode.

Non-friable asbestos-containing material is defined as “material containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACM’s are separated into Category I and Category II ACM. Category I ACM is any asbestos containing packing’s, gaskets, resilient floor coverings (vinyl floor tile and linoleum are examples of these) and asphalt roofing products. Category II ACM is stated by NESHAP as any material excluding Category I non-friable ACM such as drywall, plaster or fiberboard insulation.

### **Presumed Asbestos Containing Material**

Presumed Asbestos Containing Materials (PACM) are suspect surfacing, TSI and miscellaneous materials found in buildings constructed prior to 1980 which are classified as and due to the age of the structure, are assumed to be ACM and do not require sample collection and analysis. OSHA dictates that PACM may be “rebutted” following a complete inspection pursuant to AHERA protocol.

No PACM was identified during the completion of this inspection. All suspect materials identified were sampled and analyzed for ACM.

Table 3 lists the location, material description, friability, condition, material type (surfacing, thermal or miscellaneous) and approximate quantity of all PACM documented at the Subject Property.

Table 4 provides a summary all ACM documented at the Subject Property which includes the material location, description, and approximate quantity.

### **Friable ACM’s**

No friable ACM’s were identified during the completion of this inspection.

### **Category I ACM**

No Category I ACM was identified during the completion of this inspection.

### **Category II ACM**

No Category II non-friable ACM was identified during the completion of this inspection.

## **RECOMMENDATIONS**

### **Asbestos Containing Materials**

No ACM was identified within the Building that would require abatement prior to demolition/renovation of the structure.

Please note: The location of samples obtained during this inspection were in a random fashion and areas that were not identified during this inspection may be damaged or have become damaged since the inspection was completed. If Category I or Category II friable materials are discovered prior to or during the demolition/renovation process, these materials must be abated prior to commencement of any demolition/renovation activities at the Subject Property.

### **Hazardous Materials**

Hazardous Materials identified at the Subject Property and documented in Table 1 which require proper removal and disposal consist of the following items:

- 2' Fluorescent Light (Fixture and Ballast Only) (1)
- 2' Fluorescent Bulb (1)
- Automobile Tire (32)
- Quart Container Misc. Paint (6)
- Pint Container Misc. Paint (12)
- Spray Can Misc. Paint (30)

## **REGULATORY REQUIREMENTS**

A Notification of Intent to Renovate/Demolish form must be filed with the Michigan Department of Environmental Quality- Air Quality Division at least 10 working days prior to any renovation or demolition activities at a site.

The Notification of Intent to Renovate/Demolish form must also be completed and submitted to the MIOSHA-Asbestos Program whenever demolition, encapsulation and/or renovation activities at a site involving greater than ten lineal feet and/or fifteen square feet of ACM will be completed.

Regulated asbestos containing materials per NESHAP (40 CFR Part 61) which falls into any of the following categories are ACM's that must be removed prior to any renovation/demolition activities at the Subject Property.

- Friable asbestos material.
- Category I non-friable ACM that has become friable.
- Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading.
- Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations.

Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-26-650-012-0017-00

Asbestos abatement should only be performed by a certified asbestos abatement contractor licensed to complete abatement work. The contractor must also follow the standards and requirements set forth per the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61).

Additional information regarding the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61) can be obtained by contacting the associated agency below.

NESHAP Asbestos Program  
Department of Environmental Quality  
Phone: 517-284-6777

MIOSHA-CSHD-Asbestos Program  
State of Michigan  
Phone: 517-284-7680  
Email: asbestos@michigan.gov

### **DISCLAIMER**

Red Cedar Consulting performed destructive testing methods in an attempt to access and inspect all areas of the Building. Unfortunately, due to the age of construction along with multiple additions/renovations that may have been completed on the Building, additional inspections may be required if suspect ACM material not documented within this report is encountered during renovation/demolition activities.

This report was prepared at the request and for exclusive use by the Muskegon County Land Bank and may not be reproduced or sold without written permission from Red Cedar Consulting.

We appreciate the opportunity to provide the requested services. Please contact us at (888) 449-4566 with any questions or concerns.

Sincerely,  
**Red Cedar Consulting**



Aaron Paquet  
Michigan/EPA Certified Asbestos Building Inspector  
(A30955)



Red Cedar Consulting

***Attachment 1***  
***APEX Research Laboratory Analytical Results***



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 2037 Elwood St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69713  
Date Collected: 04/20/17  
Date Received: 04/21/17  
Date Analyzed: 04/27/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69713 - 01 Cust. #: ES-HM-01A Material: Roofing Materials Location: Appearance: black, fibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 20% Other - 80%
Lab ID #: 69713 - 01a Cust. #: ES-HM-01A Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 20% Other - 80%
Lab ID #: 69713 - 01b Cust. #: ES-HM-01A Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%

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: 2037 Elwood St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69713  
Date Collected: 04/20/17  
Date Received: 04/21/17  
Date Analyzed: 04/27/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69713 - 02 Cust. #: ES-HM-01B Material: Roofing Materials Location: Appearance: black, fibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 20% Other - 80%
Lab ID #: 69713 - 02a Cust. #: ES-HM-01B Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 20% Other - 80%
Lab ID #: 69713 - 02b Cust. #: ES-HM-01B Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%

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: 2037 Elwood St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69713  
Date Collected: 04/20/17  
Date Received: 04/21/17  
Date Analyzed: 04/27/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69713 - 03 Cust. #: ES-HM-02A Material: White Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Fiberglass - 10% Other - 70%
Lab ID #: 69713 - 04 Cust. #: ES-HM-02B Material: White Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Fiberglass - 10% Other - 70%
Lab ID #: 69713 - 05 Cust. #: ES-HM-03A Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Fiberglass - 2% Other - 83%

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: 2037 Elwood St

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69713  
Date Collected: 04/20/17  
Date Received: 04/21/17  
Date Analyzed: 04/27/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69713 - 05a Cust. #: ES-HM-03A Material: Joint Compound Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69713 - 06 Cust. #: ES-HM-03B Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Fiberglass - 2% Other - 83%
Lab ID #: 69713 - 06a Cust. #: ES-HM-03B Material: Joint Compound Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> 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.



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# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 2037 Elwood St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69713  
Date Collected: 04/20/17  
Date Received: 04/21/17  
Date Analyzed: 04/27/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69713 - 07 Cust. #: ES-HM-04A Material: Window Glazing Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> Chrysotile - Trace  POINT COUNT RESULT	Wollastonite - 2% Other - 98%
Lab ID #: 69713 - 08 Cust. #: ES-HM-04B Material: Window Glazing Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> Chrysotile - Trace  POINT COUNT RESULT	Wollastonite - 2% Other - 98%
Lab ID #: 69713 - 09 Cust. #: ES-HS-01A Material: Surfacing Material/Texture Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> 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: 2037 Elwood St

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69713  
Date Collected: 04/20/17  
Date Received: 04/21/17  
Date Analyzed: 04/27/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69713 - 09a Cust. #: ES-HS-01A Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Fiberglass - 2% Other - 83%
Lab ID #: 69713 - 10 Cust. #: ES-HS-01B Material: Surfacing Material/Texture Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69713 - 10a Cust. #: ES-HS-01B Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Fiberglass - 2% Other - 83%

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: 2037 Elwood St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69713  
Date Collected: 04/20/17  
Date Received: 04/21/17  
Date Analyzed: 04/27/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69713 - 11 Cust. #: ES-HS-01C Material: Surfacing Material/Texture Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69713 - 11a Cust. #: ES-HS-01C Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Fiberglass - 2% Other - 83%
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



Apex # **69713**

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

E-mail: apexresearch@chartermi.net Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-20-17

Project: 2037 Elmwood St.

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: Slag  **TTP** All Samples

Asbestos: Bulk  X Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
 Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
 Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BioSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
 TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	ES-HM-01A	Roofing Material			
2	ES-HM-01B	"			
3	ES-HM-02A	White Staircase			
4	ES-HM-02B	"			
5	ES-HM-03A	Asphalt & Joint Compound			
6	ES-HM-03B	"			
7	ES-HM-04A	Window Sillings			
8	ES-HM-04B	"			
9	ES-HS-01A	Asphalt & Sandpaper/Gravel			
10	ES-HS-01B	"			
11	ES-HS-01A	"			

Relinquished by: *Alexander* Received by: *WPS*  
 Date: 4-20-17 Date: 4-20-17

Relinquished by: *[Signature]* Received by: \_\_\_\_\_  
 Date: *6/20* Date: \_\_\_\_\_

**RECEIVED**

***Tables***

**Table 1 - Summary of Hazardous Materials, 2037 Elwood St., Muskegon Heights, Michigan**

<b>Hazardous Materials Description and Location</b>		
<b>Location</b>	<b>Material Description</b>	<b>Quantity</b>
Exterior	2' Fluorescent Light (Fixture and Ballast Only)	1
Exterior	2' Fluorescent Bulb	1
Exterior	Automobile Tire	32
Garage	Quart Container Misc. Paint	6
Garage	Pint Container Misc. Paint	12
Garage	Spray Can Misc. Paint	30

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2037 Elwood St., Muskegon Heights, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
ES-HM-01A	Roofing Materials	No	M	Category I	ND/ND/ND	Exterior	NA
ES-HM-01B	Roofing Materials	No	M	Category I	ND/ND/ND	Exterior	NA
ES-HM-02A	White Linoleum	No	M	Category I	ND	Bathroom	NA
ES-HM-02B	White Linoleum	No	M	Category I	ND	Bathroom	NA
ES-HM-03A	Drywall and Joint Compound	No	M	Category II	ND/ND	Living Wall	NA
ES-HM-03B	Drywall and Joint Compound	No	M	Category II	ND/ND	Dining Wall	NA
ES-HM-04A	Glazing	Yes	M	Category II	Trace CH-PC	Living	NA
ES-HM-04B	Glazing	Yes	M	Category II	Trace CH-PC	Kitchen	NA
ES-HS-01A	Drywall and Surfacing Material	No	S	Category II	ND/ND	Dining Ceiling	NA
ES-HS-01B	Drywall and Surfacing Material	No	S	Category II	ND/ND	Living Ceiling	NA
ES-HS-01C	Drywall and Surfacing Material	No	S	Category II	ND/ND	Kitchen Ceiling	NA

**Notes:**

Material Types

M = Miscellaneous building material  
 TSI = Thermal System Insulation  
 S = Surfacing Material  
 PC = Point Count Analysis  
 CH = Chrysotile Asbestos

Abbreviations

NQ = Not quantified  
 NA = Not applicable  
 ND = Not detected. Laboratory result is less than 1 % asbestos  
 lin. ft. = linear feet  
 sq. ft. = square feet

Asbestos Containing Material (ACM) is defined as any material containing more than 1 percent asbestos as determined utilizing Polarized Light Microscopy.

**Table 3 - Summary of Presumed Asbestos Containing Materials, 2037 Elwood St., Muskegon Heights, Michigan**

<b>Asbestos Containing Material Description and Location</b>					
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Condition</b>	<b>Material Type</b>	<b>Approx. Quantity</b>
No Presumed Asbestos Containing Materials Identified					

**Notes:**

Material Types

- M = Miscellaneous building material
- TSI = Thermal System Insulation
- S = Surfacing Material

Abbreviations

- lin. ft. = linear feet
- sq. ft. = square feet

**Table 4 - Summary of All Asbestos Containing Materials, 2037 Elwood St., Muskegon Heights, Michigan**

<b>Exterior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
No Asbestos Containing Materials Identified			

**Notes:**

Abbreviations

lin. ft. = linear feet

sq. ft. = square feet

**Shaded/Bolded** = Friable ACM and any Category I and Category II non-friable ACM that has a high probability of becoming crumbled, pulverized, or reduced to powder by the demolition or renovation activities that must be properly abated prior to commencement of any demolition/renovation activities.

Demolition/renovation activities completed with intact Category I non-friable ACM are regulated by OSHA and must be completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note that a Negative Pressure Enclosure must be utilized during abatement when Site Conditions Warrant. Examples of these conditions include the abatement of Plaster and Vermiculite insulation, HVAC Duct Wrap in Poor Condition, and Air-O-Cell/Mag Pipe Wrap. Conditions outside of these should be assessed on a case by case basis during the Asbestos Abatement Contractors site walk and Work Plan Preparation.



P.O. Box 13216  
Lansing, MI 48901  
Phone: 888.449.4566  
Fax: 888.448.8739  
www.redcedarconsulting.net

May 8, 2017

Mr. Tim Burgess  
Muskegon County Land Bank  
Land Bank Coordinator  
173 E. Apple Avenue, Suite 104  
Muskegon, MI 49442

***RE: Asbestos Containing Material and Hazardous Materials Inspection  
2045 Superior St., Muskegon Heights, MI 49444  
Parcel ID: 61-26-650-013-0022-00***

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 2045 Superior St., Muskegon Heights, Michigan (Subject Property). This inspection was completed at the request of the Muskegon County Land Bank to comply with the United States Environmental Protection Agency (USEPA) requirements for demolition and renovation set forth under the National Emissions Standards for Hazardous Air Pollutants (NESHAP, 40 CFR Part 61). This inspection was also completed to comply with the Occupational Safety and Health Administration (OSHA) Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

### **SUBJECT PROPERTY**

The Subject Property is comprised of a .22 acre residential parcel which contains a 720 sq. ft. attached garage and approximate 720 square foot residential building (the Building) constructed in 1930. The Building was constructed on a concrete block basement with one aboveground floor. The exterior walls of the Building were finished with wood lap while the roof was sealed with asphalt shingles. The Building can be further divided into a living room, dining room, kitchen, bath, and two bedrooms.

### **VISUAL INSPECTION AND SAMPLING**

#### **Asbestos Containing Materials Inspection**

Aaron Paquet and Darrell DeMasters of Red Cedar Consulting (Red Cedar), accredited State Of Michigan/EPA Asbestos Building Inspectors (Accreditation Numbers A30955 and A31159, respectively) who completed training per the Michigan Asbestos Workers Accreditation Act 440, completed an inspection of the Subject Property on April 20, 2017 for suspected asbestos containing building materials.

This inspection, and subsequent sample collection was completed in accordance with the USEPA Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763) assessment and sampling protocol.

During the completion of the inspection, each area of the Subject Property was visually inspected for asbestos containing building materials (ACBM). Following the completion of the visual inspection, Red Cedar staff identified each suspect area of friable and non-friable ACBM and sorted them into one of three homogenous categories for sampling purposes. AHERA defines friable as a material that when dry, may be crumbled, pulverized, or reduced to powder by hand pressure. A homogenous area is defined by OSHA as an area of surfacing, thermal system insulation (TSI) or miscellaneous material that is uniform in color and texture. Surfacing materials are most commonly found in sprayed-on, troweled-on or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members. TSI refers to materials applied to pipes, fittings, boilers, ductwork, or other components to prevent heat loss or gain, or condensation. Any material that does not fall under the surfacing or TSI category, such as floor tile, drywall, and acoustical ceiling tile are placed into the miscellaneous materials category.

Following the completion of the visual inspection, Red Cedar staff identified the following materials as suspect ACBM:

- Roofing Materials
- Linoleum
- 1'x1' Ceiling Tile
- 12"x12" Vinyl Tile
- Glazing
- Plaster

Red Cedar staff collected nineteen samples of suspect ACBM separated into eight distinct homogenous groups for laboratory analysis. Samples were collected and submitted to APEX Research Inc. Laboratories (APEX) (Accreditation Number 102118-0) for laboratory analysis. Analysis was completed utilizing polarized light microscopy (PLM) which is the Environmental Protection Agency (EPA) approved method for analysis of bulk materials for asbestos. PLM analysis completed pursuant to method (EPA 600/M4-82-020) identifies asbestos fiber bundles by the visual properties displayed when the sample is treated with various dispersion staining liquids. The laboratory report completed following the sample analysis indicates if asbestos is present, and at what percentage along with a description and percentage of other fibrous and non-fibrous materials and sample color. Chain-of-custody documentation was followed from sample collection through shipping and receiving of the samples at the designated laboratory. The documentation assures that samples will meet the quality assurance/quality control measures defined by AHERA. The laboratory analytical report prepared by APEX for the nineteen samples is included as Attachment A.



## **Hazardous Materials Inspection**

On April 20, 2017 the Subject Property was also inspected for the presence of hazardous materials which include but are not limited to polychlorinated biphenyls (PCBs) and potential mercury containing equipment and any items or containers that may contain or be classified as a hazardous or regulated material. Each material, if identified, was documented along with the approximate location. Any materials identified as hazardous are included in Table 1.

## **INSPECTION RESULTS AND RECOMMENDATIONS**

During the completion of the asbestos inspection, nineteen samples of suspect ACM were collected and are documented in Table 2 along with the Red Cedar sample number, description, friability, material type, ACM classification, sample location, material quantity and laboratory analytical results.

ACM, as defined by the USEPA NESHAP is “any material containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763 Section 1, Polarized Light Microscopy”.

Friable ACM is defined by NESHAP as any material containing more than 1 percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Friable ACM is a concern due the ease of unintentionally disturbing the ACM which may result in “visible emissions” which is known as a Fiber Release Episode.

Non-friable asbestos-containing material is defined as “material containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACM’s are separated into Category I and Category II ACM. Category I ACM is any asbestos containing packing’s, gaskets, resilient floor coverings (vinyl floor tile and linoleum are examples of these) and asphalt roofing products. Category II ACM is stated by NESHAP as any material excluding Category I non-friable ACM such as drywall, plaster or fiberboard insulation.

### **Presumed Asbestos Containing Material**

Presumed Asbestos Containing Materials (PACM) are suspect surfacing, TSI and miscellaneous materials found in buildings constructed prior to 1980 which are classified as and due to the age of the structure, are assumed to be ACM and do not require sample collection and analysis. OSHA dictates that PACM may be “rebutted” following a complete inspection pursuant to AHERA protocol.

The HVAC Duct Wrap located in the Building was classified as PACM due to the age of the structure and samples were not collected.

Table 3 lists the location, material description, friability, condition, material type (surfacing, thermal or miscellaneous) and approximate quantity of all PACM documented at the Subject Property.

Table 4 provides a summary all ACM documented at the Subject Property which includes the material location, description, and approximate quantity.

### **Friable ACM's**

Duct Wrap identified in the building in conjunction with the forced air heating system is classified as friable ACM. The visual assessment to quantify the extent of this material identified HVAC Duct Wrap at the following locations within the basement, first and second floors:

- Living (1 register, 15 sq. ft.)
- Dining (1 register, 15 sq. ft.)
- NW Bedroom (1 register, 15 sq. ft.)
- HVAC Tape on Duct (10 sq. ft.)

### **Category I ACM**

Two types of resilient floor covering (Brown Layered Linoleum and Tan 12x12 Vinyl Floor Tile) located within the kitchen and bathroom, respectively, were found to contain up to 30% Chrysotile asbestos. The assessment to quantify the extent of this material identified approximately 159 sq. ft. of this material within the Building.

### **Category II ACM**

No Category II non-friable ACM was identified during the completion of this inspection.

## **RECOMMENDATIONS**

### **Asbestos Containing Materials**

HVAC material identified in the Building system and listed below is classified as friable ACM and should be removed prior to any renovation/demolition activities.

- Living (1 register, 15 sq. ft.)
- Dining (1 register, 15 sq. ft.)
- NW Bedroom (1 register, 15 sq. ft.)
- HVAC Tape on Duct (10 sq. ft.)

The Category I resilient floor coverings (9"x9" Beige Vinyl Floor Tile and 12"x12" Yellow Vinyl Tile) are non-friable ACM's that may be left in place as long as the demolition/renovation activities are completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note: The location of samples obtained during this inspection were in a random fashion and areas that were not identified during this inspection may be damaged or have become damaged since the inspection was completed. If Category I or Category II friable materials are discovered prior to or during the demolition/renovation process, these materials must be abated prior to commencement of any demolition/renovation activities at the Subject Property.

## **Hazardous Materials**

Hazardous Materials identified at the Subject Property and documented in Table 1 which require proper removal and disposal consist of the following items:

- 4' Fluorescent Bulb (Fixture and Ballast Only) (2)
- 4' Fluorescent Bulb (4)
- Television (4)
- 3' Fluorescent Bulb (Fixture and Ballast Only) (1)
- 3' Fluorescent Bulb (2)
- Automobile Tires (2)

## **REGULATORY REQUIREMENTS**

A Notification of Intent to Renovate/Demolish form must be filed with the Michigan Department of Environmental Quality- Air Quality Division at least 10 working days prior to any renovation or demolition activities at a site.

The Notification of Intent to Renovate/Demolish form must also be completed and submitted to the MIOSHA-Asbestos Program whenever demolition, encapsulation and/or renovation activities at a site involving greater than ten lineal feet and/or fifteen square feet of ACM will be completed.

Regulated asbestos containing materials per NESHAP (40 CFR Part 61) which falls into any of the following categories are ACM's that must be removed prior to any renovation/demolition activities at the Subject Property.

- Friable asbestos material.
- Category I non-friable ACM that has become friable.
- Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading.
- Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations.

Asbestos abatement should only be performed by a certified asbestos abatement contractor licensed to complete abatement work. The contractor must also follow the standards and requirements set forth per the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61).

Additional information regarding the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61) can be obtained by contacting the associated agency below.

NESHAP Asbestos Program  
Department of Environmental Quality  
Phone: 517-284-6777

MIOSHA-CSHD-Asbestos Program  
State of Michigan  
Phone: 517-284-7680  
Email: asbestos@michigan.gov

Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-26-650-013-0022-00

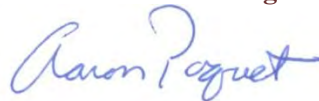
**DISCLAIMER**

Red Cedar Consulting performed destructive testing methods in an attempt to access and inspect all areas of the Building. Unfortunately, due to the age of construction along with multiple additions/renovations that may have been completed on the Building, additional inspections may be required if suspect ACM material not documented within this report is encountered during renovation/demolition activities.

This report was prepared at the request and for exclusive use by the Muskegon County Land Bank and may not be reproduced or sold without written permission from Red Cedar Consulting.

We appreciate the opportunity to provide the requested services. Please contact us at (888) 449-4566 with any questions or concerns.

Sincerely,  
**Red Cedar Consulting**



Aaron Paquet  
Michigan/EPA Certified Asbestos Building Inspector  
(A30955)

Red Cedar Consulting

***Attachment 1***  
***APEX Research Laboratory Analytical Results***



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 2045 Superior St

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69714  
Date Collected: 04/20/17  
Date Received: 04/21/17  
Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69714 - 01 Cust. #: SS-HM-01A Material: Roofing Materials Location: Appearance: black, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 20% Other - 80%
Lab ID #: 69714 - 01a Cust. #: SS-HM-01A Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 60% Other - 40%
Lab ID #: 69714 - 02 Cust. #: SS-HM-01B Material: Roofing Materials Location: Appearance: black, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 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



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Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69714 - 02a Cust. #: SS-HM-01B Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 60% Other - 40%
Lab ID #: 69714 - 03 Cust. #: SS-HM-02A Material: Brown Layered Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>YES</b> Chrysotile - 30%	Other - 70%
Lab ID #: 69714 - 03a Cust. #: SS-HM-02A Material: Flooring Location: Appearance: beige, fibrous, nonhomogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%

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Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69714 - 04 Cust. #: SS-HM-02B Material: Brown Layered Linoleum Location: Appearance: Layer: 1 of 2	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69714 - 04a Cust. #: SS-HM-02B Material: Flooring Location: Appearance: beige, fibrous, nonhomogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 69714 - 05 Cust. #: SS-HM-03A Material: 12x12 Tan VFT Location: Appearance: beige, fibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>YES</b> Chrysotile - 5%	Other - 95%

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Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69714 - 05a Cust. #: SS-HM-03A Material: Mastic Location: Appearance: yellow,nonfibrous,homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69714 - 05b Cust. #: SS-HM-03A Material: Felt Location: Appearance: brown,fibrous,nonhomogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 85% Other - 15%
Lab ID #: 69714 - 06 Cust. #: SS-HM-03B Material: 12x12 Tan VFT Location: Appearance: Layer: 1 of 3	Asbestos Present:  NOT ANALYZED	

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Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69714 - 06a Cust. #: SS-HM-03B Material: Mastic Location: Appearance: yellow,nonfibrous,homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69714 - 06b Cust. #: SS-HM-03B Material: Felt Location: Appearance: brown,fibrous,nonhomogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 85% Other - 15%
Lab ID #: 69714 - 07 Cust. #: SS-HM-04A Material: Cream Linoleum Location: Appearance: beige,fibrous,nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Fiberglass - 10% Other - 70%

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Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69714 - 07a Cust. #: SS-HM-04A Material: Mastic Location: Appearance: yellow,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69714 - 08 Cust. #: SS-HM-04B Material: Cream Linoleum Location: Appearance: beige,fibrous,nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Fiberglass - 10% Other - 70%
Lab ID #: 69714 - 08a Cust. #: SS-HM-04B Material: Mastic Location: Appearance: yellow,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69714 - 09 Cust. #: SS-HM-05A Material: Blue/Cream Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Fiberglass - 10% Other - 70%
Lab ID #: 69714 - 09a Cust. #: SS-HM-05A Material: Mastic Location: Appearance: yellow, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69714 - 10 Cust. #: SS-HM-05B Material: Blue/Cream Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Fiberglass - 10% Other - 70%

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

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Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69714 - 10a Cust. #: SS-HM-05B Material: Mastic Location: Appearance: yellow,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69714 - 11 Cust. #: SS-HM-06A Material: 1x1 White Smooth Ceiling Tile Location: Appearance: brown,fibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 95% Other - 5%
Lab ID #: 69714 - 12 Cust. #: SS-HM-06B Material: 1x1 White Smooth Ceiling Tile Location: Appearance: brown,fibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 95% Other - 5%

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

Robert T. Letarte Jr., Laboratory Director

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Date Collected: 04/20/17  
Date Received: 04/21/17  
Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69714 - 13 Cust. #: SS-HM-07A Material: Window Glazing Location: Appearance: beige,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69714 - 14 Cust. #: SS-HM-07B Material: Window Glazing Location: Appearance: beige,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69714 - 15 Cust. #: SS-HS-01A Material: Plaster Finish Coat Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Robert T. Letarte Jr., Laboratory Director

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Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69714 - 15a Cust. #: SS-HS-01A Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 69714 - 16 Cust. #: SS-HS-01B Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69714 - 16a Cust. #: SS-HS-01B Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%

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Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69714 - 17 Cust. #: SS-HS-01C Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69714 - 17a Cust. #: SS-HS-01C Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 69714 - 18 Cust. #: SS-HS-01D Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69714 - 18a Cust. #: SS-HS-01D Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 69714 - 19 Cust. #: SS-HS-01E Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69714 - 19a Cust. #: SS-HS-01E Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%

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NVLAP Lab Code 102118-0

Apex # **69714**

**APEX Research, Inc.** 11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

E-mail: [apexresearch@chartermi.net](mailto:apexresearch@chartermi.net) Fax: 734-449-9991



1 of 2

Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4.20.17

Project: 2045 Superintendence

Project #:

Contact Person: Aaron Paquet

Turn Around Times: (Circle One) PLM EPA 600, PC all samples with a detection of <5% ACM.

apaquet@redcedarconsulting.net

Rush 24 hour  
48 hour 72 hour

Other: Sky  All Samples

Asbestos: Bulk  Wipe  Point Count  PCM   
 Lead: Bulk  Wipe  Air  Paint  Soil   
 Mold: Bulk  Tape  BioSIS  Other  Viable   
 TEM: AHERA 7400  Bulk/NOB  EPA Level II

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	SS-HM-01A	Roofing Materials			
2	SS-HM-01B	" "			
3	SS-HM-02A	Brown Stained Insulation			
4	SS-HM-02B	" "			
5	SS-HM-03A	12x12 Tile VFT			
6	SS-HM-03B	" "			
7	SS-HM-04A	Green Stained Insulation			
8	SS-HM-04B	" "			
9	SS-HM-05A	Blue + Green Stained Insulation			
10	SS-HM-05B	" "			
11	SS-HM-06A	1x1 white smooth CT			

Relinquished by: [Signature] Received by: UFS  
 Date: 4-20-17 Date: 4-20-17

Relinquished by: [Signature] Received by: \_\_\_\_\_  
 Date: 1000 APR 21 2017 Date: \_\_\_\_\_

**RECEIVED**

69714

2 of 2

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189  
Phone: 734-449-9990  
E-mail: apexresearch@charternet.net  
Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216  
Lansing, MI 48901

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-20-17

Project: 2045 Superior St

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: 5 day

TTP All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_

Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_

Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BioSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_

TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	SS-HH-068	1 x 1 white smooth CT			
13	SS-HH-07A	slender flagging			
14	SS-HH-07B	" "			
15	SS-HS-01A	Plaster			
16	SS-HS-01B				
17	SS-HS-01C				
18	SS-HS-01D				
19	SS-HS-01E				

Relinquished by: [Signature] Received by: [Signature]

Date: 4-20-17

Date: 4-20-17

Relinquished by: [Signature]

Date: APR 21 2017

Received by: \_\_\_\_\_

Date: \_\_\_\_\_

RECEIVED

***Tables***

**Table 1 - Summary of Hazardous Materials, 2045 Superior St., Muskegon Heights, Michigan**

<b>Hazardous Materials Description and Location</b>		
<b>Location</b>	<b>Material Description</b>	<b>Quantity</b>
Kitchen	4' Fluorescent Bulb (Fixture and Ballast Only)	1
Kitchen	4' Fluorescent Bulb	2
Kitchen	Television	1
Bathroom	4' Fluorescent Bulb (Fixture and Ballast Only)	1
Bathroom	4' Fluorescent Bulb	2
NE Bedroom	3' Fluorescent Bulb (Fixture and Ballast Only)	1
NE Bedroom	3' Fluorescent Bulb	2
Basement	Television	2
Garage	Automobile Tires	2
Garage	Television	1

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2045 Superior St., Muskegon Heights, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
SS-HM-01A	Roofing Materials	No	M	Category I	ND/ND	Exterior	NA
SS-HM-01B	Roofing Materials	No	M	Category I	ND/ND	Exterior	NA
SS-HM-02A	Brown Layered Linoleum	No	M	Category I	30%CH/ND	Kitchen	117 sq. ft.
SS-HM-02B	Brown Layered Linoleum	No	M	Category I	NA/ND	Kitchen	NA
SS-HM-03A	Tan 12x12 Vinyl Floor Tile	No	M	Category I	5%CH/ND/ND	Bathroom	42 sq. ft.
SS-HM-03B	Tan 12x12 Vinyl Floor Tile	No	M	Category I	NA/ND/ND	Bathroom	NA
SS-HM-04A	Cream Linoleum	No	M	Category I	ND/ND	NW Bedroom	NA
SS-HM-04B	Cream Linoleum	No	M	Category I	ND/ND	NW Bedroom	NA
SS-HM-05A	Blue & Cream Linoleum	No	M	Category I	ND/ND	NE Bedroom	NA
SS-HM-05B	Blue & Cream Linoleum	No	M	Category I	ND/ND	NE Bedroom	NA
SS-HM-06A	White Smooth 1'x1' Ceiling Tile	Yes	M	Category II	ND	Bathroom	NA
SS-HM-06B	White Smooth 1'x1' Ceiling Tile	Yes	M	Category II	ND	Bathroom	NA
SS-HM-07A	Window Glazing	Yes	M	Category II	ND	Living Room	NA
SS-HM-07B	Window Glazing	Yes	M	Category II	ND	NE Bedroom	NA
SS-HS-01A	Plaster	No	S	Category II	ND/ND	Dining Room Ceiling	NA
SS-HS-01B	Plaster	No	S	Category II	ND/ND	NE Bedroom Ceiling	NA
SS-HS-01C	Plaster	No	S	Category II	ND/ND	Living Room Wall	NA
SS-HS-01D	Plaster	No	S	Category II	ND/ND	NW Bedroom Wall	NA
SS-HS-01E	Plaster	No	S	Category II	ND/ND	Kitchen Wall	NA

**Notes:**

Material Types

M = Miscellaneous building material  
 TSI = Thermal System Insulation  
 S = Surfacing Material  
 PC = Point Count Analysis  
 CH = Chrysotile Asbestos

Abbreviations

NQ = Not quantified  
 NA = Not applicable  
 ND = Not detected. Laboratory result is less than 1 % asbestos  
 lin. ft. = linear feet  
 sq. ft. = square feet

Asbestos Containing Material (ACM) is defined as any material containing more than 1 percent asbestos as determined utilizing Polarized Light Microscopy.

**Table 3 - Summary of Presumed Asbestos Containing Materials, 2045 Superior St., Muskegon Heights, Michigan**

<b>Asbestos Containing Material Description and Location</b>					
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Condition</b>	<b>Material Type</b>	<b>Approx. Quantity</b>
Living (1 register, 15 sq. ft.) Dining (1 register, 15 sq. ft.) NW Bedroom (1 register, 15 sq. ft.) HVAC Tape on Duct (10 sq. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	55 sq. ft.

**Notes:**

Material Types

- M = Miscellaneous building material
- TSI = Thermal System Insulation
- S = Surfacing Material

Abbreviations

- lin. ft. = linear feet
- sq. ft. = square feet

**Table 4 - Summary of All Asbestos Containing Materials, 2045 Superior St., Muskegon Heights, Michigan**

<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Kitchen	Brown Layered Linoleum	No	117 sq. ft.
Bathroom	Tan 12x12 Vinyl Floor Tile	No	42 sq. ft.
<b>Total</b>			<b>159 sq. ft.</b>
<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Living (1 register, 15 sq. ft.) Dining (1 register, 15 sq. ft.) NW Bedroom (1 register, 15 sq. ft.) HVAC Tape on Duct (10 sq. ft.)	HVAC Duct Wrap	Yes	55 sq. ft.
<b>Total</b>			<b>55 sq. ft.</b>

**Notes:**

Abbreviations

lin. ft. = linear feet

sq. ft. = square feet

**Shaded/Bolded** = Friable ACM and any Category I and Category II non-friable ACM that has a high probability of becoming crumbled, pulverized, or reduced to powder by the demolition or renovation activities that must be properly abated prior to commencement of any demolition/renovation activities.

Demolition/renovation activities completed with intact Category I non-friable ACM are regulated by OSHA and must be completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note that a Negative Pressure Enclosure must be utilized during abatement when Site Conditions Warrant. Examples of these conditions include the abatement of Plaster and Vermiculite insulation, HVAC Duct Wrap in Poor Condition, and Air-O-Cell/Mag Pipe Wrap. Conditions outside of these should be assessed on a case by case basis during the Asbestos Abatement Contractors site walk and Work Plan Preparation.





P.O. Box 13216  
Lansing, MI 48901  
Phone: 888.449.4566  
Fax: 888.448.8739  
www.redcedarconsulting.net

May 8, 2017

Mr. Tim Burgess  
Muskegon County Land Bank  
Land Bank Coordinator  
173 E. Apple Avenue, Suite 104  
Muskegon, MI 49442

***RE: Asbestos Containing Material and Hazardous Materials Inspection  
2113 Howden St., Muskegon Heights, MI 49444  
Parcel ID: 61-26-185-059-0004-00***

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 2113 Howden St., Muskegon Heights, Michigan (Subject Property). This inspection was completed at the request of the Muskegon County Land Bank to comply with the United States Environmental Protection Agency (USEPA) requirements for demolition and renovation set forth under the National Emissions Standards for Hazardous Air Pollutants (NESHAP, 40 CFR Part 61). This inspection was also completed to comply with the Occupational Safety and Health Administration (OSHA) Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

### **SUBJECT PROPERTY**

The Subject Property is comprised of a .14 acre residential parcel which contains an approximate 908 square foot residential building (the Building) constructed in 1925. The Building was constructed on a concrete block basement with one aboveground floor. The exterior walls of the Building were finished with wood lap while the roof was sealed with asphalt shingles. The Building can be further divided into a living room, dining room, kitchen, bath, two bedrooms and a rear entry.

### **VISUAL INSPECTION AND SAMPLING**

#### **Asbestos Containing Materials Inspection**

Aaron Paquet and Darrell DeMasters of Red Cedar Consulting (Red Cedar), accredited State Of Michigan/EPA Asbestos Building Inspectors (Accreditation Numbers A30955 and A31159, respectively) who completed training per the Michigan Asbestos Workers Accreditation Act 440, completed an inspection of the Subject Property on April 19, 2017 for suspected asbestos containing building materials.

This inspection, and subsequent sample collection was completed in accordance with the USEPA Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763) assessment and sampling protocol.

During the completion of the inspection, each area of the Subject Property was visually inspected for asbestos containing building materials (ACBM). Following the completion of the visual inspection, Red Cedar staff identified each suspect area of friable and non-friable ACBM and sorted them into one of three homogenous categories for sampling purposes. AHERA defines friable as a material that when dry, may be crumbled, pulverized, or reduced to powder by hand pressure. A homogenous area is defined by OSHA as an area of surfacing, thermal system insulation (TSI) or miscellaneous material that is uniform in color and texture. Surfacing materials are most commonly found in sprayed-on, troweled-on or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members. TSI refers to materials applied to pipes, fittings, boilers, ductwork, or other components to prevent heat loss or gain, or condensation. Any material that does not fall under the surfacing or TSI category, such as floor tile, drywall, and acoustical ceiling tile are placed into the miscellaneous materials category.

Following the completion of the visual inspection, Red Cedar staff identified the following materials as suspect ACBM:

- Roofing Shingle
- Vinyl Flooring
- Linoleum
- 1'x1' Ceiling Tile
- Drywall and Joint Compound
- Glazing
- Plaster

Red Cedar staff collected twenty five samples of suspect ACBM separated into eleven distinct homogenous groups for laboratory analysis. Samples were collected and submitted to APEX Research Inc. Laboratories (APEX) (Accreditation Number 102118-0) for laboratory analysis. Analysis was completed utilizing polarized light microscopy (PLM) which is the Environmental Protection Agency (EPA) approved method for analysis of bulk materials for asbestos. PLM analysis completed pursuant to method (EPA 600/M4-82-020) identifies asbestos fiber bundles by the visual properties displayed when the sample is treated with various dispersion staining liquids. The laboratory report completed following the sample analysis indicates if asbestos is present, and at what percentage along with a description and percentage of other fibrous and non-fibrous materials and sample color. Chain-of-custody documentation was followed from sample collection through shipping and receiving of the samples at the designated laboratory. The documentation assures that samples will meet the quality assurance/quality control measures defined by AHERA. The laboratory analytical report prepared by APEX for the twenty five samples is included as Attachment A.

## **Hazardous Materials Inspection**

On April 19, 2017 the Subject Property was also inspected for the presence of hazardous materials which include but are not limited to polychlorinated biphenyls (PCBs) and potential mercury containing equipment and any items or containers that may contain or be classified as a hazardous or regulated material. Each material, if identified, was documented along with the approximate location. Any materials identified as hazardous are included in Table 1.

## **INSPECTION RESULTS AND RECOMMENDATIONS**

During the completion of the asbestos inspection, twenty five samples of suspect ACM were collected and are documented in Table 2 along with the Red Cedar sample number, description, friability, material type, ACM classification, sample location, material quantity and laboratory analytical results.

ACM, as defined by the USEPA NESHAP is “any material containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763 Section 1, Polarized Light Microscopy”.

Friable ACM is defined by NESHAP as any material containing more than 1 percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Friable ACM is a concern due the ease of unintentionally disturbing the ACM which may result in “visible emissions” which is known as a Fiber Release Episode.

Non-friable asbestos-containing material is defined as “material containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACM’s are separated into Category I and Category II ACM. Category I ACM is any asbestos containing packing’s, gaskets, resilient floor coverings (vinyl floor tile and linoleum are examples of these) and asphalt roofing products. Category II ACM is stated by NESHAP as any material excluding Category I non-friable ACM such as drywall, plaster or fiberboard insulation.

## **Presumed Asbestos Containing Material**

Presumed Asbestos Containing Materials (PACM) are suspect surfacing, TSI and miscellaneous materials found in buildings constructed prior to 1980 which are classified as and due to the age of the structure, are assumed to be ACM and do not require sample collection and analysis. OSHA dictates that PACM may be “rebutted” following a complete inspection pursuant to AHERA protocol.

The HVAC Duct Wrap located in the Building was classified as PACM due to the age of the structure and samples were not collected.

Table 3 lists the location, material description, friability, condition, material type (surfacing, thermal or miscellaneous) and approximate quantity of all PACM documented at the Subject Property.

Table 4 provides a summary all ACM documented at the Subject Property which includes the material location, description, and approximate quantity.

### **Friable ACM's**

Duct Wrap identified in the building in conjunction with the forced air heating system is classified as friable ACM. The visual assessment to quantify the extent of this material identified HVAC Duct Wrap at the following locations within the basement and first floor:

- Basement (misc. HVAC wrap on abandoned cold air return duct in crawl space, 25 sq. ft.)

### **Category I ACM**

One type of resilient floor covering (Layered Vinyl) located within the bathroom was found to contain up to 30% Chrysotile asbestos. The assessment to quantify the extent of this material identified approximately 54 sq. ft. of this material within the Building.

### **Category II ACM**

No Category II non-friable ACM was identified during the completion of this inspection.

## **RECOMMENDATIONS**

### **Asbestos Containing Materials**

HVAC material identified in the Building system and listed below is classified as friable ACM and should be removed prior to any renovation/demolition activities.

- Basement (misc. HVAC wrap on abandoned cold air return duct in crawl space, 25 sq. ft.)

The Category I resilient floor covering (Layered Vinyl) is a non-friable ACM that may be left in place as long as the demolition/renovation activities are completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note: The location of samples obtained during this inspection were in a random fashion and areas that were not identified during this inspection may be damaged or have become damaged since the inspection was completed. If Category I or Category II friable materials are discovered prior to or during the demolition/renovation process, these materials must be abated prior to commencement of any demolition/renovation activities at the Subject Property.

### **Hazardous Materials**

Hazardous Materials identified at the Subject Property and documented in Table 1 which require proper removal and disposal consist of the following items:

- Automobile Tire (5)
- 2' Fluorescent Light (Fixture and Ballast Only) (1)
- 2' Fluorescent Bulb (1)

Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-26-185-059-0004-00

## **REGULATORY REQUIREMENTS**

A Notification of Intent to Renovate/Demolish form must be filed with the Michigan Department of Environmental Quality- Air Quality Division at least 10 working days prior to any renovation or demolition activities at a site.

The Notification of Intent to Renovate/Demolish form must also be completed and submitted to the MIOSHA-Asbestos Program whenever demolition, encapsulation and/or renovation activities at a site involving greater than ten lineal feet and/or fifteen square feet of ACM will be completed.

Regulated asbestos containing materials per NESHAP (40 CFR Part 61) which falls into any of the following categories are ACM's that must be removed prior to any renovation/demolition activities at the Subject Property.

- Friable asbestos material.
- Category I non-friable ACM that has become friable.
- Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading.
- Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations.

Asbestos abatement should only be performed by a certified asbestos abatement contractor licensed to complete abatement work. The contractor must also follow the standards and requirements set forth per the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61).

Additional information regarding the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61) can be obtained by contacting the associated agency below.

NESHAP Asbestos Program  
Department of Environmental Quality  
Phone: 517-284-6777

MIOSHA-CSHD-Asbestos Program  
State of Michigan  
Phone: 517-284-7680  
Email: [asbestos@michigan.gov](mailto:asbestos@michigan.gov)

Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-26-185-059-0004-00

**DISCLAIMER**

Red Cedar Consulting performed destructive testing methods in an attempt to access and inspect all areas of the Building. Unfortunately, due to the age of construction along with multiple additions/renovations that may have been completed on the Building, additional inspections may be required if suspect ACM material not documented within this report is encountered during renovation/demolition activities.

This report was prepared at the request and for exclusive use by the Muskegon County Land Bank and may not be reproduced or sold without written permission from Red Cedar Consulting.

We appreciate the opportunity to provide the requested services. Please contact us at (888) 449-4566 with any questions or concerns.

Sincerely,  
**Red Cedar Consulting**



Aaron Paquet  
Michigan/EPA Certified Asbestos Building Inspector  
(A30955)

Red Cedar Consulting

***Attachment 1***  
***APEX Research Laboratory Analytical Results***



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 2113 Howden St.

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69695  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/21/17  
Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69695 - 01 Cust. #: HS-HM-01A Material: Roofing Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69695 - 02 Cust. #: HS-HM-01B Material: Roofing Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69695 - 02a Cust. #: HS-HM-01B Material: Black Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%

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: 2113 Howden St.

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69695  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/21/17  
Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69695 - 02b Cust. #: HS-HM-01B Material: Red Shingle Location: Appearance: black, fibrous, homogenous Layer: 3 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69695 - 02c Cust. #: HS-HM-01B Material: Green Shingle Location: Appearance: black, fibrous, homogenous Layer: 4 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69695 - 03 Cust. #: HS-HM-02A Material: Layered Vinyl/Wood Linoleum Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% 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.



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# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 2113 Howden St.

**Report To:**

Mr. Aaron Paquet  
 Red Cedar Consulting  
 P.O. Box 13216  
 Lansing, MI 48901

ARI Report # 17-69695  
 Date Collected: 04/19/17  
 Date Received: 04/20/17  
 Date Analyzed: 04/21/17  
 Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69695 - 03a Cust. #: HS-HM-02A Material: Beige Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 2 of 3	Asbestos Present: <b>YES</b> Chrysotile - 30%	Other - 70%
Lab ID #: 69695 - 03b Cust. #: HS-HM-02A Material: Fiberboard Location: Appearance: brown, fibrous, homogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 69695 - 04 Cust. #: HS-HM-02B Material: Layered Vinyl/Wood Linoleum Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% 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: 2113 Howden St.

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69695  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/21/17  
Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69695 - 04a Cust. #: HS-HM-02B Material: Beige Linoleum Location: Appearance: Layer: 2 of 3	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69695 - 04b Cust. #: HS-HM-02B Material: Fiberboard Location: Appearance: brown, fibrous, homogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 70% Other - 30%
Lab ID #: 69695 - 05 Cust. #: HS-HM-03A Material: Yellow Pebble Linoleum Location: Appearance: yellow, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% 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.



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# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 2113 Howden St.

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69695  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/21/17  
Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69695 - 05a Cust. #: HS-HM-03A Material: Fiberboard Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 69695 - 06 Cust. #: HS-HM-03B Material: Yellow Pebble Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 69695 - 06a Cust. #: HS-HM-03B Material: Fiberboard Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



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Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69695 - 07 Cust. #: HS-HM-04A Material: Green Vinyl Layered Location: Appearance: green, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69695 - 07a Cust. #: HS-HM-04A Material: Fiberboard Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 69695 - 08 Cust. #: HS-HM-04B Material: Green Vinyl Layered Location: Appearance: green, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69695 - 08a Cust. #: HS-HM-04B Material: Fiberboard Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 69695 - 09 Cust. #: HS-HM-05A Material: 1x1 Textured White Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 69695 - 10 Cust. #: HS-HM-05B Material: 1x1 Textured White Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%

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ARI Report # 17-69695  
Date Collected: 04/19/17  
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Date Analyzed: 04/21/17  
Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69695 - 11 Cust. #: HS-HM-06A Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69695 - 11a Cust. #: HS-HM-06A Material: Joint Compound Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> Chrysotile - 1.00%  <b>POINT COUNT RESULT</b>	Other - 99.00%
Lab ID #: 69695 - 12 Cust. #: HS-HM-06B Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%

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Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69695 - 12a Cust. #: HS-HM-06B Material: Joint Compound Location: Appearance: white,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> Chrysotile - 0.75%  POINT COUNT RESULT	Other - 99.75%
Lab ID #: 69695 - 13 Cust. #: HS-HM-07A Material: Window Glazing Location: Appearance: beige,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Wollastonite - 1% Other - 99%
Lab ID #: 69695 - 14 Cust. #: HS-HM-07B Material: Window Glazing Location: Appearance: beige,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Wollastonite - 1% Other - 99%

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Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69695 - 15 Cust. #: HS-HM-08A Material: Vinyl Layered Wood Grain/Linoleum Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 69695 - 15a Cust. #: HS-HM-08A Material: Floor Tile Location: Appearance: brown, nonfibrous, homogenous Layer: 2 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 69695 - 15b Cust. #: HS-HM-08A Material: Glue Location: Appearance: clear, nonfibrous, homogenous Layer: 3 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69695 - 15c Cust. #: HS-HM-08A Material: Sheet Flooring Location: Appearance: white, fibrous, nonhomogenous Layer: 4 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69695 - 16 Cust. #: HS-HM-08B Material: Vinyl Layered Wood Grain/Linoleum Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 69695 - 16a Cust. #: HS-HM-08B Material: Floor Tile Location: Appearance: brown, nonfibrous, homogenous Layer: 2 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Other - 99%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69695 - 16b Cust. #: HS-HM-08B Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 3 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69695 - 16c Cust. #: HS-HM-08B Material: Sheet Flooring Location: Appearance: white,fibrous,nonhomogenous Layer: 4 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69695 - 17 Cust. #: HS-HM-09A Material: Brown Leaf Linoleum Location: Appearance: brown,fibrous,nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 50% Other - 50%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69695 - 18 Cust. #: HS-HM-09B Material: Brown Leaf Linoleum Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 69695 - 19 Cust. #: HS-HM-10A Material: White Linoleum Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 69695 - 20 Cust. #: HS-HM-10B Material: White Linoleum Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%

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Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69695 - 21 Cust. #: HS-HS-01A Material: Plaster Finish Coat Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69695 - 21a Cust. #: HS-HS-01A Material: Plaster Base Coat Location: Appearance: grey,fibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Hair - 5% Other - 93%
Lab ID #: 69695 - 22 Cust. #: HS-HS-01B Material: Plaster Finish Coat Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69695 - 22a Cust. #: HS-HS-01B Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Hair - 2% Other - 96%
Lab ID #: 69695 - 23 Cust. #: HS-HS-01C Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69695 - 23a Cust. #: HS-HS-01C Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Hair - 5% Other - 93%

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Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69695 - 24 Cust. #: HS-HS-01D Material: Plaster Finish Coat Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69695 - 24a Cust. #: HS-HS-01D Material: Plaster Base Coat Location: Appearance: grey,fibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Hair - 5% Other - 94%
Lab ID #: 69695 - 25 Cust. #: HS-HS-01E Material: Plaster Finish Coat Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Date Analyzed: 04/21/17  
Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69695 - 25a Cust. #: HS-HS-01E Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Hair - 2% Other - 96%
Lab ID #: 69695 - 25b Cust. #: HS-HS-01E Material: Plaster Texture Location: Appearance: brown, fibrous, homogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> Chrysotile - 0.50%  <b>POINT COUNT RESULT</b>	Other - 99.50%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

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NVLAP Lab Code 102118-0



**69695**

1073

**ARLA Research, Inc.**

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

E-mail: [apexresearch@chartermi.net](mailto:apexresearch@chartermi.net)

Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-19-17

Project: 2113 *Abundant St*

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log In \_\_\_\_\_  
Report \_\_\_\_\_

**Turn Around Times: (Circle One)**

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: *Slag* **(TTP)** All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ Biosis \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
TEM: AHERA 7400 Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	H5-HM-014	<i>Roofing Shingle</i>			
2	H5-HM-01B	<i>"</i>			
3	H5-HM-02A	<i>Scraped Vinyl</i>			
4	H5-HM-02B	<i>"</i>			
5	H5-HM-03A	<i>Yellow Bell's Insulation</i>			
6	H5-HM-03B	<i>"</i>			
7	H5-HM-04A	<i>Green Vinyl - Scraped</i>			
8	H5-HM-04B	<i>"</i>			
9	H5-HM-05A	<i>1x1 textured white CT</i>			
10	H5-HM-05B	<i>"</i>			
11	H5-HM-06A	<i>Arguably's Joint Compound</i>			

Relinquished by: *[Signature]* Received by: *USP*  
Date: 4-19-17 Date: 4-19-17

Relinquished by: \_\_\_\_\_ Received by: **RECEIVED**  
Date: \_\_\_\_\_ Date: APR 20 2017

69695

2 of 3

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

E-mail: apexresearch@chartermi.net Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-19-17

Project: 2113 *Handen St*

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: *Sdey* **(TTP)** All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_

Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_

Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BioSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_

TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	45-HM-016B	<i>Asphalt Joint Compound</i>			
13	45-HM-07A	<i>Window Siding</i>			
14	45-HM-07B	..			
15	45-HM-08A	<i>Trim Serged &amp; Woodgrain</i>			
16	45-HM-08B	..			
17	45-HM-09A	<i>Brown Leaf Sinselum</i>			
18	45-HM-09B	..			
19	45-HM-10A	<i>White Sinselum</i>			
20	45-HM-10B	..			
21	45-HS-01A	<i>Plaster</i>			
22	45-HS-01B	..			

Relinquished by: *APC/Matise* Received by: *UPS*  
Date: 4-19-17 Date: 4-19-17

Relinquished by: \_\_\_\_\_ Received by: *APC*  
Date: \_\_\_\_\_ Date: APR 20 2017

**RECEIVED**

69695

3 of 3

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

E-mail: [apexresearch@chartermi.net](mailto:apexresearch@chartermi.net) Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-19-17

Project: 2113 Henderson St

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: Skay  TTP All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_

Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_

Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BioSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_

TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
03	45-45-01C	Plaster			
04	45-45-01D				
05	45-45-01E	↓			

RECEIVED

Relinquished by: APR 20 2017 Received by: URS

Date: 4-19-17 Date: 4-19-17

Relinquished by: \_\_\_\_\_ Received by: \_\_\_\_\_

Date: \_\_\_\_\_ Date: \_\_\_\_\_

***Tables***

**Table 1 - Summary of Hazardous Materials, 2113 Howden St., Muskegon Heights, Michigan**

<b>Hazardous Materials Description and Location</b>		
<b>Location</b>	<b>Material Description</b>	<b>Quantity</b>
Exterior	Automobile Tires	4
Kitchen	2' Fluorescent Light (Fixture and Ballast Only)	1
Kitchen	2' Fluorescent Bulb	1
Basement	Automobile Tires	1

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2113 Howden St., Muskegon Heights, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
HS-HM-01A	Roofing Shingle	No	M	Category I	ND	Exterior	NA
HS-HM-01B	Roofing Shingle	No	M	Category I	ND/ND/ND/ND	Exterior	NA
HS-HM-02A	Layered Vinyl	No	M	Category I	ND/30%CH/ND	Bathroom	54 sq. ft.
HS-HM-02B	Layered Vinyl	No	M	Category I	ND/NA/ND	Bathroom	NA
HS-HM-03A	Yellow Pebble Linoleum	No	M	Category I	ND/ND	NW Bedroom	NA
HS-HM-03B	Yellow Pebble Linoleum	No	M	Category I	ND/ND	NW Bedroom	NA
HS-HM-04A	Green Vinyl Layered	No	M	Category I	ND/ND	Rear Entry	NA
HS-HM-04B	Green Vinyl Layered	No	M	Category I	ND/ND	Rear Entry	NA
HS-HM-05A	1'x1' Textured White Ceiling Tile	Yes	M	Category II	ND	Kitchen	NA
HS-HM-05B	1'x1' Textured White Ceiling Tile	Yes	M	Category II	ND	Rear Entry	NA
HS-HM-06A	Drywall and Joint Compound	No	M	Category II	ND/1.00%CH-PC	Dining Ceiling	NA
HS-HM-06B	Drywall and Joint Compound	No	M	Category II	ND/0.75%CH-PC	Rear Entry Wall	NA
HS-HM-07A	Glazing	Yes	M	Category II	ND	Dining	NA
HS-HM-07B	Glazing	Yes	M	Category II	ND	Living	NA
HS-HM-08A	Vinyl Layered Woodgrain	No	M	Category I	ND/ND/ND/ND	NE Bedroom	NA
HS-HM-08B	Vinyl Layered Woodgrain	No	M	Category I	ND/ND/ND/ND	NE Bedroom	NA
HS-HM-09A	Brown Leaf Linoleum	No	M	Category I	ND	Basement Stairway	NA
HS-HM-09B	Brown Leaf Linoleum	No	M	Category I	ND	Basement Stairway	NA
HS-HM-10A	White Linoleum	No	M	Category I	ND	Hallway	NA
HS-HM-10B	White Linoleum	No	M	Category I	ND	Hallway	NA
HS-HS-01A	Plaster	No	S	Category II	ND/ND	Kitchen Ceiling	NA
HS-HS-01B	Plaster	No	S	Category II	ND/ND	NW Bedroom Ceiling	NA
HS-HS-01C	Plaster	No	S	Category II	ND/ND	NE Bedroom Wall	NA
HS-HS-01D	Plaster	No	S	Category II	ND/ND	Kitchen Wall	NA
HS-HS-01E	Plaster	No	S	Category II	ND/ND/0.50%CH-PC	Living Wall	NA

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2113 Howden St., Muskegon Heights, Michigan**

**Notes:**

Material Types

M = Miscellaneous building material  
TSI = Thermal System Insulation  
S = Surfacing Material  
PC = Point Count Analysis  
CH = Chrysotile Asbestos

Abbreviations

NQ = Not quantified  
NA = Not applicable  
ND = Not detected. Laboratory result is less than 1 % asbestos  
lin. ft. = linear feet  
sq. ft. = square feet

Asbestos Containing Material (ACM) is defined as any material containing more than 1 percent asbestos as determined utilizing Polarized Light Microscopy.

**Table 3 - Summary of Presumed Asbestos Containing Materials, 2113 Howden St., Muskegon Heights, Michigan**

<b>Asbestos Containing Material Description and Location</b>					
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Condition</b>	<b>Material Type</b>	<b>Approx. Quantity</b>
Basement (misc. HVAC wrap on abandoned cold air return duct in crawl space, 25 sq. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	25 sq. ft.

**Notes:**

Material Types

- M = Miscellaneous building material
- TSI = Thermal System Insulation
- S = Surfacing Material

Abbreviations

- lin. ft. = linear feet
- sq. ft. = square feet



**Table 4 - Summary of All Asbestos Containing Materials, 2113 Howden St., Muskegon Heights, Michigan**

<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Bathroom	Layered Vinyl	No	54 sq. ft.
<b>Total</b>			<b>54 sq. ft.</b>
<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Basement (misc. HVAC wrap on abandoned cold air return duct in crawl space, 25 sq. ft.)	HVAC Duct Wrap	Yes	25 sq. ft.
<b>Total</b>			<b>25 sq. ft.</b>

**Notes:**

Abbreviations

lin. ft. = linear feet

sq. ft. = square feet

**Shaded/Bolded** = Friable ACM and any Category I and Category II non-friable ACM that has a high probability of becoming crumbled, pulverized, or reduced to powder by the demolition or renovation activities that must be properly abated prior to commencement of any demolition/renovation activities.

Demolition/renovation activities completed with intact Category I non-friable ACM are regulated by OSHA and must be completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note that a Negative Pressure Enclosure must be utilized during abatement when Site Conditions Warrant. Examples of these conditions include the abatement of Plaster and Vermiculite insulation, HVAC Duct Wrap in Poor Condition, and Air-O-Cell/Mag Pipe Wrap. Conditions outside of these should be assessed on a case by case basis during the Asbestos Abatement Contractors site walk and Work Plan Preparation.



P.O. Box 13216  
Lansing, MI 48901  
Phone: 888.449.4566  
Fax: 888.448.8739  
www.redcedarconsulting.net

May 8, 2017

Mr. Tim Burgess  
Muskegon County Land Bank  
Land Bank Coordinator  
173 E. Apple Avenue, Suite 104  
Muskegon, MI 49442

***RE: Asbestos Containing Material and Hazardous Materials Inspection  
2116 Jefferson St., Muskegon Heights, MI 49444  
Parcel ID: 61-26-185-052-0020-00***

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 2116 Jefferson St., Muskegon Heights, Michigan (Subject Property). This inspection was completed at the request of the Muskegon County Land Bank to comply with the United States Environmental Protection Agency (USEPA) requirements for demolition and renovation set forth under the National Emissions Standards for Hazardous Air Pollutants (NESHAP, 40 CFR Part 61). This inspection was also completed to comply with the Occupational Safety and Health Administration (OSHA) Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

### **SUBJECT PROPERTY**

The Subject Property is comprised of a .12 acre residential parcel which contains a detached garage and approximate 936 square foot residential building (the Building) constructed in 1920. The Building was constructed on a concrete block basement with one aboveground floor. The exterior walls of the Building were finished with clapboard siding while the roof was sealed with asphalt shingles. The Building can be further divided into a front entry, living room, dining room, kitchen, bath, three bedroom and a rear entry.

### **VISUAL INSPECTION AND SAMPLING**

#### **Asbestos Containing Materials Inspection**

Aaron Paquet and Darrell DeMasters of Red Cedar Consulting (Red Cedar), accredited State Of Michigan/EPA Asbestos Building Inspectors (Accreditation Numbers A30955 and A31159, respectively) who completed training per the Michigan Asbestos Workers Accreditation Act 440, completed an inspection of the Subject Property on April 19, 2017 for suspected asbestos containing building materials.

This inspection, and subsequent sample collection was completed in accordance with the USEPA Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763) assessment and sampling protocol.

During the completion of the inspection, each area of the Subject Property was visually inspected for asbestos containing building materials (ACBM). Following the completion of the visual inspection, Red Cedar staff identified each suspect area of friable and non-friable ACBM and sorted them into one of three homogenous categories for sampling purposes. AHERA defines friable as a material that when dry, may be crumbled, pulverized, or reduced to powder by hand pressure. A homogenous area is defined by OSHA as an area of surfacing, thermal system insulation (TSI) or miscellaneous material that is uniform in color and texture. Surfacing materials are most commonly found in sprayed-on, troweled-on or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members. TSI refers to materials applied to pipes, fittings, boilers, ductwork, or other components to prevent heat loss or gain, or condensation. Any material that does not fall under the surfacing or TSI category, such as floor tile, drywall, and acoustical ceiling tile are placed into the miscellaneous materials category.

Following the completion of the visual inspection, Red Cedar staff identified the following materials as suspect ACBM:

- Roofing Shingle
- Linoleum
- Vinyl Flooring
- 9"x9" Vinyl Tile
- 1'x1' Ceiling Tile
- 12"x12" Vinyl Tile
- Drywall and Joint Compound
- Glazing
- Plaster

Red Cedar staff collected twenty five samples of suspect ACBM separated into eleven distinct homogenous groups for laboratory analysis. Samples were collected and submitted to APEX Research Inc. Laboratories (APEX) (Accreditation Number 102118-0) for laboratory analysis. Analysis was completed utilizing polarized light microscopy (PLM) which is the Environmental Protection Agency (EPA) approved method for analysis of bulk materials for asbestos. PLM analysis completed pursuant to method (EPA 600/M4-82-020) identifies asbestos fiber bundles by the visual properties displayed when the sample is treated with various dispersion staining liquids. The laboratory report completed following the sample analysis indicates if asbestos is present, and at what percentage along with a description and percentage of other fibrous and non-fibrous materials and sample color. Chain-of-custody documentation was followed from sample collection through shipping and receiving of the samples at the designated laboratory. The documentation assures that samples will meet the quality assurance/quality control measures defined by AHERA. The laboratory analytical report prepared by APEX for the twenty five samples is included as Attachment A.

## **Hazardous Materials Inspection**

On April 19, 2017 the Subject Property was also inspected for the presence of hazardous materials which include but are not limited to polychlorinated biphenyls (PCBs) and potential mercury containing equipment and any items or containers that may contain or be classified as a hazardous or regulated material. Each material, if identified, was documented along with the approximate location. Any materials identified as hazardous are included in Table 1.

## **INSPECTION RESULTS AND RECOMMENDATIONS**

During the completion of the asbestos inspection, twenty five samples of suspect ACM were collected and are documented in Table 2 along with the Red Cedar sample number, description, friability, material type, ACM classification, sample location, material quantity and laboratory analytical results.

ACM, as defined by the USEPA NESHAP is “any material containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763 Section 1, Polarized Light Microscopy”.

Friable ACM is defined by NESHAP as any material containing more than 1 percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Friable ACM is a concern due the ease of unintentionally disturbing the ACM which may result in “visible emissions” which is known as a Fiber Release Episode.

Non-friable asbestos-containing material is defined as “material containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACM’s are separated into Category I and Category II ACM. Category I ACM is any asbestos containing packing’s, gaskets, resilient floor coverings (vinyl floor tile and linoleum are examples of these) and asphalt roofing products. Category II ACM is stated by NESHAP as any material excluding Category I non-friable ACM such as drywall, plaster or fiberboard insulation.

### **Presumed Asbestos Containing Material**

Presumed Asbestos Containing Materials (PACM) are suspect surfacing, TSI and miscellaneous materials found in buildings constructed prior to 1980 which are classified as and due to the age of the structure, are assumed to be ACM and do not require sample collection and analysis. OSHA dictates that PACM may be “rebutted” following a complete inspection pursuant to AHERA protocol.

The HVAC Duct Wrap located in the Building was classified as PACM due to the age of the structure and samples were not collected.

Table 3 lists the location, material description, friability, condition, material type (surfacing, thermal or miscellaneous) and approximate quantity of all PACM documented at the Subject Property.

Table 4 provides a summary all ACM documented at the Subject Property which includes the material location, description, and approximate quantity.

### **Friable ACM's**

Window glazing samples collected from windows in the living room and basement were found to contain up to 5% asbestos following analysis. The assessment to quantify the extent of this material identified thirteen windows at the following locations that would fall into the same homogenous group. The locations of the windows are listed below:

- Garage (2 windows 36" wide x 36" tall)
- Living (1 window 28" wide x 58" tall)
- Dining (2 windows 28" wide x 58" tall)
- Front Entry (1 window 28" wide x 48" tall)
- NW Bedroom (1 window 28" wide x 48" tall)
- Kitchen (2 windows 24" wide x 46" tall)
- Basement (4 windows 20" wide x 30" tall)

Duct Wrap identified in the building in conjunction with the forced air heating system is classified as friable ACM. The visual assessment to quantify the extent of this material identified HVAC Duct Wrap at the following locations within the basement and first floor:

- Living (1 register, 15 sq. ft.)
- Dining (1 register, 15 sq. ft.)
- Bathroom (1 register, 15 sq. ft.)
- Basement (misc. HVAC wrap on Cold Air Ductwork, 50 sq. ft.)
- Basement (misc. HVAC on floor, 10 sq. ft.)
- Basement (12 in. dia. HVAC Wrapped Ductwork, 20 lin. ft.)

### **Category I ACM**

Two types of resilient floor covering (9"x9" Red Vinyl Tile and 9"x9" Green Vinyl Tile) located within the kitchen were found to contain up to 2% Chrysotile asbestos. The assessment to quantify the extent of this material identified approximately 130 sq. ft. of this material within the Building.

### **Category II ACM**

No Category II non-friable ACM was identified during the completion of this inspection.

## **RECOMMENDATIONS**

### **Asbestos Containing Materials**

HVAC material identified in the Building system and listed below is classified as friable ACM and should be removed prior to any renovation/demolition activities.

- Living (1 register, 15 sq. ft.)
- Dining (1 register, 15 sq. ft.)
- Bathroom (1 register, 15 sq. ft.)
- Basement (misc. HVAC wrap on Cold Air Ductwork, 50 sq. ft.)

- Basement (misc. HVAC on floor, 10 sq. ft.)
- Basement (12 in. dia. HVAC Wrapped Ductwork, 20 lin. ft.)

Friable asbestos containing window glazing was identified on thirteen windows throughout the Building. The locations of these windows that should be abated prior to demolition/renovation activities are listed below:

- Living (1 window 28" wide x 58" tall)
- Dining (2 windows 28" wide x 58" tall)
- Front Entry (1 window 28" wide x 48" tall)
- NW Bedroom (1 window 28" wide x 48" tall)
- Kitchen (2 windows 24" wide x 46" tall)
- Basement (4 windows 20" wide x 30" tall)

Please note: Other different sized windows are located throughout the Building but these windows were assessed and found to be constructed either without window glazing or were sampled and found to not contain asbestos and therefore are not required to be removed.

The Category I resilient floor coverings (9"x9" Red Vinyl Tile and 9"x9" Green Vinyl Tile) are non-friable ACM's that may be left in place as long as the demolition/renovation activities are completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note: The location of samples obtained during this inspection were in a random fashion and areas that were not identified during this inspection may be damaged or have become damaged since the inspection was completed. If Category I or Category II friable materials are discovered prior to or during the demolition/renovation process, these materials must be abated prior to commencement of any demolition/renovation activities at the Subject Property.

### **Hazardous Materials**

Hazardous Materials identified at the Subject Property and documented in Table 1 which require proper removal and disposal consist of the following items:

- Automobile Tire (>240)
- Smoke Detector (4)
- Thermostat (1)

### **REGULATORY REQUIREMENTS**

A Notification of Intent to Renovate/Demolish form must be filed with the Michigan Department of Environmental Quality- Air Quality Division at least 10 working days prior to any renovation or demolition activities at a site.

The Notification of Intent to Renovate/Demolish form must also be completed and submitted to the MIOSHA-Asbestos Program whenever demolition, encapsulation and/or renovation activities at a site involving greater than ten lineal feet and/or fifteen square feet of ACM will be completed.

Regulated asbestos containing materials per NESHAP (40 CFR Part 61) which falls into any of the following categories are ACM's that must be removed prior to any renovation/demolition activities at the Subject Property.

- Friable asbestos material.
- Category I non-friable ACM that has become friable.
- Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading.
- Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations.

Asbestos abatement should only be performed by a certified asbestos abatement contractor licensed to complete abatement work. The contractor must also follow the standards and requirements set forth per the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61).

Additional information regarding the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61) can be obtained by contacting the associated agency below.

NESHAP Asbestos Program  
Department of Environmental Quality  
Phone: 517-284-6777

MIOSHA-CSHD-Asbestos Program  
State of Michigan  
Phone: 517-284-7680  
Email: asbestos@michigan.gov

## **DISCLAIMER**

Red Cedar Consulting performed destructive testing methods in an attempt to access and inspect all areas of the Building. Unfortunately, due to the age of construction along with multiple additions/renovations that may have been completed on the Building, additional inspections may be required if suspect ACM material not documented within this report is encountered during renovation/demolition activities.

This report was prepared at the request and for exclusive use by the Muskegon County Land Bank and may not be reproduced or sold without written permission from Red Cedar Consulting.

We appreciate the opportunity to provide the requested services. Please contact us at (888) 449-4566 with any questions or concerns.

Sincerely,  
**Red Cedar Consulting**



Aaron Paquet  
Michigan/EPA Certified Asbestos Building Inspector  
(A30955)

Red Cedar Consulting

***Attachment 1***  
***APEX Research Laboratory Analytical Results***





# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 2116 Jefferson St.

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69694  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/24/17  
Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69694 - 01 Cust. #: JS-HM-01A Material: Roofing Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 15% Other - 85%
Lab ID #: 69694 - 02 Cust. #: JS-HM-01B Material: Roofing Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 15% Other - 85%
Lab ID #: 69694 - 03 Cust. #: JS-HM-02A Material: Cream Linoleum Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Fiberglass - 2% Other - 78%

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: 2116 Jefferson St.

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69694  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/24/17  
Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69694 - 04 Cust. #: JS-HM-02B Material: Cream Linoleum Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Fiberglass - 5% Other - 80%
Lab ID #: 69694 - 05 Cust. #: JS-HM-03A Material: Layered Vinyl/Linoleum/Glue Location: Appearance: grey, fibrous, nonhomogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Fiberglass - 5% Other - 80%
Lab ID #: 69694 - 05a Cust. #: JS-HM-03A Material: Linoleum Location: Appearance: white, fibrous, nonhomogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Fiberglass - 5% 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: 2116 Jefferson St.

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69694  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/24/17  
Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69694 - 05b Cust. #: JS-HM-03A Material: Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Fiberglass - 5% Other - 80%
Lab ID #: 69694 - 06 Cust. #: JS-HM-03B Material: Layered Vinyl/Linoleum/Glue Location: Appearance: grey, fibrous, nonhomogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Fiberglass - 5% Other - 80%
Lab ID #: 69694 - 06a Cust. #: JS-HM-03B Material: Linoleum Location: Appearance: white, fibrous, nonhomogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Fiberglass - 5% 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: 2116 Jefferson St.

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Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69694 - 06b Cust. #: JS-HM-03B Material: Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Fiberglass - 5% Other - 80%
Lab ID #: 69694 - 07 Cust. #: JS-HM-04A Material: 9x9 Red VFT Location: Appearance: red, fibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>YES</b> Chrysotile - 2.00%  <b>POINT COUNT RESULT</b>	Other - 98.00%
Lab ID #: 69694 - 07a Cust. #: JS-HM-04A Material: Mastic Location: Appearance: black, nonfibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 2116 Jefferson St.

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69694  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/24/17  
Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69694 - 07b Cust. #: JS-HM-04A Material: Flooring/Felt Location: Appearance: green, fibrous, nonhomogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 60% Other - 40%
Lab ID #: 69694 - 08 Cust. #: JS-HM-04B Material: 9x9 Red VFT Location: Appearance: Layer: 1 of 3	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69694 - 08a Cust. #: JS-HM-04B Material: Mastic Location: Appearance: black, nonfibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Robert T. Letarte Jr., Laboratory Director

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P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69694  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/24/17  
Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69694 - 08b Cust. #: JS-HM-04B Material: Flooring/Felt Location: Appearance: green, fibrous, nonhomogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 60% Other - 40%
Lab ID #: 69694 - 09 Cust. #: JS-HM-05A Material: 9x9 Green VFT Location: Appearance: brown, fibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>YES</b> Chrysotile - 1.50%  <b>POINT COUNT RESULT</b>	Other - 98.50%
Lab ID #: 69694 - 09a Cust. #: JS-HM-05A Material: Mastic Location: Appearance: black, nonfibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Lansing, MI 48901

ARI Report # 17-69694  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/24/17  
Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69694 - 09b Cust. #: JS-HM-05A Material: Flooring Location: Appearance: green, fibrous, nonhomogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 60% Other - 40%
Lab ID #: 69694 - 10 Cust. #: JS-HM-05B Material: 9x9 Green VFT Location: Appearance: Layer: 1 of 3	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69694 - 10a Cust. #: JS-HM-05B Material: Mastic Location: Appearance: black, nonfibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Project: 2116 Jefferson St.

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Lansing, MI 48901

ARI Report # 17-69694  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/24/17  
Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69694 - 10b Cust. #: JS-HM-05B Material: Flooring Location: Appearance: green, fibrous, nonhomogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 60% Other - 40%
Lab ID #: 69694 - 11 Cust. #: JS-HM-06A Material: 1x1 White Smooth Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 69694 - 12 Cust. #: JS-HM-06B Material: 1x1 White Smooth Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0





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## Test Method, Polarized Light Microscopy (PLM)

Project: 2116 Jefferson St.

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69694  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/24/17  
Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69694 - 13 Cust. #: JS-HM-07A Material: 12x12 Tan VFT Location: Appearance: brown,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69694 - 13a Cust. #: JS-HM-07A Material: Glue Location: Appearance: brown,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69694 - 14 Cust. #: JS-HM-07B Material: 12x12 Tan VFT Location: Appearance: brown,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Robert T. Letarte Jr., Laboratory Director

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Project: 2116 Jefferson St.

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P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69694  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/24/17  
Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69694 - 14a Cust. #: JS-HM-07B Material: Glue Location: Appearance: brown,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69694 - 15 Cust. #: JS-HM-08A Material: Drywall Location: Appearance: beige,fibrous,nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Fiberglass - 1% Other - 79%
Lab ID #: 69694 - 15a Cust. #: JS-HM-08A Material: Joint Compound/Mesh Location: Appearance: white,fibrous,nonhomogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 5% Other - 95%

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Robert T. Letarte Jr., Laboratory Director

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Project: 2116 Jefferson St.

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Lansing, MI 48901

ARI Report # 17-69694  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/24/17  
Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69694 - 16 Cust. #: JS-HM-08B Material: Drywall Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69694 - 16a Cust. #: JS-HM-08B Material: Joint Compound Location: Appearance: white, fibrous, nonhomogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 5% Other - 95%
Lab ID #: 69694 - 17 Cust. #: JS-HM-09A Material: Window Glazing Location: House Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 1.25%  <b>POINT COUNT RESULT</b>	Other - 98.75%

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Project: 2116 Jefferson St.

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Lansing, MI 48901

ARI Report # 17-69694  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/24/17  
Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69694 - 18 Cust. #: JS-HM-09B Material: Window Glazing Location: House Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69694 - 19 Cust. #: JS-HM-10A Material: Window Glazing Location: Basement Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 5%	Other - 95%
Lab ID #: 69694 - 20 Cust. #: JS-HM-10B Material: Window Glazing Location: Basement Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	

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ARI Report # 17-69694  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/24/17  
Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69694 - 21 Cust. #: JS-HS-01A Material: Plaster Texture Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69694 - 21a Cust. #: JS-HS-01A Material: Plaster Finish Coat Location: Appearance: white,nonfibrous,homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69694 - 21b Cust. #: JS-HS-01A Material: Plaster Base Coat Location: Appearance: beige,fibrous,homogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 1% Other - 99%

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ARI Report # 17-69694  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/24/17  
Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69694 - 22 Cust. #: JS-HS-01B Material: Plaster Texture Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69694 - 22a Cust. #: JS-HS-01B Material: Plaster Finish Coat Location: Appearance: white,nonfibrous,homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69694 - 22b Cust. #: JS-HS-01B Material: Plaster Base Coat Location: Appearance: beige,fibrous,homogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 1% Other - 99%

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Lansing, MI 48901

ARI Report # 17-69694  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/24/17  
Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69694 - 23 Cust. #: JS-HS-01C Material: Plaster Texture Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69694 - 23a Cust. #: JS-HS-01C Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69694 - 23b Cust. #: JS-HS-01C Material: Plaster Base Coat Location: Appearance: beige, fibrous, homogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 1% Other - 99%

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ARI Report # 17-69694  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/24/17  
Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69694 - 24 Cust. #: JS-HS-01D Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69694 - 24a Cust. #: JS-HS-01D Material: Plaster Base Coat Location: Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 1% Other - 99%
Lab ID #: 69694 - 25 Cust. #: JS-HS-01E Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Lansing, MI 48901

ARI Report # 17-69694  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/24/17  
Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69694 - 25a Cust. #: JS-HS-01E Material: Plaster Base Coat Location: Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 1% Other - 99%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	
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

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NVLAP Lab Code 102118-0

69694

1013

# MILVA research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

E-mail: apexresearch@charterni.net

Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-19-17

Project: 2116 *Self Storage*

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: 5 day All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BioSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	JS-HM-01A	Roofing Shingles			
2	JS-HM-01B	" "			
3	JS-HM-02A	Down Spout			
4	JS-HM-02B	" "			
5	JS-HM-03A	Delayed Vinyl			
6	JS-HM-03B	" "			
7	JS-HM-04A	9x9 Red VET			
8	JS-HM-04B	" "			
9	JS-HM-05A	9x9 Green VET			
10	JS-HM-05B	" "			
11	JS-HM-06A	1x1 White smooth CT			

Relinquished by: *[Signature]* Received by: *US*  
Date: 4-19-17 Date: 4-19-17

Relinquished by: \_\_\_\_\_ Received by: *[Signature]*  
Date: \_\_\_\_\_ Date: APR 20 2017

69694

2 of 3

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990



E-mail: apexresearch@chartermi.net

Fax: 734-449-9991

Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-19-17

Project: 2116 Jefferson St.

Project #:

Contact Person: Aaron Paquet

Lab Use Only
Log-In _____
Report _____

Turn Around Times: (Circle One) PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: Seal All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_

Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_

Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ Biosis \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_

TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	JS-HM-06B	1x1 white smooth CT			
13	JS-HM-07A	12x12 tan VFT			
14	JS-HM-07B	" " " "			
15	JS-HM-08A	Regwall + joint compound			
16	JS-HM-08B	" " " "			
17	JS-HM-09A	Window Siding (House)			
18	JS-HM-09B	" " " "			
19	JS-HM-10A	Window Siding (Basement)			
20	JS-HM-10B	" " " "			
21	JS-HS-01A	Paint			
22	JS-HS-01B	" "			

Relinquished by: Alex Maciste Received by: UPS

Date: 4-19-17 Date: 4-19-17

Relinquished by: \_\_\_\_\_ Received by: \_\_\_\_\_

Date: \_\_\_\_\_ Date: \_\_\_\_\_

**RECEIVED**

69694

3 of 3

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

E-mail: apexresearch@chartermi.net Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-19-17

Project: 2116 Jefferson St.

Project #: \_\_\_\_\_

Contact Person: Aaron Paquet

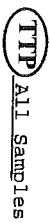
## Turn Around Times: (Circle One)

P1M EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: 5 day



Asbestos: Bulk  Wipe  Point Count  PCM

Lead: Bulk  Wipe  Air  Paint  Soil

Mold: Bulk  Tape  BioSIS  Other  Viable

TEM: AHERA 7400  Bulk/NOB  EPA Level II

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
23	J5-H5-01C	Plaster			
24	J5-H5-01D				
25	J5-H5-01E	↓			

Relinquished by: [Signature] Received by: UPS

Date: 4-19-17 Date: 4-19-17

Relinquished by: \_\_\_\_\_ Received by: **RECEIVED**

Date: \_\_\_\_\_ Date: **APR 20 2017**

***Tables***

**Table 1 - Summary of Hazardous Materials, 2116 Jefferson St., Muskegon Heights, Michigan**

<b>Hazardous Materials Description and Location</b>		
<b>Location</b>	<b>Material Description</b>	<b>Quantity</b>
Exterior	Automobile Tire	30
Garage	Automobile Tire	10
Living Room	Smoke Detector	1
Dining	Smoke Detector	1
Dining	Thermostat	1
N Bedroom	Smoke Detector	1
NE Bedroom	Smoke Detector	1
Kitchen	Automobile Tire	1
Basement	Automobile Tire	>200

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2116 Jefferson St., Muskegon Heights, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
JS-HM-01A	Roofing Shingle	No	M	Category I	ND	Exterior	NA
JS-HM-01B	Roofing Shingle	No	M	Category I	ND	Exterior	NA
JS-HM-02A	Cream Linoleum	No	M	Category I	ND	Front Entry	NA
JS-HM-02B	Cream Linoleum	No	M	Category I	ND	Front Entry	NA
JS-HM-03A	Layered Vinyl	No	M	Category I	ND/ND/ND	Dining	NA
JS-HM-03B	Layered Vinyl	No	M	Category I	ND/ND/ND	Dining	NA
JS-HM-04A	9"x9" Red Vinyl Tile	No	M	Category I	2.00%CH-PC/ND/ND	Kitchen	65 sq. ft.
JS-HM-04B	9"x9" Red Vinyl Tile	No	M	Category I	NA/ND/ND	Kitchen	NA
JS-HM-05A	9"x9" Green Vinyl Tile	No	M	Category I	1.50%CH-PC/ND/ND	Kitchen	65 sq. ft.
JS-HM-05B	9"x9" Green Vinyl Tile	No	M	Category I	NA/ND/ND	Kitchen	NA
JS-HM-06A	1'x1' White Smooth Ceiling Tile	Yes	M	Category II	ND	Front Entry	NA
JS-HM-06B	1'x1' White Smooth Ceiling Tile	Yes	M	Category II	ND	NW Bedroom	NA
JS-HM-07A	12"x12" Tan Vinyl Tile	No	M	Category I	ND/ND	Rear Entry	NA
JS-HM-07B	12"x12" Tan Vinyl Tile	No	M	Category I	ND/ND	Rear Entry	NA
JS-HM-08A	Drywall and Joint Compound	No	M	Category II	ND/ND	NW Bedroom Wall	NA
JS-HM-08B	Drywall and Joint Compound	No	M	Category II	ND/ND	NE Bedroom Wall	NA
JS-HM-09A	Glazing (House)	Yes	M	Category II	1.25%CH-PC	Living	9 Windows
JS-HM-09B	Glazing (House)	Yes	M	Category II	NA	Dining	NA
JS-HM-10A	Glazing (Basement)	Yes	M	Category II	5%CH	Basement	4 Windows
JS-HM-10B	Glazing (Basement)	Yes	M	Category II	NA	Basement	NA
JS-HS-01A	Plaster	No	S	Category II	ND/ND/ND	N Bedroom Ceiling	NA
JS-HS-01B	Plaster	No	S	Category II	ND/ND/ND	Bathroom Ceiling	NA
JS-HS-01C	Plaster	No	S	Category II	ND/ND/ND	Bathroom Wall	NA
JS-HS-01D	Plaster	No	S	Category II	ND/ND	N Bedroom Wall	NA
JS-HS-01E	Plaster	No	S	Category II	ND/ND	NE Bedroom Closet Wall	NA

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2116 Jefferson St., Muskegon Heights, Michigan**

**Notes:**

Material Types

- M = Miscellaneous building material
- TSI = Thermal System Insulation
- S = Surfacing Material
- PC = Point Count Analysis
- CH = Chrysotile Asbestos

Abbreviations

- NQ = Not quantified
- NA = Not applicable
- ND = Not detected. Laboratory result is less than 1 % asbestos
- lin. ft. = linear feet
- sq. ft. = square feet

Asbestos Containing Material (ACM) is defined as any material containing more than 1 percent asbestos as determined utilizing Polarized Light Microscopy.



**Table 3 - Summary of Presumed Asbestos Containing Materials, 2116 Jefferson St., Muskegon Heights, Michigan**

<b>Asbestos Containing Material Description and Location</b>					
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Condition</b>	<b>Material Type</b>	<b>Approx. Quantity</b>
Living (1 register, 15 sq. ft.) Dining (1 register, 15 sq. ft.) Bathroom (1 register, 15 sq. ft.) Basement (misc. HVAC wrap on Cold Air Ductwork, 50 sq. ft.) Basement (misc. HVAC on floor, 10 sq. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	105 sq. ft.
Basement (12 in. dia. HVAC Wrapped Ductwork, 20 lin. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	20 lin. ft.

**Notes:**

Material Types

- M = Miscellaneous building material
- TSI = Thermal System Insulation
- S = Surfacing Material

Abbreviations

- lin. ft. = linear feet
- sq. ft. = square feet

**Table 4 - Summary of All Asbestos Containing Materials, 2116 Jefferson St., Muskegon Heights, Michigan**

<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Kitchen	9"x9" Red Vinyl Tile	No	65 sq. ft.
Kitchen	9"x9" Green Vinyl Tile	No	65 sq. ft.
<b>Total</b>			<b>130 sq. ft.</b>
<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Living (1 register, 15 sq. ft.) Dining (1 register, 15 sq. ft.) Bathroom (1 register, 15 sq. ft.) Basement (misc. HVAC wrap on Cold Air Ductwork, 50 sq. ft.) Basement (misc. HVAC on floor, 10 sq. ft.)	HVAC Duct Wrap	Yes	105 sq. ft.
<b>Total</b>			<b>105 sq. ft.</b>
<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Basement (12 in. dia. HVAC Wrapped Ductwork, 20 lin. ft.)	HVAC Duct Wrap	Yes	20 lin. ft.
<b>Total</b>			<b>20 lin. ft.</b>
<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Garage (2 windows 36" wide x 36" tall)	Glazing	Yes	2 Windows
Living (1 window 28" wide x 58" tall)	Glazing	Yes	1 Window
Dining (2 windows 28" wide x 58" tall)	Glazing	Yes	2 Windows
Front Entry (1 window 28" wide x 48" tall)	Glazing	Yes	1 Window
NW Bedroom (1 window 28" wide x 48" tall)	Glazing	Yes	1 Window
Kitchen (2 windows 24" wide x 46" tall)	Glazing	Yes	2 Windows
Basement (4 windows 20" wide x 30" tall)	Glazing	Yes	4 Windows
<b>Total</b>			<b>13 Windows</b>

## Table 4 - Summary of All Asbestos Containing Materials, 2116 Jefferson St., Muskegon Heights, Michigan

### Notes:

#### Abbreviations

lin. ft. = linear feet

sq. ft. = square feet

**Shaded/Bolded** = Friable ACM and any Category I and Category II non-friable ACM that has a high probability of becoming crumbled, pulverized, or reduced to powder by the demolition or renovation activities that must be properly abated prior to commencement of any demolition/renovation activities.

Demolition/renovation activities completed with intact Category I non-friable ACM are regulated by OSHA and must be completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note that a Negative Pressure Enclosure must be utilized during abatement when Site Conditions Warrant. Examples of these conditions include the abatement of Plaster and Vermiculite insulation, HVAC Duct Wrap in Poor Condition, and Air-O-Cell/Mag Pipe Wrap. Conditions outside of these should be assessed on a case by case basis during the Asbestos Abatement Contractors site walk and Work Plan Preparation.



P.O. Box 13216  
Lansing, MI 48901  
Phone: 888.449.4566  
Fax: 888.448.8739  
www.redcedarconsulting.net

May 8, 2017

Mr. Tim Burgess  
Muskegon County Land Bank  
Land Bank Coordinator  
173 E. Apple Avenue, Suite 104  
Muskegon, MI 49442

***RE: Asbestos Containing Material and Hazardous Materials Inspection  
2140 Mcilwraith St., Muskegon Heights, MI 49444  
Parcel ID: 61-26-650-007-0027-00***

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 2140 Mcilwraith St., Muskegon Heights, Michigan (Subject Property). This inspection was completed at the request of the Muskegon County Land Bank to comply with the United States Environmental Protection Agency (USEPA) requirements for demolition and renovation set forth under the National Emissions Standards for Hazardous Air Pollutants (NESHAP, 40 CFR Part 61). This inspection was also completed to comply with the Occupational Safety and Health Administration (OSHA) Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

### **SUBJECT PROPERTY**

The Subject Property is comprised of a .21 acre residential parcel which contains an approximate 1,149 square foot residential building (the Building) constructed in 1940. The Building was constructed on a concrete block basement with one aboveground floor. The exterior walls of the Building were finished with clapboard and shingle siding while the roof was sealed with asphalt shingles. The Building can be further divided into a front entry, living room, kitchen, bath, and four bedrooms.

### **VISUAL INSPECTION AND SAMPLING**

#### **Asbestos Containing Materials Inspection**

Aaron Paquet and Darrell DeMasters of Red Cedar Consulting (Red Cedar), accredited State Of Michigan/EPA Asbestos Building Inspectors (Accreditation Numbers A30955 and A31159, respectively) who completed training per the Michigan Asbestos Workers Accreditation Act 440, completed an inspection of the Subject Property on April 19, 2017 for suspected asbestos containing building materials.

This inspection, and subsequent sample collection was completed in accordance with the USEPA Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763) assessment and sampling protocol.

During the completion of the inspection, each area of the Subject Property was visually inspected for asbestos containing building materials (ACBM). Following the completion of the visual inspection, Red Cedar staff identified each suspect area of friable and non-friable ACBM and sorted them into one of three homogenous categories for sampling purposes. AHERA defines friable as a material that when dry, may be crumbled, pulverized, or reduced to powder by hand pressure. A homogenous area is defined by OSHA as an area of surfacing, thermal system insulation (TSI) or miscellaneous material that is uniform in color and texture. Surfacing materials are most commonly found in sprayed-on, troweled-on or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members. TSI refers to materials applied to pipes, fittings, boilers, ductwork, or other components to prevent heat loss or gain, or condensation. Any material that does not fall under the surfacing or TSI category, such as floor tile, drywall, and acoustical ceiling tile are placed into the miscellaneous materials category.

Following the completion of the visual inspection, Red Cedar staff identified the following materials as suspect ACBM:

- Roofing Shingle
- Shingle Siding
- Linoleum
- 12"x12" Vinyl Tile
- 1'x1' Ceiling Tile
- Drywall and Joint Compound
- Glazing

Red Cedar staff collected twenty four samples of suspect ACBM separated into twelve distinct homogenous groups for laboratory analysis. Samples were collected and submitted to APEX Research Inc. Laboratories (APEX) (Accreditation Number 102118-0) for laboratory analysis. Analysis was completed utilizing polarized light microscopy (PLM) which is the Environmental Protection Agency (EPA) approved method for analysis of bulk materials for asbestos. PLM analysis completed pursuant to method (EPA 600/M4-82-020) identifies asbestos fiber bundles by the visual properties displayed when the sample is treated with various dispersion staining liquids. The laboratory report completed following the sample analysis indicates if asbestos is present, and at what percentage along with a description and percentage of other fibrous and non-fibrous materials and sample color. Chain-of-custody documentation was followed from sample collection through shipping and receiving of the samples at the designated laboratory. The documentation assures that samples will meet the quality assurance/quality control measures defined by AHERA. The laboratory analytical report prepared by APEX for the twenty four samples is included as Attachment A.

## **Hazardous Materials Inspection**

On April 19, 2017 the Subject Property was also inspected for the presence of hazardous materials which include but are not limited to polychlorinated biphenyls (PCBs) and potential mercury containing equipment and any items or containers that may contain or be classified as a hazardous or regulated material. Each material, if identified, was documented along with the approximate location. Any materials identified as hazardous are included in Table 1.

## **INSPECTION RESULTS AND RECOMMENDATIONS**

During the completion of the asbestos inspection, twenty four samples of suspect ACM were collected and are documented in Table 2 along with the Red Cedar sample number, description, friability, material type, ACM classification, sample location, material quantity and laboratory analytical results.

ACM, as defined by the USEPA NESHAP is “any material containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763 Section 1, Polarized Light Microscopy”.

Friable ACM is defined by NESHAP as any material containing more than 1 percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Friable ACM is a concern due the ease of unintentionally disturbing the ACM which may result in “visible emissions” which is known as a Fiber Release Episode.

Non-friable asbestos-containing material is defined as “material containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACM’s are separated into Category I and Category II ACM. Category I ACM is any asbestos containing packing’s, gaskets, resilient floor coverings (vinyl floor tile and linoleum are examples of these) and asphalt roofing products. Category II ACM is stated by NESHAP as any material excluding Category I non-friable ACM such as drywall, plaster or fiberboard insulation.

### **Presumed Asbestos Containing Material**

Presumed Asbestos Containing Materials (PACM) are suspect surfacing, TSI and miscellaneous materials found in buildings constructed prior to 1980 which are classified as and due to the age of the structure, are assumed to be ACM and do not require sample collection and analysis. OSHA dictates that PACM may be “rebutted” following a complete inspection pursuant to AHERA protocol.

The HVAC Duct Wrap located in the Building was classified as PACM due to the age of the structure and samples were not collected.

Table 3 lists the location, material description, friability, condition, material type (surfacing, thermal or miscellaneous) and approximate quantity of all PACM documented at the Subject Property.

Table 4 provides a summary all ACM documented at the Subject Property which includes the material location, description, and approximate quantity.

### **Friable ACM's**

A window glazing sample collected from a window in the basement was found to contain up to 5% asbestos following analysis. The assessment to quantify the extent of this material identified six windows at the following locations that would fall into the same homogenous group. The locations of the windows are listed below:

- Basement (6 windows 14" wide x 29" tall)

Duct Wrap identified in the building in conjunction with the forced air heating system is classified as friable ACM. The visual assessment to quantify the extent of this material identified HVAC Duct Wrap at the following locations within the basement and first floor:

- Basement (misc. HVAC wrap on 7 Boot Joints, 7 sq. ft.)

### **Category I ACM**

Two types of resilient floor covering (Yellow Linoleum and Gray 12"x12" Vinyl Tile) located within the NW and SE Bedrooms were found to contain up to 30% Chrysotile asbestos. The assessment to quantify the extent of this material identified approximately 200 sq. ft. of this material within the Building.

### **Category II ACM**

No Category II non-friable ACM was identified during the completion of this inspection.

## **RECOMMENDATIONS**

### **Asbestos Containing Materials**

HVAC material identified in the Building system and listed below is classified as friable ACM and should be removed prior to any renovation/demolition activities.

- Basement (misc. HVAC wrap on 7 Boot Joints, 7 sq. ft.)

Friable asbestos containing window glazing was identified on six windows throughout the Building. The locations of these windows that should be abated prior to demolition/renovation activities are listed below:

- Basement (6 windows 14" wide x 29" tall)

Please note: Other different sized windows are located throughout the Building but these windows were assessed and found to be constructed either without window glazing or were sampled and found to not contain asbestos and therefore are not required to be removed.

The Category I resilient floor coverings (Yellow Linoleum and Gray 12"x12" Vinyl Tile) are non-friable ACM's that may be left in place as long as the demolition/renovation activities are completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-26-650-007-0027-00

Please note: The location of samples obtained during this inspection were in a random fashion and areas that were not identified during this inspection may be damaged or have become damaged since the inspection was completed. If Category I or Category II friable materials are discovered prior to or during the demolition/renovation process, these materials must be abated prior to commencement of any demolition/renovation activities at the Subject Property.

### **Hazardous Materials**

Hazardous Materials identified at the Subject Property and documented in Table 1 which require proper removal and disposal consist of the following items:

- Smoke Detector (2)

### **REGULATORY REQUIREMENTS**

A Notification of Intent to Renovate/Demolish form must be filed with the Michigan Department of Environmental Quality- Air Quality Division at least 10 working days prior to any renovation or demolition activities at a site.

The Notification of Intent to Renovate/Demolish form must also be completed and submitted to the MIOSHA-Asbestos Program whenever demolition, encapsulation and/or renovation activities at a site involving greater than ten lineal feet and/or fifteen square feet of ACM will be completed.

Regulated asbestos containing materials per NESHAP (40 CFR Part 61) which falls into any of the following categories are ACM's that must be removed prior to any renovation/demolition activities at the Subject Property.

- Friable asbestos material.
- Category I non-friable ACM that has become friable.
- Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading.
- Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations.

Asbestos abatement should only be performed by a certified asbestos abatement contractor licensed to complete abatement work. The contractor must also follow the standards and requirements set forth per the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61).

Additional information regarding the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61) can be obtained by contacting the associated agency below.

NESHAP Asbestos Program  
Department of Environmental Quality  
Phone: 517-284-6777

MIOSHA-CSHD-Asbestos Program  
State of Michigan  
Phone: 517-284-7680  
Email: asbestos@michigan.gov



Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-26-650-007-0027-00

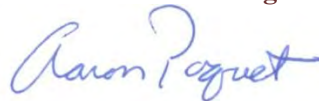
**DISCLAIMER**

Red Cedar Consulting performed destructive testing methods in an attempt to access and inspect all areas of the Building. Unfortunately, due to the age of construction along with multiple additions/renovations that may have been completed on the Building, additional inspections may be required if suspect ACM material not documented within this report is encountered during renovation/demolition activities.

This report was prepared at the request and for exclusive use by the Muskegon County Land Bank and may not be reproduced or sold without written permission from Red Cedar Consulting.

We appreciate the opportunity to provide the requested services. Please contact us at (888) 449-4566 with any questions or concerns.

Sincerely,  
**Red Cedar Consulting**



Aaron Paquet  
Michigan/EPA Certified Asbestos Building Inspector  
(A30955)

Red Cedar Consulting

***Attachment 1***  
***APEX Research Laboratory Analytical Results***



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 2140 Mcilwraith St

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69691  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/24/17  
Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69691 - 01 Cust. #: MS-HM-01A Material: Roofing Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 30% Other - 70%
Lab ID #: 69691 - 02 Cust. #: MS-HM-01B Material: Roofing Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 30% Other - 70%
Lab ID #: 69691 - 03 Cust. #: MS-HM-02A Material: Shingle Siding Location: Appearance: black, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%

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: 2140 Mcilwraith St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69691  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/24/17  
Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69691 - 04 Cust. #: MS-HM-02B Material: Shingle Siding Location: Appearance: black, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 60% Other - 40%
Lab ID #: 69691 - 05 Cust. #: MS-HM-03A Material: Brown Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69691 - 06 Cust. #: MS-HM-03B Material: Brown Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%

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: 2140 Mcilwraith St

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69691  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/24/17  
Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69691 - 07 Cust. #: MS-HM-04A Material: Tan 12x12 VFT Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69691 - 07a Cust. #: MS-HM-04A Material: Glue Location: Appearance: yellow,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69691 - 08 Cust. #: MS-HM-04B Material: Tan 12x12 VFT Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 2140 Mcilwraith St

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69691  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/24/17  
Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69691 - 08a Cust. #: MS-HM-04B Material: Glue Location: Appearance: yellow,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69691 - 09 Cust. #: MS-HM-05A Material: Cream Linoleum Location: Appearance: white,fibrous,nonhomogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 69691 - 09a Cust. #: MS-HM-05A Material: Floor Tile Location: Appearance: white,nonfibrous,homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> 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: 2140 Mcilwraith St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69691  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/24/17  
Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69691 - 09b Cust. #: MS-HM-05A Material: Glue Location: Appearance: yellow,nonfibrous,homogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69691 - 10 Cust. #: MS-HM-05B Material: Cream Linoleum Location: Appearance: white,fibrous,nonhomogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 69691 - 10a Cust. #: MS-HM-05B Material: Floor Tile Location: Appearance: white,nonfibrous,homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 2140 Mcilwraith St

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Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69691  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/24/17  
Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69691 - 10b Cust. #: MS-HM-05B Material: Glue Location: Appearance: yellow,nonfibrous,homogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69691 - 11 Cust. #: MS-HM-06A Material: White 12x12 VFT Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69691 - 11a Cust. #: MS-HM-06A Material: Glue Location: Appearance: yellow,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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Project: 2140 Mcilwraith St

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Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69691  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/24/17  
Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69691 - 12 Cust. #: MS-HM-06B Material: White 12x12 VFT Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69691 - 12a Cust. #: MS-HM-06B Material: Glue Location: Appearance: yellow,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69691 - 13 Cust. #: MS-HM-07A Material: Yellow Linoleum Location: Appearance: yellow,fibrous,nonhomogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 30%	Other - 70%

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 2140 Mcilwraith St

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Mr. Aaron Paquet  
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P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69691  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/24/17  
Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69691 - 14 Cust. #: MS-HM-07B Material: Yellow Linoleum Location: Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69691 - 15 Cust. #: MS-HM-08A Material: Grey 12x12 VFT Location: Appearance: grey, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>YES</b> Chrysotile - 5%	Other - 95%
Lab ID #: 69691 - 15a Cust. #: MS-HM-08A Material: Mastic Location: Appearance: black, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Other - 99%

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

Robert T. Letarte Jr., Laboratory Director

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# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 2140 Mcilwraith St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69691  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/24/17  
Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69691 - 16 Cust. #: MS-HM-08B Material: Grey 12x12 VFT Location: Appearance: Layer: 1 of 2	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69691 - 16a Cust. #: MS-HM-08B Material: Mastic Location: Appearance: black,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 69691 - 17 Cust. #: MS-HM-09A Material: 1x1 White Smooth Ceiling Tile Location: Appearance: brown,fibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%

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

Robert T. Letarte Jr., Laboratory Director

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## Test Method, Polarized Light Microscopy (PLM)

Project: 2140 Mcilwraith St

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Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69691  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/24/17  
Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69691 - 18 Cust. #: MS-HM-09B Material: 1x1 White Smooth Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 69691 - 19 Cust. #: MS-HM-10A Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69691 - 19a Cust. #: MS-HM-10A Material: Joint Compound Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> Chrysotile - 0.25%  <b>POINT COUNT RESULT</b>	Other - 99.75%

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

Robert T. Letarte Jr., Laboratory Director

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## Test Method, Polarized Light Microscopy (PLM)

Project: 2140 Mcilwraith St

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P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69691  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/24/17  
Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69691 - 20 Cust. #: MS-HM-10B Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69691 - 20a Cust. #: MS-HM-10B Material: Joint Compound Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> Chrysotile - Trace  <b>POINT COUNT RESULT</b>	Other - 100%
Lab ID #: 69691 - 21 Cust. #: MS-HM-11A Material: Window Glazing Location: House Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Other - 99%

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

Robert T. Letarte Jr., Laboratory Director

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## Test Method, Polarized Light Microscopy (PLM)

Project: 2140 Mcilwraith St

**Report To:**

Mr. Aaron Paquet  
 Red Cedar Consulting  
 P.O. Box 13216  
 Lansing, MI 48901

ARI Report # 17-69691  
 Date Collected: 04/19/17  
 Date Received: 04/20/17  
 Date Analyzed: 04/24/17  
 Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69691 - 22 Cust. #: MS-HM-11B Material: Window Glazing Location: House Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 69691 - 23 Cust. #: MS-HM-12A Material: Window Glazing Location: Basement Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 5%	Other - 95%
Lab ID #: 69691 - 24 Cust. #: MS-HM-12B Material: Window Glazing Location: Basement Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	

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NVLAP Lab Code 102118-0

# 69691

143

## APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

E-mail: [apexresearch@chartermi.net](mailto:apexresearch@chartermi.net) Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-19-17

Project: 2140 Melbournville St

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log-in \_\_\_\_\_  
Report \_\_\_\_\_

### Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: Slag  TTP All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BioSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	MS-HH-01A	Roofing Shingle			
2	MS-HH-01B	" "			
3	MS-HH-02A	Shingle siding			
4	MS-HH-02B	" "			
5	MS-HH-03A	Blown Insulation			
6	MS-HH-03B	" "			
7	MS-HH-04A	Trim 12X12 VET			
8	MS-HH-04B	" "			
9	MS-HH-05A	Green Insulation			
10	MS-HH-05B	" "			
11	MS-HH-06A	White 12X12 VET			

Relinquished by: [Signature] Received by: UPS  
Date: 4-19-17 Date: 4-19-17

Relinquished by: \_\_\_\_\_ Received by: [Signature]  
Date: \_\_\_\_\_ Date: APR 20 2017

69691

243

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189

Phone: 734-449-9990



E-mail: apexresearch@chartermi.net

Fax: 734-449-9991

Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-19-17

Project: 243 McAllister St

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: Slab  TTP All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BIOSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	M5-HM-26B	White 12x12 VFT			
13	M5-HM-27A	Yellow Staircase			
14	M5-HM-27B	" "			
15	M5-HM-28A	Slab 12x12 VFT			
16	M5-HM-28B	" "			
17	M5-HM-29A	1x1 white smalt CT			
18	M5-HM-29B	" "			
19	M5-HM-12A	Aluminum & Spout Compound			
20	M5-HM-10B	" "			
21	M5-HM-11A	Aluminum Slagging (Flange)			
22	M5-HM-11B	" "			

Relinquished by: David M. Tate Received by: VF5  
Date: 4-19-17 Date: 4-19-17

Relinquished by: \_\_\_\_\_ Received by: VF5  
Date: \_\_\_\_\_ Date: APR 20 2017



69691

3 of 3

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

E-mail: [apexresearch@chartermi.net](mailto:apexresearch@chartermi.net) Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216  
Lansing, MI 48901

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-19-17

Project: 2140 McAllister St

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log-in \_\_\_\_\_  
Report \_\_\_\_\_

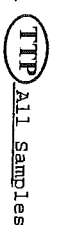
## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: Sleazy



Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_

Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_

Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BiosIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_

TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
23	MS-HM-12A	Windows Slagging (Entrance)			
24	MS-HM-12B	..			

Relinquished by: AP Apex Received by: US

Date: 4-19-17 Date: 4-19-17

Relinquished by:

Date:

RECEIVED  
Received by: Amg

Date: APR 20 2017

***Tables***

**Table 1 - Summary of Hazardous Materials, 2140 Mcilwraith St., Muskegon Heights, Michigan**

<b>Hazardous Materials Description and Location</b>		
<b>Location</b>	<b>Material Description</b>	<b>Quantity</b>
Living Room Floor	Smoke Detector	2

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2140 Mcilwraith St., Muskegon Heights, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
MS-HM-01A	Roofing Shingle	No	M	Category I	ND	Exterior	NA
MS-HM-01B	Roofing Shingle	No	M	Category I	ND	Exterior	NA
MS-HM-02A	Shingle Siding	No	M	Category I	ND	Exterior	NA
MS-HM-02B	Shingle Siding	No	M	Category I	ND	Exterior	NA
MS-HM-03A	Brown Linoleum	No	M	Category I	ND	Living	NA
MS-HM-03B	Brown Linoleum	No	M	Category I	ND	Living	NA
MS-HM-04A	Tan 12"x12" Vinyl Tile	No	M	Category I	ND/ND	Kitchen	NA
MS-HM-04B	Tan 12"x12" Vinyl Tile	No	M	Category I	ND/ND	Kitchen	NA
MS-HM-05A	Cream Linoleum	No	M	Category I	ND/ND/ND	Bathroom	NA
MS-HM-05B	Cream Linoleum	No	M	Category I	ND/ND/ND	Bathroom	NA
MS-HM-06A	White 12"x12" Vinyl Tile	No	M	Category I	ND/ND	NE Bedroom	NA
MS-HM-06B	White 12"x12" Vinyl Tile	No	M	Category I	ND/ND	NE Bedroom	NA
MS-HM-07A	Yellow Linoleum	No	M	Category I	30%CH	NW Bedroom	100 sq. ft.
MS-HM-07B	Yellow Linoleum	No	M	Category I	NA	NW Bedroom	NA
MS-HM-08A	Gray 12"x12" Vinyl Tile	No	M	Category I	5%CH/ND	SE Bedroom	100 sq. ft.
MS-HM-08B	Gray 12"x12" Vinyl Tile	No	M	Category I	NA/ND	SE Bedroom	NA
MS-HM-09A	1'x1' White Smooth Ceiling Tile	Yes	M	Category II	ND	Living	NA
MS-HM-09B	1'x1' White Smooth Ceiling Tile	Yes	M	Category II	ND	Living	NA
MS-HM-10A	Drywall and Joint Compound	No	M	Category II	ND/0.25CH-PC	NE Bedroom Wall	NA
MS-HM-10B	Drywall and Joint Compound	No	M	Category II	ND/Trace CH-PC	SW Bedroom Wall	NA
MS-HM-11A	Glazing (House)	Yes	M	Category II	ND	Kitchen	NA
MS-HM-11B	Glazing (House)	Yes	M	Category II	ND	Living	NA
MS-HM-12A	Glazing (Basement)	Yes	M	Category II	5%CH	Basement	6 Windows
MS-HM-12B	Glazing (Basement)	Yes	M	Category II	NA	Basement	NA

**Notes:**

Material Types

M = Miscellaneous building material

Abbreviations

NQ = Not quantified

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2140 Mcilwraith St., Muskegon Heights, Michigan**

TSI = Thermal System Insulation  
S = Surfacing Material  
PC = Point Count Analysis  
CH = Chrysotile Asbestos

NA = Not applicable  
ND = Not detected. Laboratory result is less than 1 % asbestos  
lin. ft. = linear feet  
sq. ft. = square feet

Asbestos Containing Material (ACM) is defined as any material containing more than 1 percent asbestos as determined utilizing Polarized Light Microscopy.

**Table 3 - Summary of Presumed Asbestos Containing Materials, 2140 Mcilwraith St., Muskegon Heights, Michigan**

<b>Asbestos Containing Material Description and Location</b>					
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Condition</b>	<b>Material Type</b>	<b>Approx. Quantity</b>
Basement (misc. HVAC wrap on 7 Boot Joints, 7 sq. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	7 sq. ft.

**Notes:**

Material Types

- M = Miscellaneous building material
- TSI = Thermal System Insulation
- S = Surfacing Material

Abbreviations

- lin. ft. = linear feet
- sq. ft. = square feet

**Table 4 - Summary of All Asbestos Containing Materials, 2140 Mcilwraith St., Muskegon Heights, Michigan**

<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
NW Bedroom	Yellow Linoleum	No	100 sq. ft.
SE Bedroom	Gray 12"x12" Vinyl Tile	No	100 sq. ft.
<b>Total</b>			<b>200 sq. ft.</b>
<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Basement (misc. HVAC wrap on 7 Boot Joints, 7 sq. ft.)	HVAC Duct Wrap	Yes	7 sq. ft.
<b>Total</b>			<b>7 sq. ft.</b>
<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Basement (6 windows 14" wide x 29" tall)	Glazing	Yes	6 Windows
<b>Total</b>			<b>6 Windows</b>

**Notes:**

Abbreviations

lin. ft. = linear feet

sq. ft. = square feet

**Shaded/Bolded** = Friable ACM and any Category I and Category II non-friable ACM that has a high probability of becoming crumbled, pulverized, or reduced to powder by the demolition or renovation activities that must be properly abated prior to commencement of any demolition/renovation activities.

Demolition/renovation activities completed with intact Category I non-friable ACM are regulated by OSHA and must be completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note that a Negative Pressure Enclosure must be utilized during abatement when Site Conditions Warrant. Examples of these conditions include the abatement of Plaster and Vermiculite insulation, HVAC Duct Wrap in Poor Condition, and Air-O-Cell/Mag Pipe Wrap. Conditions outside of these should be assessed on a case by case basis during the Asbestos Abatement Contractors site walk and Work Plan Preparation.



P.O. Box 13216  
Lansing, MI 48901  
Phone: 888.449.4566  
Fax: 888.448.8739  
www.redcedarconsulting.net

May 12, 2017

Mr. Tim Burgess  
Muskegon County Land Bank  
Land Bank Coordinator  
173 E. Apple Avenue, Suite 104  
Muskegon, MI 49442

**RE: *Asbestos Containing Material and Hazardous Materials Inspection***  
***2145 Peck St., Muskegon Heights, MI 49444***  
***Parcel ID: 61-26-185-053-0012-00***

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 2145 Peck St., Muskegon Heights, Michigan (Subject Property). This inspection was completed at the request of the Muskegon County Land Bank to comply with the United States Environmental Protection Agency (USEPA) requirements for demolition and renovation set forth under the National Emissions Standards for Hazardous Air Pollutants (NESHAP, 40 CFR Part 61). This inspection was also completed to comply with the Occupational Safety and Health Administration (OSHA) Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

### **SUBJECT PROPERTY**

The Subject Property is comprised of a .14 acre residential parcel which contains a 364 sq. ft. attached garage and approximate 856 square foot residential building (the Building) constructed in 1916. The Building was constructed on a concrete block basement with two aboveground floors. The exterior walls of the Building were finished with wood lap over a vapor barrier while the roof was sealed with asphalt shingles. The Building can be further divided into a front entry, living room, dining room, kitchen, bath, and one bedroom on the first floor while the second floor contains one bedroom.

### **VISUAL INSPECTION AND SAMPLING**

#### **Asbestos Containing Materials Inspection**

Aaron Paquet and Darrell DeMasters of Red Cedar Consulting (Red Cedar), accredited State Of Michigan/EPA Asbestos Building Inspectors (Accreditation Numbers A30955 and A31159, respectively) who completed training per the Michigan Asbestos Workers Accreditation Act 440, completed an inspection of the Subject Property on April 27, 2017 for suspected asbestos containing building materials.



This inspection, and subsequent sample collection was completed in accordance with the USEPA Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763) assessment and sampling protocol.

During the completion of the inspection, each area of the Subject Property was visually inspected for asbestos containing building materials (ACBM). Following the completion of the visual inspection, Red Cedar staff identified each suspect area of friable and non-friable ACBM and sorted them into one of three homogenous categories for sampling purposes. AHERA defines friable as a material that when dry, may be crumbled, pulverized, or reduced to powder by hand pressure. A homogenous area is defined by OSHA as an area of surfacing, thermal system insulation (TSI) or miscellaneous material that is uniform in color and texture. Surfacing materials are most commonly found in sprayed-on, troweled-on or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members. TSI refers to materials applied to pipes, fittings, boilers, ductwork, or other components to prevent heat loss or gain, or condensation. Any material that does not fall under the surfacing or TSI category, such as floor tile, drywall, and acoustical ceiling tile are placed into the miscellaneous materials category.

Following the completion of the visual inspection, Red Cedar staff identified the following materials as suspect ACBM:

- Asphalt Shingle
- Vapor Barrier
- Asphalt Vapor Barrier
- Linoleum
- 12"x12" Vinyl Tile
- 9"x9" Vinyl Tile
- Glazing
- Plaster
- Plaster Over Wallboard

Red Cedar staff collected thirty samples of suspect ACBM separated into thirteen distinct homogenous groups for laboratory analysis. Samples were collected and submitted to APEX Research Inc. Laboratories (APEX) (Accreditation Number 102118-0) for laboratory analysis. Analysis was completed utilizing polarized light microscopy (PLM) which is the Environmental Protection Agency (EPA) approved method for analysis of bulk materials for asbestos. PLM analysis completed pursuant to method (EPA 600/M4-82-020) identifies asbestos fiber bundles by the visual properties displayed when the sample is treated with various dispersion staining liquids. The laboratory report completed following the sample analysis indicates if asbestos is present, and at what percentage along with a description and percentage of other fibrous and non-fibrous materials and sample color. Chain-of-custody documentation was followed from sample collection through shipping and receiving of the samples at the designated laboratory. The documentation assures that samples will meet the quality assurance/quality control measures defined by AHERA. The laboratory analytical report prepared by APEX for the thirty samples is included as Attachment A.

## **Hazardous Materials Inspection**

On April 27, 2017 the Subject Property was also inspected for the presence of hazardous materials which include but are not limited to polychlorinated biphenyls (PCBs) and potential mercury containing equipment and any items or containers that may contain or be classified as a hazardous or regulated material. Each material, if identified, was documented along with the approximate location. Any materials identified as hazardous are included in Table 1.

## **INSPECTION RESULTS AND RECOMMENDATIONS**

During the completion of the asbestos inspection, thirty samples of suspect ACM were collected and are documented in Table 2 along with the Red Cedar sample number, description, friability, material type, ACM classification, sample location, material quantity and laboratory analytical results.

ACM, as defined by the USEPA NESHAP is “any material containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763 Section 1, Polarized Light Microscopy”.

Friable ACM is defined by NESHAP as any material containing more than 1 percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Friable ACM is a concern due the ease of unintentionally disturbing the ACM which may result in “visible emissions” which is known as a Fiber Release Episode.

Non-friable asbestos-containing material is defined as “material containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACM’s are separated into Category I and Category II ACM. Category I ACM is any asbestos containing packing’s, gaskets, resilient floor coverings (vinyl floor tile and linoleum are examples of these) and asphalt roofing products. Category II ACM is stated by NESHAP as any material excluding Category I non-friable ACM such as drywall, plaster or fiberboard insulation.

### **Presumed Asbestos Containing Material**

Presumed Asbestos Containing Materials (PACM) are suspect surfacing, TSI and miscellaneous materials found in buildings constructed prior to 1980 which are classified as and due to the age of the structure, are assumed to be ACM and do not require sample collection and analysis. OSHA dictates that PACM may be “rebutted” following a complete inspection pursuant to AHERA protocol.

The HVAC Duct Wrap located in the Building was classified as PACM due to the age of the structure and samples were not collected.

Table 3 lists the location, material description, friability, condition, material type (surfacing, thermal or miscellaneous) and approximate quantity of all PACM documented at the Subject Property.

Table 4 provides a summary all ACM documented at the Subject Property which includes the material location, description, and approximate quantity.

### **Friable ACM's**

A window glazing sample collected from a window in the Dining Room was found to contain up to 5% asbestos following analysis. The assessment to quantify the extent of this material identified twelve windows at the following locations that would fall into the same homogenous group. The locations of the windows are listed below:

- Living (2 windows 36" wide x 56" tall)
- SW Bedroom (3 windows 34" wide x 44" tall)
- Bath (1 window 36" wide x 44" tall)
- Kitchen (2 windows 34" wide x 44" tall)
- Basement (4 windows 30" wide x 20" tall)

Duct Wrap identified in the building in conjunction with the forced air heating system is classified as friable ACM. The visual assessment to quantify the extent of this material identified HVAC Duct Wrap at the following locations within the basement, first and second floors:

- Living (1 register, 15 sq. ft.)
- SW Bedroom (1 register, 15 sq. ft.)
- Kitchen (1 register, 15 sq. ft.)
- Sun Room (1 register, 15 sq. ft.)
- Basement (misc. HVAC wrap on Ductwork, 25 sq. ft.)
- Basement (12 in. dia. HVAC Wrapped Ductwork, 32 lin. ft.)

### **Category I ACM**

Five types of resilient floor covering (Black 9"x9" Vinyl Tile, Brown 9"x9" Vinyl Tile, Tan 12"x12" Vinyl Floor Tile, Red 12"x12" Vinyl Floor Tile, Black 12"x12" Vinyl Floor Tile) located within the Kitchen, SW Bedroom, Stairway and Stairwell, respectively, were found to contain up to 10% Chrysotile asbestos. The assessment to quantify the extent of this material identified approximately 554 sq. ft. of this material within the Building.

### **Category II ACM**

No Category II non-friable ACM was identified during the completion of this inspection.

## **RECOMMENDATIONS**

### **Asbestos Containing Materials**

HVAC material identified in the Building system and listed below is classified as friable ACM and should be removed prior to any renovation/demolition activities.

- Living (1 register, 15 sq. ft.)
- SW Bedroom (1 register, 15 sq. ft.)
- Kitchen (1 register, 15 sq. ft.)
- Sun Room (1 register, 15 sq. ft.)

- Basement (misc. HVAC wrap on Ductwork, 25 sq. ft.)
- Basement (12 in. dia. HVAC Wrapped Ductwork, 32 lin. ft.)

Friable asbestos containing window glazing was identified on twelve windows throughout the Building. The locations of these windows that should be abated prior to demolition/renovation activities are listed below:

- Living (2 windows 36" wide x 56" tall)
- SW Bedroom (3 windows 34" wide x 44" tall)
- Bath (1 window 36" wide x 44" tall)
- Kitchen (2 windows 34" wide x 44" tall)
- Basement (4 windows 30" wide x 20" tall)

Please note: Other different sized windows are located throughout the Building but these windows were assessed and found to be constructed either without window glazing or were sampled and found to not contain asbestos and therefore are not required to be removed.

The Category I resilient floor coverings (Black 9"x9" Vinyl Tile, Brown 9"x9" Vinyl Tile, Tan 12"x12" Vinyl Floor Tile, Red 12"x12" Vinyl Floor Tile, Black 12"x12" Vinyl Floor Tile) are non-friable ACM's that may be left in place as long as the demolition/renovation activities are completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note: The location of samples obtained during this inspection were in a random fashion and areas that were not identified during this inspection may be damaged or have become damaged since the inspection was completed. If Category I or Category II friable materials are discovered prior to or during the demolition/renovation process, these materials must be abated prior to commencement of any demolition/renovation activities at the Subject Property.

### **Hazardous Materials**

Hazardous Materials identified at the Subject Property and documented in Table 1 which require proper removal and disposal consist of the following items:

- No Hazardous Materials Identified

### **REGULATORY REQUIREMENTS**

A Notification of Intent to Renovate/Demolish form must be filed with the Michigan Department of Environmental Quality- Air Quality Division at least 10 working days prior to any renovation or demolition activities at a site.

The Notification of Intent to Renovate/Demolish form must also be completed and submitted to the MIOSHA-Asbestos Program whenever demolition, encapsulation and/or renovation activities at a site involving greater than ten lineal feet and/or fifteen square feet of ACM will be completed.

Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-26-185-053-0012-00

Regulated asbestos containing materials per NESHAP (40 CFR Part 61) which falls into any of the following categories are ACM's that must be removed prior to any renovation/demolition activities at the Subject Property.

- Friable asbestos material.
- Category I non-friable ACM that has become friable.
- Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading.
- Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations.

Asbestos abatement should only be performed by a certified asbestos abatement contractor licensed to complete abatement work. The contractor must also follow the standards and requirements set forth per the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61).

Additional information regarding the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61) can be obtained by contacting the associated agency below.

NESHAP Asbestos Program  
Department of Environmental Quality  
Phone: 517-284-6777

MIOSHA-CSHD-Asbestos Program  
State of Michigan  
Phone: 517-284-7680  
Email: [asbestos@michigan.gov](mailto:asbestos@michigan.gov)

Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-26-185-053-0012-00

**DISCLAIMER**

Red Cedar Consulting performed destructive testing methods in an attempt to access and inspect all areas of the Building. Unfortunately, due to the age of construction along with multiple additions/renovations that may have been completed on the Building, additional inspections may be required if suspect ACM material not documented within this report is encountered during renovation/demolition activities.

This report was prepared at the request and for exclusive use by the Muskegon County Land Bank and may not be reproduced or sold without written permission from Red Cedar Consulting.

We appreciate the opportunity to provide the requested services. Please contact us at (888) 449-4566 with any questions or concerns.

Sincerely,  
**Red Cedar Consulting**



Aaron Paquet  
Michigan/EPA Certified Asbestos Building Inspector  
(A30955)

Red Cedar Consulting

***Attachment 1***  
***APEX Research Laboratory Analytical Results***



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 2145 Peck St

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69858  
Date Collected: 04/27/17  
Date Received: 04/28/17  
Date Analyzed: 05/03/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69858 - 01 Cust. #: PT-HM-01A Material: Vapor Barrier Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 70% Other - 30%
Lab ID #: 69858 - 02 Cust. #: PT-HM-01B Material: Vapor Barrier Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 70% Other - 30%
Lab ID #: 69858 - 03 Cust. #: PT-HM-02A Material: Roofing Materials Location: Appearance: black, fibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 30% Other - 70%

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: 2145 Peck St

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69858  
Date Collected: 04/27/17  
Date Received: 04/28/17  
Date Analyzed: 05/03/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69858 - 03a Cust. #: PT-HM-02A Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 30% Other - 70%
Lab ID #: 69858 - 03b Cust. #: PT-HM-02A Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 69858 - 04 Cust. #: PT-HM-02B Material: Roofing Materials Location: Appearance: black, fibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 30% Other - 70%

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

Robert T. Letarte Jr., Laboratory Director

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Date Collected: 04/27/17  
Date Received: 04/28/17  
Date Analyzed: 05/03/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69858 - 04a Cust. #: PT-HM-02B Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 30% Other - 70%
Lab ID #: 69858 - 04b Cust. #: PT-HM-02B Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 69858 - 05 Cust. #: PT-HM-03A Material: Asphalt Vapor Barrier Location: Appearance: black, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%

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

Robert T. Letarte Jr., Laboratory Director

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ARI Report # 17-69858  
Date Collected: 04/27/17  
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Date Analyzed: 05/03/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69858 - 06 Cust. #: PT-HM-03B Material: Asphalt Vapor Barrier Location: Appearance: black, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69858 - 07 Cust. #: PT-HM-04A Material: 9x9 Black VFT Location: Appearance: black, fibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>YES</b> Chrysotile - 10%	Other - 90%
Lab ID #: 69858 - 07a Cust. #: PT-HM-04A Material: Mastic Location: Appearance: black, nonfibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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Date Analyzed: 05/03/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69858 - 07b Cust. #: PT-HM-04A Material: Felt Location: Appearance: black, fibrous, homogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 69858 - 08 Cust. #: PT-HM-04B Material: 9x9 Black VFT Location: Appearance: Layer: 1 of 3	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69858 - 08a Cust. #: PT-HM-04B Material: Mastic Location: Appearance: black, nonfibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> 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.



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Date Analyzed: 05/03/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69858 - 08b Cust. #: PT-HM-04B Material: Felt Location: Appearance: black, fibrous, homogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 60% Other - 40%
Lab ID #: 69858 - 09 Cust. #: PT-HM-05A Material: 9x9 Brown VFT Location: Appearance: brown, fibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>YES</b> Chrysotile - 10%	Other - 90%
Lab ID #: 69858 - 09a Cust. #: PT-HM-05A Material: Mastic Location: Appearance: black, nonfibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> 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



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Date Analyzed: 05/03/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69858 - 09b Cust. #: PT-HM-05A Material: Felt Location: Appearance: black, fibrous, homogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 60% Other - 40%
Lab ID #: 69858 - 10 Cust. #: PT-HM-05B Material: 9x9 Brown VFT Location: Appearance: Layer: 1 of 3	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69858 - 10a Cust. #: PT-HM-05B Material: Mastic Location: Appearance: black, nonfibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> 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.



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Date Received: 04/28/17  
Date Analyzed: 05/03/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69858 - 10b Cust. #: PT-HM-05B Material: Felt Location: Appearance: black, fibrous, homogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 69858 - 11 Cust. #: PT-HM-06A Material: White/Grey Linoleum Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 69858 - 12 Cust. #: PT-HM-06B Material: White/Grey Linoleum Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Other - 70%

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 2145 Peck St

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69858  
Date Collected: 04/27/17  
Date Received: 04/28/17  
Date Analyzed: 05/03/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69858 - 13 Cust. #: PT-HM-07A Material: Window Glazing Location: Main Rooms Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 5%	Other - 95%
Lab ID #: 69858 - 14 Cust. #: PT-HM-07B Material: Window Glazing Location: Main Rooms Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69858 - 15 Cust. #: PT-HM-08A Material: 12x12 Tan VFT Location: Appearance: brown, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>YES</b> Chrysotile - 10%	Other - 90%

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ARI Report # 17-69858  
Date Collected: 04/27/17  
Date Received: 04/28/17  
Date Analyzed: 05/03/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69858 - 15a Cust. #: PT-HM-08A Material: Mastic Location: Appearance: black,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69858 - 16 Cust. #: PT-HM-08B Material: 12x12 Tan VFT Location: Appearance: Layer: 1 of 2	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69858 - 16a Cust. #: PT-HM-08B Material: Mastic Location: Appearance: black,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Lansing, MI 48901

ARI Report # 17-69858  
Date Collected: 04/27/17  
Date Received: 04/28/17  
Date Analyzed: 05/03/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69858 - 17 Cust. #: PT-HM-09A Material: 12x12 Red VFT Location: Appearance: brown, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>YES</b> Chrysotile - 10%	Other - 90%
Lab ID #: 69858 - 17a Cust. #: PT-HM-09A Material: Mastic Location: Appearance: black, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69858 - 18 Cust. #: PT-HM-09B Material: 12x12 Red VFT Location: Appearance: Layer: 1 of 2	Asbestos Present:  NOT ANALYZED	

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Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



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P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69858  
Date Collected: 04/27/17  
Date Received: 04/28/17  
Date Analyzed: 05/03/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69858 - 18a Cust. #: PT-HM-09B Material: Mastic Location: Appearance: black,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69858 - 19 Cust. #: PT-HM-10A Material: Window Glazing Location: 2nd Floor Appearance: beige,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Wollastonite - 2% Other - 98%
Lab ID #: 69858 - 20 Cust. #: PT-HM-10B Material: Window Glazing Location: 2nd Floor Appearance: beige,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Wollastonite - 1% Other - 99%

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

Robert T. Letarte Jr., Laboratory Director

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## Test Method, Polarized Light Microscopy (PLM)

Project: 2145 Peck St

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Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69858  
Date Collected: 04/27/17  
Date Received: 04/28/17  
Date Analyzed: 05/03/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69858 - 21 Cust. #: PT-HM-11A Material: 12x12 Black VFT Location: Appearance: black, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>YES</b> Chrysotile - 5%	Other - 95%
Lab ID #: 69858 - 21a Cust. #: PT-HM-11A Material: Mastic Location: Appearance: black, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69858 - 22 Cust. #: PT-HM-11B Material: 12x12 Black VFT Location: Appearance: Layer: 1 of 2	Asbestos Present:  NOT ANALYZED	

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 2145 Peck St

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Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69858  
Date Collected: 04/27/17  
Date Received: 04/28/17  
Date Analyzed: 05/03/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69858 - 22a Cust. #: PT-HM-11B Material: Mastic Location: Appearance: black,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69858 - 23 Cust. #: PT-HS-01A Material: Plaster Finish Coat Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69858 - 23a Cust. #: PT-HS-01A Material: Plaster Base Coat Location: Appearance: brown,fibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 2% Other - 98%

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Lansing, MI 48901

ARI Report # 17-69858  
Date Collected: 04/27/17  
Date Received: 04/28/17  
Date Analyzed: 05/03/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69858 - 24 Cust. #: PT-HS-01B Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69858 - 24a Cust. #: PT-HS-01B Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: 69858 - 24b Cust. #: PT-HS-01B Material: Texture Location: Appearance: beige, fibrous, homogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Wollastonite - 2% Other - 98%

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ARI Report # 17-69858  
Date Collected: 04/27/17  
Date Received: 04/28/17  
Date Analyzed: 05/03/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69858 - 25 Cust. #: PT-HS-01C Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69858 - 25a Cust. #: PT-HS-01C Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Wollastonite - 2% Other - 97%
Lab ID #: 69858 - 26 Cust. #: PT-HS-01D Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Lansing, MI 48901

ARI Report # 17-69858  
Date Collected: 04/27/17  
Date Received: 04/28/17  
Date Analyzed: 05/03/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69858 - 26a Cust. #: PT-HS-01D Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 5% Other - 95%
Lab ID #: 69858 - 26b Cust. #: PT-HS-01D Material: Texture Location: Appearance: brown, fibrous, homogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Wollastonite - 5% Other - 95%
Lab ID #: 69858 - 27 Cust. #: PT-HS-01E Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Robert T. Letarte Jr., Laboratory Director

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Lansing, MI 48901

ARI Report # 17-69858  
Date Collected: 04/27/17  
Date Received: 04/28/17  
Date Analyzed: 05/03/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69858 - 27a Cust. #: PT-HS-01E Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: 69858 - 28 Cust. #: PT-HS-02A Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69858 - 28a Cust. #: PT-HS-02A Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Vermiculite - 15% Other - 84%

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ARI Report # 17-69858  
Date Collected: 04/27/17  
Date Received: 04/28/17  
Date Analyzed: 05/03/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69858 - 28b Cust. #: PT-HS-02A Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69858 - 29 Cust. #: PT-HS-02B Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69858 - 29a Cust. #: PT-HS-02B Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> Chrysotile - 0.25%  <b>POINT COUNT RESULT</b>	Other - 99.75%

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Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69858 - 29b Cust. #: PT-HS-02B Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69858 - 30 Cust. #: PT-HS-02C Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69858 - 30a Cust. #: PT-HS-02C Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> Chrysotile - Trace  <b>POINT COUNT RESULT</b>	Other - 100%

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Date Analyzed: 05/03/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69858 - 30b Cust. #: PT-HS-02C Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

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NVLAP Lab Code 102118-0

Apex #

**69858**

1 of 3

# APEX Research, Inc.

11054 HI Tech Drive, Whitmore Lake, MI 48189  
Phone: 734-449-9990  
E-mail: apexresearch@chartermi.net  
Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-27-17

Project: 2145 Bldg A

Project #: \_\_\_\_\_

Contact Person: Aaron Paquet

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM.  
apauquet@redcedarconsulting.net

Rush 24 hour

48 hour 72 hour

Other: Stacy All Samples

Asbestos: Bulk  Wipe  Point Count  PCM   
Lead: Bulk  Wipe  Air  Paint  Soil   
Mold: Bulk  Tape  BioSIS  Other  Viable   
TEM: AHERA 7400  Bulk/NOB  EPA Level II

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	PT-HM-01A	Vapor Barrier			
2	PT-HM-01B	" "			
3	PT-HM-02A	Roofing Materials			
4	PT-HM-02B	" "			
5	PT-HM-03A	Asphalt Vapor Barrier			
6	PT-HM-03B	" "			
7	PT-HM-04A	9x9 Black VFT			
8	PT-HM-04B	" "			
9	PT-HM-05A	9x9 Brown VFT			
10	PT-HM-05B	" "			
11	PT-HM-06A	White & Gray Samples			

Relinquished by: APR 27 2017 Received by: UTS

Date: 4-27-17 Date: 4-27-17

Relinquished by: RECEIVED Received by: \_\_\_\_\_

Date: 1030 APR 28 2017 Date: \_\_\_\_\_

69858

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189  
E-mail: apexresearch@chartermi.net  
Phone: 734-449-9990  
Fax: 734-449-9991



243

Client Name: Red Cedar Consulting

Address: PO Box 13216  
Lansing, MI 48901

City, St, Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-27-17

Project: 2145 Back St

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: Seal All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ Biosis \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	PT-HM-06B	White & Grey Soudure			
13	PT-HM-07A	Windows Siding (Main Room)			
14	PT-HM-07B	" " " "			
15	PT-HM-08A	12x12 Tan VET			
16	PT-HM-08B	" " " "			
17	PT-HM-09A	12x12 Red VET			
18	PT-HM-09B	" " " "			
19	PT-HM-10A	Windows Siding (2nd floor)			
20	PT-HM-10B	" " " "			
21	PT-HM-11A	12x12 Black VET			
22	PT-HM-11B	" " " "			

Relinquished by: A. Paquet Received by: VP  
Date: 4-27-17 Date: 4-27-17

Relinquished by: [Signature] Received by: \_\_\_\_\_  
Date: APR 28 2017 Date: \_\_\_\_\_

RECEIVED

69858

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189

Phone: 734-449-9990  
Fax: 734-449-9991



3 of 3

Client Name: Red Cedar Consulting

Address: PO Box 13216  
Lansing, MI 48901

City, St., Zip: Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-27-17

Project: 2145 Beck St

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour  
48 hour 72 hour

Other: Sdey  All samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BioSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
23	PT-HS-01A	Plaster			
24	PT-HS-01B	Plaster over shellboard			
25	PT-HS-01C				
26	PT-HS-01D	Plaster over shellboard			
27	PT-HS-01E				
28	PT-HS-02A				
29	PT-HS-02B	Plaster over shellboard			
30	PT-HS-02C				

Relinquished by: [Signature] Received by: UBS  
Date: 4-27-17 Date: 4-27-17

Relinquished by: [Signature] Received by: \_\_\_\_\_  
Date: APR 28 2017 Date: \_\_\_\_\_

***Tables***



**Table 1 - Summary of Hazardous Materials, 2145 Peck St., Muskegon Heights, Michigan**

<b>Hazardous Materials Description and Location</b>		
<b>Location</b>	<b>Material Description</b>	<b>Quantity</b>
No Hazardous Materials Identified		

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2145 Peck St., Muskegon Heights, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
PT-HM-01A	Vapor Barrier	Yes	M	Category II	ND	Exterior	NA
PT-HM-01B	Vapor Barrier	Yes	M	Category II	ND	Exterior	NA
PT-HM-02A	Roofing Materials	No	M	Category I	ND/ND/ND	Exterior	NA
PT-HM-02B	Roofing Materials	No	M	Category I	ND/ND/ND	Exterior	NA
PT-HM-03A	Asphalt Vapor Barrier	Yes	M	Category II	ND	Exterior	NA
PT-HM-03B	Asphalt Vapor Barrier	Yes	M	Category II	ND	Exterior	NA
PT-HM-04A	Black 9"x9" Vinyl Tile	No	M	Category I	10%CH/ND/ND	Kitchen	55 sq. ft.
PT-HM-04B	Black 9"x9" Vinyl Tile	No	M	Category I	NA/ND/ND	Kitchen	NA
PT-HM-05A	Brown 9"x9" Vinyl Tile	No	M	Category I	10%CH/ND/ND	Kitchen	55 sq. ft.
PT-HM-05B	Brown 9"x9" Vinyl Tile	No	M	Category I	NA/ND/ND	Kitchen	NA
PT-HM-06A	White & gray Linoleum	No	M	Category I	ND	Bathroom	NA
PT-HM-06B	White & Gray Linoleum	No	M	Category I	ND	Bathroom	NA
PT-HM-07A	Window Glazing (Main Rooms)	Yes	M	Category II	5%CH	Dining Room	12 Windows
PT-HM-07B	Window Glazing (Main Rooms)	Yes	M	Category II	NA	Living Room	NA
PT-HM-08A	Tan 12"x12" Vinyl Floor Tile	No	M	Category I	10%CH/ND	Bedroom	360 sq. ft.
PT-HM-08B	Tan 12"x12" Vinyl Floor Tile	No	M	Category I	NA/ND	Bedroom	NA
PT-HM-09A	Red 12"x12" Vinyl Floor Tile	No	M	Category I	10%CH/ND	2 <sup>nd</sup> Fl. Stairwell	48 sq. ft.
PT-HM-09B	Red 12"x12" Vinyl Floor Tile	No	M	Category I	NA/ND	2 <sup>nd</sup> Fl. Stairwell	NA
PT-HM-10A	Window Glazing (2 <sup>nd</sup> Floor)	Yes	M	Category II	ND	Bedroom	NA
PT-HM-10B	Window Glazing (2 <sup>nd</sup> Floor)	Yes	M	Category II	ND	Bedroom	NA
PT-HM-11A	Black 12"x12" Vinyl Floor Tile	No	M	Category I	5%CH/ND	Basement Stairwell	36 sq. ft.
PT-HM-11B	Black 12"x12" Vinyl Floor Tile	No	M	Category I	NA/ND	Basement Stairwell	NA
PT-HS-01A	Plaster	No	S	Category II	ND/ND	Bathroom Ceiling	NA
PT-HS-01B	Plaster	No	S	Category II	ND/ND/ND	Dining Room Ceiling	NA
PT-HS-01C	Plaster	No	S	Category II	ND/ND	Living Room Wall	NA
PT-HS-01D	Plaster	No	S	Category II	ND/ND/ND	Kitchen Wall	NA
PT-HS-01E	Plaster	No	S	Category II	ND/ND	SW Bedroom Wall	NA

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2145 Peck St., Muskegon Heights, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
PT-HS-02A	Plaster Over Wallboard	No	S	Category II	ND/ND/ND	Bedroom Ceiling	NA
PT-HS-02B	Plaster Over Wallboard	No	S	Category II	ND/0.25%CH-PC/ND	Bedroom Wall	NA
PT-HS-02C	Plaster Over Wallboard	No	S	Category II	ND/TRACE CH-PC/ND	Bedroom Wall	NA

**Notes:**

Material Types

M = Miscellaneous building material  
 TSI = Thermal System Insulation  
 S = Surfacing Material  
 PC = Point Count Analysis  
 CH = Chrysotile Asbestos

Abbreviations

NQ = Not quantified  
 NA = Not applicable  
 ND = Not detected. Laboratory result is less than 1 % asbestos  
 lin. ft. = linear feet  
 sq. ft. = square feet

Asbestos Containing Material (ACM) is defined as any material containing more than 1 percent asbestos as determined utilizing Polarized Light Microscopy.

**Table 3 - Summary of Presumed Asbestos Containing Materials, 2145 Peck St., Muskegon Heights, Michigan**

<b>Asbestos Containing Material Description and Location</b>					
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Condition</b>	<b>Material Type</b>	<b>Approx. Quantity</b>
Living (1 register, 15 sq. ft.) SW Bedroom (1 register, 15 sq. ft.) Kitchen (1 register, 15 sq. ft.) Sun Room (1 register, 15 sq. ft.) Basement (misc. HVAC wrap on Ductwork, 25 sq. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	85 sq. ft.
Basement (12 in. dia. HVAC Wrapped Ductwork, 32 lin. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	32 lin. ft.

**Notes:**

Material Types

- M = Miscellaneous building material
- TSI = Thermal System Insulation
- S = Surfacing Material

Abbreviations

- lin. ft. = linear feet
- sq. ft. = square feet

**Table 4 - Summary of All Asbestos Containing Materials, 2145 Peck St., Muskegon Heights, Michigan**

<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Kitchen	Black 9"x9" Vinyl Tile	No	55 sq. ft.
Kitchen	Brown 9"x9" Vinyl Tile	No	55 sq. ft.
SW Bedroom	Tan 12"x12" Vinyl Floor Tile	No	360 sq. ft.
Stairway	Red 12"x12" Vinyl Floor Tile	No	48 sq. ft.
Stairwell	Black 12"x12" Vinyl Floor Tile	No	36 sq. ft.
<b>Total</b>			<b>554 sq. ft.</b>
<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Living (1 register, 15 sq. ft.)	HVAC Duct Wrap	Yes	85 sq. ft.
SW Bedroom (1 register, 15 sq. ft.)			
Kitchen (1 register, 15 sq. ft.)			
Sun Room (1 register, 15 sq. ft.)			
Basement (misc. HVAC wrap on Ductwork, 25 sq. ft.)			
<b>Total</b>			<b>85 sq. ft.</b>
<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Basement (12 in. dia. HVAC Wrapped Ductwork, 32 lin. ft.)	HVAC Duct Wrap	Yes	32 lin. ft.
<b>Total</b>			<b>32 lin. ft.</b>
<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Living (2 windows 36" wide x 56" tall)	Glazing	Yes	2 Windows
SW Bedroom (3 windows 34" wide x 44" tall)	Glazing	Yes	3 Windows
Bath (1 window 36" wide x 44" tall)	Glazing	Yes	1 Window
Kitchen (2 windows 34" wide x 44" tall)	Glazing	Yes	2 Windows
Basement (4 windows 30" wide x 20" tall)	Glazing	Yes	4 Windows
<b>Total</b>			<b>12 Windows</b>

**Notes:**  
Abbreviations

**Table 4 - Summary of All Asbestos Containing Materials, 2145 Peck St., Muskegon Heights, Michigan**

lin. ft. = linear feet  
sq. ft. = square feet

**Shaded/Bolded** = Friable ACM and any Category I and Category II non-friable ACM that has a high probability of becoming crumbled, pulverized, or reduced to powder by the demolition or renovation activities that must be properly abated prior to commencement of any demolition/renovation activities.

Demolition/renovation activities completed with intact Category I non-friable ACM are regulated by OSHA and must be completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note that a Negative Pressure Enclosure must be utilized during abatement when Site Conditions Warrant. Examples of these conditions include the abatement of Plaster and Vermiculite insulation, HVAC Duct Wrap in Poor Condition, and Air-O-Cell/Mag Pipe Wrap. Conditions outside of these should be assessed on a case by case basis during the Asbestos Abatement Contractors site walk and Work Plan Preparation.



P.O. Box 13216  
Lansing, MI 48901  
Phone: 888.449.4566  
Fax: 888.448.8739  
www.redcedarconsulting.net

May 8, 2017

Mr. Tim Burgess  
Muskegon County Land Bank  
Land Bank Coordinator  
173 E. Apple Avenue, Suite 104  
Muskegon, MI 49442

***RE: Asbestos Containing Material and Hazardous Materials Inspection  
2145 Sanford St., Muskegon Heights, MI 49444  
Parcel ID: 26-185-052-0012-00***

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 2145 Sanford St., Muskegon Heights, Michigan (Subject Property). This inspection was completed at the request of the Muskegon County Land Bank to comply with the United States Environmental Protection Agency (USEPA) requirements for demolition and renovation set forth under the National Emissions Standards for Hazardous Air Pollutants (NESHAP, 40 CFR Part 61). This inspection was also completed to comply with the Occupational Safety and Health Administration (OSHA) Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

### **SUBJECT PROPERTY**

The Subject Property is comprised of a .143 acre residential parcel which contains an approximate 1,232 square foot residential building (the Building) constructed in 1906. The Building was constructed on a concrete block basement with two aboveground floors. The exterior walls of the Building were finished with Transite siding while the roof was sealed with asphalt shingles. The Building can be further divided into a living room, kitchen, bath, and three bedrooms on the first floor while the second floor contains a front entry, living room, kitchen, bathroom and one bedroom.

### **VISUAL INSPECTION AND SAMPLING**

#### **Asbestos Containing Materials Inspection**

Aaron Paquet and Darrell DeMasters of Red Cedar Consulting (Red Cedar), accredited State Of Michigan/EPA Asbestos Building Inspectors (Accreditation Numbers A30955 and A31159, respectively)

who completed training per the Michigan Asbestos Workers Accreditation Act 440, completed an inspection of the Subject Property on April 14, 2017 for suspected asbestos containing building materials.

This inspection, and subsequent sample collection was completed in accordance with the USEPA Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763) assessment and sampling protocol.

During the completion of the inspection, each area of the Subject Property was visually inspected for asbestos containing building materials (ACBM). Following the completion of the visual inspection, Red Cedar staff identified each suspect area of friable and non-friable ACBM and sorted them into one of three homogenous categories for sampling purposes. AHERA defines friable as a material that when dry, may be crumbled, pulverized, or reduced to powder by hand pressure. A homogenous area is defined by OSHA as an area of surfacing, thermal system insulation (TSI) or miscellaneous material that is uniform in color and texture. Surfacing materials are most commonly found in sprayed-on, troweled-on or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members. TSI refers to materials applied to pipes, fittings, boilers, ductwork, or other components to prevent heat loss or gain, or condensation. Any material that does not fall under the surfacing or TSI category, such as floor tile, drywall, and acoustical ceiling tile are placed into the miscellaneous materials category.

Following the completion of the visual inspection, Red Cedar staff identified the following materials as suspect ACBM:

- Asphalt Shingle
- Vapor Barrier
- Vinyl Flooring
- 12"x12" Peel & Stick Vinyl Tile
- 12"x12" Vinyl Tile
- 9"x9" Vinyl Tile
- Drywall
- Glazing
- Plaster

Red Cedar staff collected twenty seven samples of suspect ACBM separated into twelve distinct homogenous groups for laboratory analysis. Samples were collected and submitted to APEX Research Inc. Laboratories (APEX) (Accreditation Number 102118-0) for laboratory analysis. Analysis was completed utilizing polarized light microscopy (PLM) which is the Environmental Protection Agency (EPA) approved method for analysis of bulk materials for asbestos. PLM analysis completed pursuant to method (EPA 600/M4-82-020) identifies asbestos fiber bundles by the visual properties displayed when the sample is treated with various dispersion staining liquids. The laboratory report completed following the sample analysis indicates if asbestos is present, and at what percentage along with a description and percentage of other fibrous and non-fibrous materials and sample color. Chain-of-custody documentation was followed from sample collection through shipping and receiving of the samples at the designated laboratory. The documentation assures that samples will meet the quality assurance/quality control measures defined by AHERA. The laboratory analytical report prepared by APEX for the twenty seven samples is included as Attachment A.



## **Hazardous Materials Inspection**

On April 14, 2017 the Subject Property was also inspected for the presence of hazardous materials which include but are not limited to polychlorinated biphenyls (PCBs) and potential mercury containing equipment and any items or containers that may contain or be classified as a hazardous or regulated material. Each material, if identified, was documented along with the approximate location. Any materials identified as hazardous are included in Table 1.

## **INSPECTION RESULTS AND RECOMMENDATIONS**

During the completion of the asbestos inspection, twenty seven samples of suspect ACM were collected and are documented in Table 2 along with the Red Cedar sample number, description, friability, material type, ACM classification, sample location, material quantity and laboratory analytical results.

ACM, as defined by the USEPA NESHAP is “any material containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763 Section 1, Polarized Light Microscopy”.

Friable ACM is defined by NESHAP as any material containing more than 1 percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Friable ACM is a concern due the ease of unintentionally disturbing the ACM which may result in “visible emissions” which is known as a Fiber Release Episode.

Non-friable asbestos-containing material is defined as “material containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACM’s are separated into Category I and Category II ACM. Category I ACM is any asbestos containing packing’s, gaskets, resilient floor coverings (vinyl floor tile and linoleum are examples of these) and asphalt roofing products. Category II ACM is stated by NESHAP as any material excluding Category I non-friable ACM such as drywall, plaster or fiberboard insulation.

### **Presumed Asbestos Containing Material**

Presumed Asbestos Containing Materials (PACM) are suspect surfacing, TSI and miscellaneous materials found in buildings constructed prior to 1980 which are classified as and due to the age of the structure, are assumed to be ACM and do not require sample collection and analysis. OSHA dictates that PACM may be “rebutted” following a complete inspection pursuant to AHERA protocol.

The HVAC Duct Wrap located in the Building and the Cementitious “Transite” Siding on the Building were classified as PACM due to the age of the structure and samples were not collected.

Table 3 lists the location, material description, friability, condition, material type (surfacing, thermal or miscellaneous) and approximate quantity of all PACM documented at the Subject Property.

Table 4 provides a summary all ACM documented at the Subject Property which includes the material location, description, and approximate quantity.

### **Friable ACM's**

Duct Wrap identified in the building in conjunction with the forced air heating system is classified as friable ACM. The visual assessment to quantify the extent of this material identified HVAC Duct Wrap at the following locations within the basement, first and second floors:

- 2<sup>nd</sup> Fl. Living Room (1 vertical chase to basement, 25 sq. ft.)
- 2<sup>nd</sup> Fl. Bathroom (1 vertical chase to basement, 25 sq. ft.)
- 2<sup>nd</sup> Fl. Hallway (1 vertical chase to basement, 25 sq. ft.)

### **Category I ACM**

Two types of resilient floor covering (Gray 9" x 9" Vinyl Floor Tile and Red 9" x 9" Vinyl Floor Tile) located within the kitchen were found to contain up to 10% Chrysotile asbestos. The assessment to quantify the extent of this material identified approximately 434 sq. ft. of this material within the Building.

### **Category II ACM**

The cementitious "Transite" siding located on the exterior of the Building was classified as PACM and no samples were collected. The visual assessment to quantify the extent of this material identified 1,626 sq. ft. of cementitious (Transite) siding on the Building.

## **RECOMMENDATIONS**

### **Asbestos Containing Materials**

HVAC material identified in the Building system and listed below is classified as friable ACM and should be removed prior to any renovation/demolition activities.

- 2<sup>nd</sup> Fl. Living Room (1 vertical chase to basement, 25 sq. ft.)
- 2<sup>nd</sup> Fl. Bathroom (1 vertical chase to basement, 25 sq. ft.)
- 2<sup>nd</sup> Fl. Hallway (1 vertical chase to basement, 25 sq. ft.)

Transite siding was identified on the exterior of the Building and must be abated prior to completion of any demolition activities at the Subject Property. In demolition, all cementitious ACM must be removed prior to demolition due to the likelihood of becoming regulated due to the demolition process.

The Category I resilient floor coverings (Gray 9" x 9" Vinyl Floor Tile and Red 9" x 9" Vinyl Floor Tile) are non-friable ACM's that may be left in place as long as the demolition/renovation activities are completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note: The location of samples obtained during this inspection were in a random fashion and areas that were not identified during this inspection may be damaged or have become damaged since the inspection was completed. If Category I or Category II friable materials are discovered prior to or during

Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 26-185-052-0012-00

the demolition/renovation process, these materials must be abated prior to commencement of any demolition/renovation activities at the Subject Property.

### **Hazardous Materials**

Hazardous Materials identified at the Subject Property and documented in Table 1 which require proper removal and disposal consist of the following items:

- Automobile Tire (8)
- Carbon Monoxide Detector (2)
- Smoke Detector (2)

### **REGULATORY REQUIREMENTS**

A Notification of Intent to Renovate/Demolish form must be filed with the Michigan Department of Environmental Quality- Air Quality Division at least 10 working days prior to any renovation or demolition activities at a site.

The Notification of Intent to Renovate/Demolish form must also be completed and submitted to the MIOSHA-Asbestos Program whenever demolition, encapsulation and/or renovation activities at a site involving greater than ten lineal feet and/or fifteen square feet of ACM will be completed.

Regulated asbestos containing materials per NESHAP (40 CFR Part 61) which falls into any of the following categories are ACM's that must be removed prior to any renovation/demolition activities at the Subject Property.

- Friable asbestos material.
- Category I non-friable ACM that has become friable.
- Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading.
- Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations.

Asbestos abatement should only be performed by a certified asbestos abatement contractor licensed to complete abatement work. The contractor must also follow the standards and requirements set forth per the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61).

Additional information regarding the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61) can be obtained by contacting the associated agency below.

NESHAP Asbestos Program  
Department of Environmental Quality  
Phone: 517-284-6777

MIOSHA-CSHD-Asbestos Program  
State of Michigan  
Phone: 517-284-7680  
Email: asbestos@michigan.gov

Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 26-185-052-0012-00

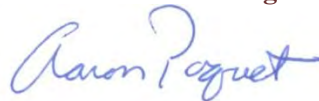
**DISCLAIMER**

Red Cedar Consulting performed destructive testing methods in an attempt to access and inspect all areas of the Building. Unfortunately, due to the age of construction along with multiple additions/renovations that may have been completed on the Building, additional inspections may be required if suspect ACM material not documented within this report is encountered during renovation/demolition activities.

This report was prepared at the request and for exclusive use by the Muskegon County Land Bank and may not be reproduced or sold without written permission from Red Cedar Consulting.

We appreciate the opportunity to provide the requested services. Please contact us at (888) 449-4566 with any questions or concerns.

Sincerely,  
**Red Cedar Consulting**



Aaron Paquet  
Michigan/EPA Certified Asbestos Building Inspector  
(A30955)

Red Cedar Consulting

***Attachment 1***  
***APEX Research Laboratory Analytical Results***



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 2145 Sanford

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69625  
Date Collected: 04/14/17  
Date Received: 04/17/17  
Date Analyzed: 04/18/17  
Date Reported: 04/24/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69625 - 01 Cust. #: AS-HM-01A Material: Roofing Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69625 - 01a Cust. #: AS-HM-01A Material: Vapor Barrier Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 69625 - 02 Cust. #: AS-HM-01B Material: Roofing Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%

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: 2145 Sanford

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69625  
Date Collected: 04/14/17  
Date Received: 04/17/17  
Date Analyzed: 04/18/17  
Date Reported: 04/24/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69625 - 02a Cust. #: AS-HM-01B Material: Vapor Barrier Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 69625 - 03 Cust. #: AS-HM-02A Material: 9x9 Grey Floor Tile Location: Appearance: grey, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>YES</b> Chrysotile - 10%	Other - 90%
Lab ID #: 69625 - 03a Cust. #: AS-HM-02A Material: Mastic Location: Appearance: black, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	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: 2145 Sanford

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69625  
Date Collected: 04/14/17  
Date Received: 04/17/17  
Date Analyzed: 04/18/17  
Date Reported: 04/24/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69625 - 04 Cust. #: AS-HM-02B Material: 9x9 Grey Floor Tile Location: Appearance: Layer: 1 of 2	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69625 - 04a Cust. #: AS-HM-02B Material: Mastic Location: Appearance: black,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 69625 - 05 Cust. #: AS-HM-03A Material: Multilayer Floor Tile Location: 1st Floor Kitchen Appearance: black,nonfibrous,homogenous Layer: 1 of 12	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Other - 99%

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0





# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 2145 Sanford

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Lansing, MI 48901

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Date Reported: 04/24/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69625 - 05a Cust. #: AS-HM-03A Material: Glue Location: 1st Floor Kitchen Appearance: clear,nonfibrous,homogenous Layer: 2 of 12	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69625 - 05b Cust. #: AS-HM-03A Material: Wood Floor Tile Location: 1st Floor Kitchen Appearance: brown,nonfibrous,homogenous Layer: 3 of 12	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 69625 - 05c Cust. #: AS-HM-03A Material: Glue Location: 1st Floor Kitchen Appearance: clear,nonfibrous,homogenous Layer: 4 of 12	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Date Reported: 04/24/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69625 - 05d Cust. #: AS-HM-03A Material: Grey Floor Tile, Stripe Location: 1st Floor Kitchen Appearance: grey,nonfibrous,homogenous Layer: 5 of 12	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 69625 - 05e Cust. #: AS-HM-03A Material: Glue Location: 1st Floor Kitchen Appearance: clear,nonfibrous,homogenous Layer: 6 of 12	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69625 - 05f Cust. #: AS-HM-03A Material: Wood Floor Tile Location: 1st Floor Kitchen Appearance: brown,nonfibrous,homogenous Layer: 7 of 12	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69625 - 05g Cust. #: AS-HM-03A Material: Glue Location: 1st Floor Kitchen Appearance: clear,nonfibrous,homogenous Layer: 8 of 12	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69625 - 05h Cust. #: AS-HM-03A Material: Beige Floor Tile Location: 1st Floor Kitchen Appearance: beige,nonfibrous,homogenous Layer: 9 of 12	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69625 - 05i Cust. #: AS-HM-03A Material: Glue Location: 1st Floor Kitchen Appearance: clear,nonfibrous,homogenous Layer: 10 of 12	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69625 - 05j Cust. #: AS-HM-03A Material: Brown Floor Tile Location: 1st Floor Kitchen Appearance: brown,nonfibrous,homogenous Layer: 11 of 12	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 69625 - 05k Cust. #: AS-HM-03A Material: Glue Location: 1st Floor Kitchen Appearance: clear,nonfibrous,homogenous Layer: 12 of 12	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69625 - 06 Cust. #: AS-HM-03B Material: Multilayer Floor Tile Location: 1st Floor Kitchen Appearance: black,nonfibrous,homogenous Layer: 1 of 12	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Other - 99%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69625 - 06a Cust. #: AS-HM-03B Material: Glue Location: 1st Floor Kitchen Appearance: clear,nonfibrous,homogenous Layer: 2 of 12	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69625 - 06b Cust. #: AS-HM-03B Material: Wood Floor Tile Location: 1st Floor Kitchen Appearance: brown,nonfibrous,homogenous Layer: 3 of 12	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 69625 - 06c Cust. #: AS-HM-03B Material: Glue Location: 1st Floor Kitchen Appearance: clear,nonfibrous,homogenous Layer: 4 of 12	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69625 - 06d Cust. #: AS-HM-03B Material: Grey Floor Tile, Stripe Location: 1st Floor Kitchen Appearance: grey,nonfibrous,homogenous Layer: 5 of 12	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 69625 - 06e Cust. #: AS-HM-03B Material: Glue Location: 1st Floor Kitchen Appearance: clear,nonfibrous,homogenous Layer: 6 of 12	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69625 - 06f Cust. #: AS-HM-03B Material: Wood Floor Tile Location: 1st Floor Kitchen Appearance: brown,nonfibrous,homogenous Layer: 7 of 12	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Other - 99%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69625 - 06g Cust. #: AS-HM-03B Material: Glue Location: 1st Floor Kitchen Appearance: clear,nonfibrous,homogenous Layer: 8 of 12	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69625 - 06h Cust. #: AS-HM-03B Material: Beige Floor Tile Location: 1st Floor Kitchen Appearance: beige,nonfibrous,homogenous Layer: 9 of 12	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69625 - 06i Cust. #: AS-HM-03B Material: Glue Location: 1st Floor Kitchen Appearance: clear,nonfibrous,homogenous Layer: 10 of 12	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69625 - 06j Cust. #: AS-HM-03B Material: Brown Floor Tile Location: 1st Floor Kitchen Appearance: brown,nonfibrous,homogenous Layer: 11 of 12	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 69625 - 06k Cust. #: AS-HM-03B Material: Glue Location: 1st Floor Kitchen Appearance: clear,nonfibrous,homogenous Layer: 12 of 12	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69625 - 07 Cust. #: AS-HM-04A Material: 12x12 Grey Peel/Stick VFT Location: Appearance: grey,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69625 - 07a Cust. #: AS-HM-04A Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69625 - 08 Cust. #: AS-HM-04B Material: 12x12 Grey Peel/Stick VFT Location: Appearance: grey,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69625 - 08a Cust. #: AS-HM-04B Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69625 - 09 Cust. #: AS-HM-05A Material: 9x9 Red VFT Location: Appearance: red, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>YES</b> Chrysotile - 10%	Other - 90%
Lab ID #: 69625 - 09a Cust. #: AS-HM-05A Material: Mastic Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Other - 85%
Lab ID #: 69625 - 10 Cust. #: AS-HM-05B Material: 9x9 Red VFT Location: Appearance: Layer: 1 of 2	Asbestos Present:  NOT ANALYZED	

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69625 - 10a Cust. #: AS-HM-05B Material: Mastic Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Other - 85%
Lab ID #: 69625 - 11 Cust. #: AS-HM-06A Material: Tan Vinyl Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 69625 - 12 Cust. #: AS-HM-06B Material: Tan Vinyl Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69625 - 13 Cust. #: AS-HM-07A Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69625 - 13a Cust. #: AS-HM-07A Material: Joint Compound Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69625 - 14 Cust. #: AS-HM-07B Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69625 - 14a Cust. #: AS-HM-07B Material: Joint Compound Location: Appearance: white,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69625 - 15 Cust. #: AS-HM-08A Material: Texture Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69625 - 16 Cust. #: AS-HM-08B Material: Texture Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Date Reported: 04/24/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69625 - 17 Cust. #: AS-HM-09A Material: Floor Tile Location: Appearance: orange,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69625 - 17a Cust. #: AS-HM-09A Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69625 - 18 Cust. #: AS-HM-09B Material: Floor Tile Location: Appearance: orange,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Date Reported: 04/24/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69625 - 18a Cust. #: AS-HM-09B Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69625 - 19 Cust. #: AS-HM-10A Material: Brown Floor Tile Location: Appearance: brown,nonfibrous,homogenous Layer: 1 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69625 - 19a Cust. #: AS-HM-10A Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 4	Asbestos Present: <b>NO</b> 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: 2145 Sanford

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69625  
Date Collected: 04/14/17  
Date Received: 04/17/17  
Date Analyzed: 04/18/17  
Date Reported: 04/24/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69625 - 19b Cust. #: AS-HM-10A Material: Black Floor Tile Location: Appearance: black,nonfibrous,homogenous Layer: 3 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 69625 - 19c Cust. #: AS-HM-10A Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 4 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69625 - 20 Cust. #: AS-HM-10B Material: Brown Floor Tile Location: Appearance: brown,nonfibrous,homogenous Layer: 1 of 4	Asbestos Present: <b>NO</b> 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: 2145 Sanford

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69625  
Date Collected: 04/14/17  
Date Received: 04/17/17  
Date Analyzed: 04/18/17  
Date Reported: 04/24/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69625 - 20a Cust. #: AS-HM-10B Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69625 - 20b Cust. #: AS-HM-10B Material: Black Floor Tile Location: Appearance: black,nonfibrous,homogenous Layer: 3 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 69625 - 20c Cust. #: AS-HM-10B Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 4 of 4	Asbestos Present: <b>NO</b> 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: 2145 Sanford

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69625  
Date Collected: 04/14/17  
Date Received: 04/17/17  
Date Analyzed: 04/18/17  
Date Reported: 04/24/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69625 - 21 Cust. #: AS-HM-11A Material: Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 69625 - 22 Cust. #: AS-HM-11B Material: Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 69625 - 23 Cust. #: AS-HS-01A Material: Plaster Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 5% Other - 95%

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: 2145 Sanford

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69625  
Date Collected: 04/14/17  
Date Received: 04/17/17  
Date Analyzed: 04/18/17  
Date Reported: 04/24/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69625 - 24 Cust. #: AS-HS-01B Material: Plaster/Drywall Location: Appearance: white, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 5% Other - 95%
Lab ID #: 69625 - 25 Cust. #: AS-HS-01C Material: Plaster Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 5% Other - 95%
Lab ID #: 69625 - 26 Cust. #: AS-HS-01D Material: Plaster Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 5% Other - 95%

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: 2145 Sanford

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69625  
Date Collected: 04/14/17  
Date Received: 04/17/17  
Date Analyzed: 04/18/17  
Date Reported: 04/24/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69625 - 27 Cust. #: AS-HS-01E Material: Plaster Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 5% Other - 95%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	
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

**69625**

1 of 3

**APEX Research, Inc.**

11054 Hi Tech Drive, Whitmore Lake, MI 48189

Phone: 734-449-9990  
 Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-14-17

Project: 2145 Sanford

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
 Log-In \_\_\_\_\_  
 Report \_\_\_\_\_

**Turn Around Times: (Circle One)**

P1M EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour  
 48 hour 72 hour

Other: 5 days **(TTP)** All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
 Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
 Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BioSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
 TEM: AHERA 7400 Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	AS-HM-01A	Roofing Sample + Vapor Barrier			
2	AS-HM-01B	" " " "			
3	AS-HM-02A	9x9 Heavy VET			
4	AS-HM-02B	" " " "			
5	AS-HM-03A	18" Glass Koolink Multi-Regen Floor			
6	AS-HM-03B	" " " "			
7	AS-HM-04A	12x12 Heavy Pelt + Stick VET			
8	AS-HM-04B	" " " "			
9	AS-HM-05A	9x9 Red VET			
10	AS-HM-05B	" " " "			
11	AS-HM-06A	Ten Vinyl			

Relinquished by: [Signature] Date: 4-14-17  
 Received by: [Signature] Date: 4-14-17

Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_  
 Received by: [Signature] Date: APR 17 2017

69625

2 of 3

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189

Phone: 734-449-9990



E-mail: apexresearch@chartermi.net

Fax: 734-449-9991

Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-14-17

Project: 2145 Sanford St.

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: Sdey All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_

Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_

Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BioSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_

TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	AS-HM-06B				
13	AS-HH-07A				
14	AS-HM-07B				
15	AS-HM-08A				
16	AS-HM-08B				
17	AS-2M-09A				
18	AS-HM-09B				
19	AS-HM-10A				
20	AS-HM-10B				
21	AS-HM-11A				
22	AS-HM-11B				

Relinquished by: Alexandra Received by: UPS  
Date: 4-14-17 Date: 4-14-17

Relinquished by: \_\_\_\_\_ Received by:   
Date: \_\_\_\_\_ Date: APR 17 2017

69625

3 of 3

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990



E-mail: apexresearch@chartermi.net

Fax: 734-449-9991

Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-14-17

Project: 2145 Sanford St.

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: 5 day  All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BioSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
23	AS-HS-01A	Paster			
24	AS-HS-01B				
25	AS-HS-01C				
26	AS-HS-01D				
27	AS-HS-01E				

Relinquished by: [Signature] Date: 4-14-17

Received by: UPS Date: 4-14-17

Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_

Received by: [Signature] Date: APR 17 2017

***Tables***



**Table 1 - Summary of Hazardous Materials, 2145 Sanford St., Muskegon Heights, Michigan**

<b>Hazardous Materials Description and Location</b>		
<b>Location</b>	<b>Material Description</b>	<b>Quantity</b>
Exterior	Automobile Tires	8
1 <sup>st</sup> Floor Living Room	Carbon Monoxide Detector	1
1 <sup>st</sup> Floor NW Bedroom	Smoke Detector	1
1 <sup>st</sup> Floor NE Bedroom	Smoke Detector	1
2 <sup>nd</sup> Floor Living Room	Carbon Monoxide Detector	1

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2145 Sanford St., Muskegon Heights, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
AS-HM-01A	Roofing Shingle & Vapor Barrier	No	M	Category I	ND/ND	Exterior	NA
AS-HM-01B	Roofing Shingle & Vapor Barrier	No	M	Category I	ND/ND	Exterior	NA
AS-HM-02A	Gray 9"x9" Vinyl Floor Tile	No	M	Category I	10%CH/ND	1 <sup>st</sup> Floor Living Room	320 sq. ft.
AS-HM-02B	Gray 9"x9" Vinyl Floor Tile	No	M	Category I	NA/ND	1 <sup>st</sup> Floor Living Room	NA
AS-HM-03A	1 <sup>st</sup> Floor Kitchen Multi-Layer Floor	No	M	Category I	ND x 12 Layers	1 <sup>st</sup> Floor Kitchen	NA
AS-HM-03B	1 <sup>st</sup> Floor Kitchen Multi-Layer Floor	No	M	Category I	ND x 12 Layers	1 <sup>st</sup> Floor Kitchen	NA
AS-HM-04A	Gray 12x12 Peel & Stick Vinyl Floor Tile	No	M	Category I	ND/ND	1 <sup>st</sup> Floor Bathroom	NA
AS-HM-04B	Gray 12x12 Peel & Stick Vinyl Floor Tile	No	M	Category I	ND/ND	1 <sup>st</sup> Floor Bathroom	NA
AS-HM-05A	Red 9"x9" Vinyl Floor Tile	No	M	Category I	10%CH/ND	1 <sup>st</sup> Floor NE bedroom	114 sq. ft.
AS-HM-05B	Red 9"x9" Vinyl Floor Tile	No	M	Category I	NA/ND	1 <sup>st</sup> Floor NE Bedroom	NA
AS-HM-06A	Tan Vinyl	No	M	Category I	ND	1 <sup>st</sup> Floor Hallway	NA
AS-HM-06B	Tan Vinyl	No	M	Category I	ND	1 <sup>st</sup> Floor Hallway	NA
AS-HM-07A	Drywall	No	M	Category II	ND/ND	1 <sup>st</sup> Floor Kitchen Ceiling	NA
AS-HM-07B	Drywall	No	M	Category II	ND/ND	1 <sup>st</sup> Floor Hallway Wall	NA
AS-HM-08A	Window Glazing	Yes	M	Category II	ND	1st Floor Living Room	NA
AS-HM-08B	Window Glazing	Yes	M	Category II	ND	1 <sup>st</sup> Floor Kitchen	NA
AS-HM-09A	12x12 Yellow Pebble Vinyl Floor Tile	No	M	Category I	ND/ND	2 <sup>nd</sup> Floor Kitchen	NA
AS-HM-09B	12x12 Yellow Pebble Vinyl Floor Tile	No	M	Category I	ND/ND	2 <sup>nd</sup> Floor Kitchen	NA
AS-HM-10A	Layered Flooring	No	M	Category I	ND/ND/ND/ND	2 <sup>nd</sup> Floor Bathroom	NA
AS-HM-10B	Layered Flooring	No	M	Category I	ND/ND/ND/ND	2 <sup>nd</sup> Floor Bathroom	NA
AS-HM-11A	Yellow Vinyl	No	M	Category I	ND	2 <sup>nd</sup> Floor Hallway	NA
AS-HM-11B	Yellow Vinyl	No	M	Category I	ND	2 <sup>nd</sup> Floor Hallway	NA
AS-HS-01A	Plaster	No	S	Category II	ND	1 <sup>st</sup> Floor NW Bedroom Ceiling	NA
AS-HS-01B	Plaster	No	S	Category II	ND	1 <sup>st</sup> Floor Living Room Ceiling	NA
AS-HS-01C	Plaster	No	S	Category II	ND	1 <sup>st</sup> Floor Kitchen Wall	NA

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2145 Sanford St., Muskegon Heights, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
AS-HS-01D	Plaster	No	S	Category II	ND	1 <sup>st</sup> Floor N Bedroom Wall	NA
AS-HS-01E	Plaster	No	S	Category II	ND	1 <sup>st</sup> Floor Kitchen Wall	NA

**Notes:**

Material Types

M = Miscellaneous building material  
 TSI = Thermal System Insulation  
 S = Surfacing Material  
 PC = Point Count Analysis  
 CH = Chrysotile Asbestos

Abbreviations

NQ = Not quantified  
 NA = Not applicable  
 ND = Not detected. Laboratory result is less than 1 % asbestos  
 lin. ft. = linear feet  
 sq. ft. = square feet

Asbestos Containing Material (ACM) is defined as any material containing more than 1 percent asbestos as determined utilizing Polarized Light Microscopy.

**Table 3 - Summary of Presumed Asbestos Containing Materials, 2145 Sanford St., Muskegon Heights, Michigan**

<b>Asbestos Containing Material Description and Location</b>					
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Condition</b>	<b>Material Type</b>	<b>Approx. Quantity</b>
Building Exterior	Transite Siding	No	Fair	M	1,626 sq. ft.
2 <sup>nd</sup> Fl. Living Room (1 vertical chase to basement, 25 sq. ft.) 2 <sup>nd</sup> Fl. Bathroom (1 vertical chase to basement, 25 sq. ft.) 2 <sup>nd</sup> Fl. Hallway (1 vertical chase to basement, 25 sq. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	75 sq. ft.

**Notes:**

Material Types

M = Miscellaneous building material  
 TSI = Thermal System Insulation  
 S = Surfacing Material

Abbreviations

lin. ft. = linear feet  
 sq. ft. = square feet

**Table 4 - Summary of All Asbestos Containing Materials, 2145 Sanford St., Muskegon Heights, Michigan**

<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
1 <sup>st</sup> Floor Living Room	Gray 9"x9" Vinyl Floor Tile	No	320 sq. ft.
1 <sup>st</sup> Floor NE Bedroom	Red 9"x9" Vinyl Floor Tile	No	114 sq. ft.
<b>Total</b>			<b>434 sq. ft.</b>
<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
2 <sup>nd</sup> Fl. Living Room (1 vertical chase to basement, 25 sq. ft.)	HVAC Duct Wrap	Yes	75 sq. ft.
2 <sup>nd</sup> Fl. Bathroom (1 vertical chase to basement, 25 sq. ft.)			
2 <sup>nd</sup> Fl. Hallway (1 vertical chase to basement, 25 sq. ft.)			
<b>Total</b>			<b>75 sq. ft.</b>
<b>Exterior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Building Exterior	Transite Siding	No	1,626 sq. ft.
<b>Total</b>			<b>1,626 sq. ft.</b>

**Notes:**

Abbreviations

lin. ft. = linear feet

sq. ft. = square feet

**Shaded/Bolded** = Friable ACM and any Category I and Category II non-friable ACM that has a high probability of becoming crumbled, pulverized, or reduced to powder by the demolition or renovation activities that must be properly abated prior to commencement of any demolition/renovation activities.

Demolition/renovation activities completed with intact Category I non-friable ACM are regulated by OSHA and must be completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note that a Negative Pressure Enclosure must be utilized during abatement when Site Conditions Warrant. Examples of these conditions include the abatement of Plaster and Vermiculite insulation, HVAC Duct Wrap in Poor Condition, and Air-O-Cell/Mag Pipe Wrap. Conditions outside of these should be assessed on a case by case basis during the Asbestos Abatement Contractors site walk and Work Plan Preparation.



P.O. Box 13216  
Lansing, MI 48901  
Phone: 888.449.4566  
Fax: 888.448.8739  
www.redcedarconsulting.net

May 8, 2017

Mr. Tim Burgess  
Muskegon County Land Bank  
Land Bank Coordinator  
173 E. Apple Avenue, Suite 104  
Muskegon, MI 49442

***RE: Asbestos Containing Material and Hazardous Materials Inspection  
2228 Riordan St., Muskegon Heights, MI 49444  
Parcel ID: 61-26-185-063-0017-00***

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 2228 Riordan St., Muskegon Heights, Michigan (Subject Property). This inspection was completed at the request of the Muskegon County Land Bank to comply with the United States Environmental Protection Agency (USEPA) requirements for demolition and renovation set forth under the National Emissions Standards for Hazardous Air Pollutants (NESHAP, 40 CFR Part 61). This inspection was also completed to comply with the Occupational Safety and Health Administration (OSHA) Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

### **SUBJECT PROPERTY**

The Subject Property is comprised of a .14 acre residential parcel which contains an approximate 560 square foot residential building (the Building) constructed in 1910. The Building was constructed on a concrete block crawl space with one aboveground floor. The exterior walls of the Building were finished with asphalt shingle siding while the roof was sealed with asphalt shingles. The Building can be further divided into a living room, kitchen, bath, and two bedrooms.

### **VISUAL INSPECTION AND SAMPLING**

#### **Asbestos Containing Materials Inspection**

Aaron Paquet and Darrell DeMasters of Red Cedar Consulting (Red Cedar), accredited State Of Michigan/EPA Asbestos Building Inspectors (Accreditation Numbers A30955 and A31159, respectively) who completed training per the Michigan Asbestos Workers Accreditation Act 440, completed an inspection of the Subject Property on April 18, 2017 for suspected asbestos containing building materials.

This inspection, and subsequent sample collection was completed in accordance with the USEPA Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763) assessment and sampling protocol.

During the completion of the inspection, each area of the Subject Property was visually inspected for asbestos containing building materials (ACBM). Following the completion of the visual inspection, Red Cedar staff identified each suspect area of friable and non-friable ACBM and sorted them into one of three homogenous categories for sampling purposes. AHERA defines friable as a material that when dry, may be crumbled, pulverized, or reduced to powder by hand pressure. A homogenous area is defined by OSHA as an area of surfacing, thermal system insulation (TSI) or miscellaneous material that is uniform in color and texture. Surfacing materials are most commonly found in sprayed-on, troweled-on or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members. TSI refers to materials applied to pipes, fittings, boilers, ductwork, or other components to prevent heat loss or gain, or condensation. Any material that does not fall under the surfacing or TSI category, such as floor tile, drywall, and acoustical ceiling tile are placed into the miscellaneous materials category.

Following the completion of the visual inspection, Red Cedar staff identified the following materials as suspect ACBM:

- Asphalt Shingle
- Linoleum
- 1'x1' Ceiling Tile
- Layered Gypsum
- Cove Base & Glue
- Drywall
- Glazing

Red Cedar staff collected twenty two samples of suspect ACBM separated into eleven distinct homogenous groups for laboratory analysis. Samples were collected and submitted to APEX Research Inc. Laboratories (APEX) (Accreditation Number 102118-0) for laboratory analysis. Analysis was completed utilizing polarized light microscopy (PLM) which is the Environmental Protection Agency (EPA) approved method for analysis of bulk materials for asbestos. PLM analysis completed pursuant to method (EPA 600/M4-82-020) identifies asbestos fiber bundles by the visual properties displayed when the sample is treated with various dispersion staining liquids. The laboratory report completed following the sample analysis indicates if asbestos is present, and at what percentage along with a description and percentage of other fibrous and non-fibrous materials and sample color. Chain-of-custody documentation was followed from sample collection through shipping and receiving of the samples at the designated laboratory. The documentation assures that samples will meet the quality assurance/quality control measures defined by AHERA. The laboratory analytical report prepared by APEX for the twenty two samples is included as Attachment A.

## **Hazardous Materials Inspection**

On April 18, 2017 the Subject Property was also inspected for the presence of hazardous materials which include but are not limited to polychlorinated biphenyls (PCBs) and potential mercury containing equipment and any items or containers that may contain or be classified as a hazardous or regulated material. Each material, if identified, was documented along with the approximate location. Any materials identified as hazardous are included in Table 1.

## **INSPECTION RESULTS AND RECOMMENDATIONS**

During the completion of the asbestos inspection, twenty two samples of suspect ACM were collected and are documented in Table 2 along with the Red Cedar sample number, description, friability, material type, ACM classification, sample location, material quantity and laboratory analytical results.

ACM, as defined by the USEPA NESHAP is “any material containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763 Section 1, Polarized Light Microscopy”.

Friable ACM is defined by NESHAP as any material containing more than 1 percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Friable ACM is a concern due the ease of unintentionally disturbing the ACM which may result in “visible emissions” which is known as a Fiber Release Episode.

Non-friable asbestos-containing material is defined as “material containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACM’s are separated into Category I and Category II ACM. Category I ACM is any asbestos containing packing’s, gaskets, resilient floor coverings (vinyl floor tile and linoleum are examples of these) and asphalt roofing products. Category II ACM is stated by NESHAP as any material excluding Category I non-friable ACM such as drywall, plaster or fiberboard insulation.

### **Presumed Asbestos Containing Material**

Presumed Asbestos Containing Materials (PACM) are suspect surfacing, TSI and miscellaneous materials found in buildings constructed prior to 1980 which are classified as and due to the age of the structure, are assumed to be ACM and do not require sample collection and analysis. OSHA dictates that PACM may be “rebutted” following a complete inspection pursuant to AHERA protocol.

No PACM was identified during the completion of this inspection. All suspect materials identified were sampled and analyzed for ACM.

Table 3 lists the location, material description, friability, condition, material type (surfacing, thermal or miscellaneous) and approximate quantity of all PACM documented at the Subject Property.

Table 4 provides a summary all ACM documented at the Subject Property which includes the material location, description, and approximate quantity.



### **Friable ACM's**

A window glazing sample collected from a window in the 2<sup>nd</sup> Fl. N. Bedroom was found to contain up to 1.25% asbestos following analysis. The assessment to quantify the extent of this material identified six windows at the following locations that would fall into the same homogenous group. The locations of the windows are listed below:

- Living Room (2 windows 28" wide x 63" tall)
- SW Bedroom (1 window 28" wide x 63" tall)
- Kitchen (1 window 28" wide x 63" tall)
- S Bedroom (1 window 28" wide x 63" tall)
- Bathroom (1 window 28" wide x 36" tall)

### **Category I ACM**

No Category I ACM was identified during the completion of this inspection.

### **Category II ACM**

No Category II non-friable ACM was identified during the completion of this inspection.

## **RECOMMENDATIONS**

### **Asbestos Containing Materials**

Friable asbestos containing window glazing was identified on six windows throughout the Building. The locations of these windows that should be abated prior to demolition/renovation activities are listed below:

- Living Room (2 windows 28" wide x 63" tall)
- SW Bedroom (1 window 28" wide x 63" tall)
- Kitchen (1 window 28" wide x 63" tall)
- S Bedroom (1 window 28" wide x 63" tall)
- Bathroom (1 window 28" wide x 36" tall)

Please note: Other different sized windows are located throughout the Building but these windows were assessed and found to be constructed either without window glazing or were sampled and found to not contain asbestos and therefore are not required to be removed.

Please note: The location of samples obtained during this inspection were in a random fashion and areas that were not identified during this inspection may be damaged or have become damaged since the inspection was completed. If Category I or Category II friable materials are discovered prior to or during the demolition/renovation process, these materials must be abated prior to commencement of any demolition/renovation activities at the Subject Property.

Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-26-185-063-0017-00

## **Hazardous Materials**

Hazardous Materials identified at the Subject Property and documented in Table 1 which require proper removal and disposal consist of the following items:

- Smoke Detector (3)
- Automobile Tire (2)

## **REGULATORY REQUIREMENTS**

A Notification of Intent to Renovate/Demolish form must be filed with the Michigan Department of Environmental Quality- Air Quality Division at least 10 working days prior to any renovation or demolition activities at a site.

The Notification of Intent to Renovate/Demolish form must also be completed and submitted to the MIOSHA-Asbestos Program whenever demolition, encapsulation and/or renovation activities at a site involving greater than ten lineal feet and/or fifteen square feet of ACM will be completed.

Regulated asbestos containing materials per NESHAP (40 CFR Part 61) which falls into any of the following categories are ACM's that must be removed prior to any renovation/demolition activities at the Subject Property.

- Friable asbestos material.
- Category I non-friable ACM that has become friable.
- Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading.
- Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations.

Asbestos abatement should only be performed by a certified asbestos abatement contractor licensed to complete abatement work. The contractor must also follow the standards and requirements set forth per the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61).

Additional information regarding the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61) can be obtained by contacting the associated agency below.

NESHAP Asbestos Program  
Department of Environmental Quality  
Phone: 517-284-6777

MIOSHA-CSHD-Asbestos Program  
State of Michigan  
Phone: 517-284-7680  
Email: asbestos@michigan.gov

Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-26-185-063-0017-00

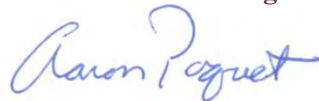
**DISCLAIMER**

Red Cedar Consulting performed destructive testing methods in an attempt to access and inspect all areas of the Building. Unfortunately, due to the age of construction along with multiple additions/renovations that may have been completed on the Building, additional inspections may be required if suspect ACM material not documented within this report is encountered during renovation/demolition activities.

This report was prepared at the request and for exclusive use by the Muskegon County Land Bank and may not be reproduced or sold without written permission from Red Cedar Consulting.

We appreciate the opportunity to provide the requested services. Please contact us at (888) 449-4566 with any questions or concerns.

Sincerely,  
**Red Cedar Consulting**



Aaron Paquet  
Michigan/EPA Certified Asbestos Building Inspector  
(A30955)

Red Cedar Consulting

***Attachment 1***  
***APEX Research Laboratory Analytical Results***



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 2228 Riordan St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69677  
Date Collected: 04/18/17  
Date Received: 04/19/17  
Date Analyzed: 04/20/17  
Date Reported: 04/25/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69677 - 01 Cust. #: IS-HM-01A Material: Shingle Siding Location: Appearance: black, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69677 - 01a Cust. #: IS-HM-01A Material: Vapor Paper Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 60% Other - 40%
Lab ID #: 69677 - 02 Cust. #: IS-HM-01B Material: Shingle Siding Location: Appearance: black, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%

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



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## Test Method, Polarized Light Microscopy (PLM)

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ARI Report # 17-69677  
Date Collected: 04/18/17  
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Date Analyzed: 04/20/17  
Date Reported: 04/25/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69677 - 02a Cust. #: IS-HM-01B Material: Vapor Paper Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 60% Other - 40%
Lab ID #: 69677 - 03 Cust. #: IS-HM-02A Material: Shingle Roof Location: Appearance: black, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69677 - 03a Cust. #: IS-HM-02A Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%

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Robert T. Letarte Jr., Laboratory Director

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Lansing, MI 48901

ARI Report # 17-69677  
Date Collected: 04/18/17  
Date Received: 04/19/17  
Date Analyzed: 04/20/17  
Date Reported: 04/25/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69677 - 04 Cust. #: IS-HM-02B Material: Shingle Roof Location: Appearance: black, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69677 - 04a Cust. #: IS-HM-02B Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69677 - 05 Cust. #: IS-HM-03A Material: Cream Linoleum Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%

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Robert T. Letarte Jr., Laboratory Director

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ARI Report # 17-69677  
Date Collected: 04/18/17  
Date Received: 04/19/17  
Date Analyzed: 04/20/17  
Date Reported: 04/25/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69677 - 06 Cust. #: IS-HM-03B Material: Cream Linoleum/Glue Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69677 - 07 Cust. #: IS-HM-04A Material: White Linoleum/Glue Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Fiberglass - 5% Other - 80%
Lab ID #: 69677 - 08 Cust. #: IS-HM-04B Material: White Linoleum/Glue Location: Appearance: white, nonfibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Robert T. Letarte Jr., Laboratory Director

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ARI Report # 17-69677  
Date Collected: 04/18/17  
Date Received: 04/19/17  
Date Analyzed: 04/20/17  
Date Reported: 04/25/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69677 - 09 Cust. #: IS-HM-05A Material: 1x1 White Textured Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 69677 - 10 Cust. #: IS-HM-05B Material: 1x1 White Textured Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 69677 - 11 Cust. #: IS-HM-06A Material: 1x1 White/Gold Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%

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

Robert T. Letarte Jr., Laboratory Director

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## Test Method, Polarized Light Microscopy (PLM)

Project: 2228 Riordan St

**Report To:**

Mr. Aaron Paquet  
 Red Cedar Consulting  
 P.O. Box 13216  
 Lansing, MI 48901

ARI Report # 17-69677  
 Date Collected: 04/18/17  
 Date Received: 04/19/17  
 Date Analyzed: 04/20/17  
 Date Reported: 04/25/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69677 - 12 Cust. #: IS-HM-06B Material: 1x1 White/Gold Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 69677 - 13 Cust. #: IS-HM-07A Material: Drywall Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69677 - 14 Cust. #: IS-HM-07B Material: Drywall Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%

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

Robert T. Letarte Jr., Laboratory Director

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ARI Report # 17-69677  
Date Collected: 04/18/17  
Date Received: 04/19/17  
Date Analyzed: 04/20/17  
Date Reported: 04/25/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69677 - 15 Cust. #: IS-HM-08A Material: Layered Gypsum Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 69677 - 16 Cust. #: IS-HM-08B Material: Layered Gypsum Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 69677 - 17 Cust. #: IS-HM-09A Material: Blue Cove Base Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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ARI Report # 17-69677  
Date Collected: 04/18/17  
Date Received: 04/19/17  
Date Analyzed: 04/20/17  
Date Reported: 04/25/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69677 - 17a Cust. #: IS-HM-09A Material: Glue Location: Appearance: beige, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69677 - 18 Cust. #: IS-HM-09B Material: Blue Cove Base Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69677 - 18a Cust. #: IS-HM-09B Material: Glue Location: Appearance: beige, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> 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.



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ARI Report # 17-69677  
Date Collected: 04/18/17  
Date Received: 04/19/17  
Date Analyzed: 04/20/17  
Date Reported: 04/25/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69677 - 19 Cust. #: IS-HM-10A Material: Brown Cove Base Location: Appearance: green,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69677 - 19a Cust. #: IS-HM-10A Material: Glue Location: Appearance: brown,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69677 - 20 Cust. #: IS-HM-10B Material: Brown Cove Base Location: Appearance: green,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> 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.



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Date Analyzed: 04/20/17  
Date Reported: 04/25/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69677 - 20a Cust. #: IS-HM-10B Material: Glue Location: Appearance: brown,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69677 - 21 Cust. #: IS-HM-11A Material: Window Glazing Location: Appearance: grey,fibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> Chrysotile - 0.50%  POINT COUNT RESULT	Other - 99.50%
Lab ID #: 69677 - 22 Cust. #: IS-HM-11B Material: Window Glazing Location: Appearance: grey,fibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 1.25%  POINT COUNT RESULT	Other - 98.75%

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0

**69677**

142

**HERA research, Inc.**

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990



E-mail: apexresearch@charternet.net Fax: 734-449-9991

Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-18-17

Project: 2238 *Ridgewood St*

Project #:

Contact Person: Aaron Paquet

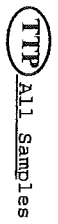
Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

**Turn Around Times: (Circle One)**

PJM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour  
48 hour 72 hour

Other: *Sdey*



Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BioSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	15-111-01A	Shingle Siding			
2	15-111-01B	" "			
3	15-111-02A	Shingle Roof			
4	15-111-02B	" "			
5	15-111-03A	Cream Linoleum			
6	15-111-03B	" "			
7	15-111-04A	White Linoleum			
8	15-111-04B	" "			
9	15-111-05A	1x1 White Textured CT			
10	15-111-05B	" "			
11	15-111-06A	1x1 White + Gold CT			

Relinquished by: *[Signature]* Received by: *[Signature]*  
Date: 4-18-17 Date: 4-18-17

Relinquished by: \_\_\_\_\_ Received by: \_\_\_\_\_  
Date: \_\_\_\_\_ Date: APR 19 2017

**RECEIVED**

69677

20F2

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990



E-mail: apexresearch@chartermi.net Fax: 734-449-9991

Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-18-17

Project: 2228 Riordan SE

Project #:

Contact Person: Aaron Paquet

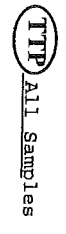
Lab Use Only  
Log In \_\_\_\_\_  
Report \_\_\_\_\_

Turn Around Times: (Circle One) PLM EPA 600, PC all samples with a detection of <5% ACM. [apaguet@redcedarconsulting.net](mailto:apaguet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: 5 day



Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BioSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	15-HM-06B	1 x 1 White & Gold E.T.			
13	15-HM-07A	Drywall (No Joint Compound)			
14	15-HM-07B	" " " " " "			
15	15-HM-08A	Layered Gypsum			
16	15-HM-08B	" " " " " "			
17	15-HM-09A	Blue Cove Base & Glue			
18	15-HM-09B	" " " " " "			
19	15-HM-10A	Brown Cove Base & Glue			
20	15-HM-10B	" " " " " "			
21	15-HM-11A	Window Glazing			
22	15-HM-11B	" " " " " "			

Relinquished by: Alexander M. Stute Received by: UPS

Date: 4-18-17 Date: 4-18-17

Relinquished by: \_\_\_\_\_

Date: \_\_\_\_\_

Received by: **RECEIVED**

Date: APR 19 2017



***Tables***

**Table 1 - Summary of Hazardous Materials, 2228 Riordan St., Muskegon Heights, Michigan**

<b>Hazardous Materials Description and Location</b>		
<b>Location</b>	<b>Material Description</b>	<b>Quantity</b>
Kitchen	Smoke Detector	1
SW Bedroom	Smoke Detector	1
S Bedroom	Smoke Detector	1
Exterior	Automobile Tires	2

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2228 Riordan St., Muskegon Heights, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
IS-HM-01A	Shingle Siding	No	M	Category I	ND/ND	Exterior	NA
IS-HM-01B	Shingle Siding	No	M	Category I	ND/ND	Exterior	NA
IS-HM-02A	Shingle Roof	No	M	Category I	ND/ND	Exterior	NA
IS-HM-02B	Shingle Roof	No	M	Category I	ND/ND	Exterior	NA
IS-HM-03A	Cream Linoleum	No	M	Category I	ND	Living Room	NA
IS-HM-03B	Cream Linoleum	No	M	Category I	ND	SW Bedroom	NA
IS-HM-04A	White Linoleum	No	M	Category I	ND	Kitchen	NA
IS-HM-04B	White Linoleum	No	M	Category I	ND	Bathroom	NA
IS-HM-05A	White Textured 1'x1' Ceiling Tile	Yes	M	Category II	ND	Living Room	NA
IS-HM-05B	White Textured 1'x1' Ceiling Tile	Yes	M	Category II	ND	Kitchen	NA
IS-HM-06A	White & Gold 1'x1' Ceiling Tile	Yes	M	Category II	ND	S Bedroom Ceiling	NA
IS-HM-06B	White & Gold 1'x1' Ceiling Tile	Yes	M	Category II	ND	SW Bedroom Ceiling	NA
IS-HM-07A	Drywall (No Joint Compound)	No	M	Category II	ND	Kitchen Wall	NA
IS-HM-07B	Drywall (No Joint Compound)	No	M	Category II	ND	S Bedroom Wall	NA
IS-HM-08A	Layered Gypsum	No	M	Category II	ND	Living Room Wall	NA
IS-HM-08B	Layered Gypsum	No	M	Category II	ND	SW Bedroom Wall	NA
IS-HM-09A	Blue Cove Base & Glue	No	M	Category I	ND/ND	Kitchen	NA
IS-HM-09B	Blue Cove Base & Glue	No	M	Category I	ND/ND	Bathroom	NA
IS-HM-10A	Brown Cove Base & Glue	No	M	Category I	ND/ND	Living Room	NA
IS-HM-10B	Brown Cove Base & Glue	No	M	Category I	ND/ND	S Bedroom	NA
IS-HM-11A	Window Glazing	Yes	M	Category II	.05%CH-PC	Living Room	NA
IS-HM-11B	Window Glazing	Yes	M	Category II	1.25%CH-PC	Living Room	6 windows

## Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2228 Riordan St., Muskegon Heights, Michigan

### Notes:

#### Material Types

M = Miscellaneous building material  
TSI = Thermal System Insulation  
S = Surfacing Material  
PC = Point Count Analysis  
CH = Chrysotile Asbestos

#### Abbreviations

NQ = Not quantified  
NA = Not applicable  
ND = Not detected. Laboratory result is less than 1 % asbestos  
lin. ft. = linear feet  
sq. ft. = square feet

Asbestos Containing Material (ACM) is defined as any material containing more than 1 percent asbestos as determined utilizing Polarized Light Microscopy.

**Table 3 - Summary of Presumed Asbestos Containing Materials, 2228 Riordan St., Muskegon Heights, Michigan**

<b>Asbestos Containing Material Description and Location</b>					
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Condition</b>	<b>Material Type</b>	<b>Approx. Quantity</b>
No Presumed Asbestos Containing Materials Identified					

**Notes:**

Material Types

- M = Miscellaneous building material
- TSI = Thermal System Insulation
- S = Surfacing Material

Abbreviations

- lin. ft. = linear feet
- sq. ft. = square feet

**Table 4 - Summary of All Asbestos Containing Materials, 2228 Riordan St., Muskegon Heights, Michigan**

<b>Interior - Asbestos Containing Materials</b>				
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>	
Living (2 windows 28" wide x 63" tall)	Glazing	Yes	2 Windows	
SW Bedroom (1 window 28" wide x 63" tall)	Glazing	Yes	1 Window	
Kitchen (1 window 28" wide x 63" tall)	Glazing	Yes	1 Window	
S Bedroom (1 window 28" wide x 63" tall)	Glazing	Yes	1 Window	
Bathroom (1 window 28" wide x 36" tall)	Glazing	Yes	1 Window	
			<b>Total</b>	<b>6 Windows</b>

**Notes:**

Abbreviations

lin. ft. = linear feet

sq. ft. = square feet

**Shaded/Bolded** = Friable ACM and any Category I and Category II non-friable ACM that has a high probability of becoming crumbled, pulverized, or reduced to powder by the demolition or renovation activities that must be properly abated prior to commencement of any demolition/renovation activities.

Demolition/renovation activities completed with intact Category I non-friable ACM are regulated by OSHA and must be completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note that a Negative Pressure Enclosure must be utilized during abatement when Site Conditions Warrant. Examples of these conditions include the abatement of Plaster and Vermiculite insulation, HVAC Duct Wrap in Poor Condition, and Air-O-Cell/Mag Pipe Wrap. Conditions outside of these should be assessed on a case by case basis during the Asbestos Abatement Contractors site walk and Work Plan Preparation.



P.O. Box 13216  
Lansing, MI 48901  
Phone: 888.449.4566  
Fax: 888.448.8739  
www.redcedarconsulting.net

May 8, 2017

Mr. Tim Burgess  
Muskegon County Land Bank  
Land Bank Coordinator  
173 E. Apple Avenue, Suite 104  
Muskegon, MI 49442

**RE: *Asbestos Containing Material and Hazardous Materials Inspection***  
***2244 Reynolds St., Muskegon Heights, MI 49444***  
***Parcel ID: 61-26-185-065-0013-00***

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 2244 Reynolds St., Muskegon Heights, Michigan (Subject Property). This inspection was completed at the request of the Muskegon County Land Bank to comply with the United States Environmental Protection Agency (USEPA) requirements for demolition and renovation set forth under the National Emissions Standards for Hazardous Air Pollutants (NESHAP, 40 CFR Part 61). This inspection was also completed to comply with the Occupational Safety and Health Administration (OSHA) Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

### **SUBJECT PROPERTY**

The Subject Property is comprised of a .14 acre residential parcel which contains a 280 sq. ft. detached garage and approximate 992 square foot residential building (the Building) constructed in 1915. The Building was constructed on a concrete block basement with one aboveground floor. The exterior walls of the Building were finished with clapboard siding while the roof was sealed with asphalt shingles. The Building can be further divided into a living room, kitchen, bath, three bedrooms and a rear entry.

### **VISUAL INSPECTION AND SAMPLING**

#### **Asbestos Containing Materials Inspection**

Aaron Paquet and Darrell DeMasters of Red Cedar Consulting (Red Cedar), accredited State Of Michigan/EPA Asbestos Building Inspectors (Accreditation Numbers A30955 and A31159, respectively) who completed training per the Michigan Asbestos Workers Accreditation Act 440, completed an inspection of the Subject Property on April 12, 2017 for suspected asbestos containing building materials.

This inspection, and subsequent sample collection was completed in accordance with the USEPA Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763) assessment and sampling protocol.

During the completion of the inspection, each area of the Subject Property was visually inspected for asbestos containing building materials (ACBM). Following the completion of the visual inspection, Red Cedar staff identified each suspect area of friable and non-friable ACBM and sorted them into one of three homogenous categories for sampling purposes. AHERA defines friable as a material that when dry, may be crumbled, pulverized, or reduced to powder by hand pressure. A homogenous area is defined by OSHA as an area of surfacing, thermal system insulation (TSI) or miscellaneous material that is uniform in color and texture. Surfacing materials are most commonly found in sprayed-on, troweled-on or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members. TSI refers to materials applied to pipes, fittings, boilers, ductwork, or other components to prevent heat loss or gain, or condensation. Any material that does not fall under the surfacing or TSI category, such as floor tile, drywall, and acoustical ceiling tile are placed into the miscellaneous materials category.

Following the completion of the visual inspection, Red Cedar staff identified the following materials as suspect ACBM:

- Asphalt Shingle
- Linoleum
- 1'x1' Ceiling Tile
- 12"x12" Vinyl Tile
- Drywall & Joint Compound
- Glazing
- Plaster

Red Cedar staff collected twenty nine samples of suspect ACBM separated into thirteen distinct homogenous groups for laboratory analysis. Samples were collected and submitted to APEX Research Inc. Laboratories (APEX) (Accreditation Number 102118-0) for laboratory analysis. Analysis was completed utilizing polarized light microscopy (PLM) which is the Environmental Protection Agency (EPA) approved method for analysis of bulk materials for asbestos. PLM analysis completed pursuant to method (EPA 600/M4-82-020) identifies asbestos fiber bundles by the visual properties displayed when the sample is treated with various dispersion staining liquids. The laboratory report completed following the sample analysis indicates if asbestos is present, and at what percentage along with a description and percentage of other fibrous and non-fibrous materials and sample color. Chain-of-custody documentation was followed from sample collection through shipping and receiving of the samples at the designated laboratory. The documentation assures that samples will meet the quality assurance/quality control measures defined by AHERA. The laboratory analytical report prepared by APEX for the twenty nine samples is included as Attachment A.



## **Hazardous Materials Inspection**

On April 12, 2017 the Subject Property was also inspected for the presence of hazardous materials which include but are not limited to polychlorinated biphenyls (PCBs) and potential mercury containing equipment and any items or containers that may contain or be classified as a hazardous or regulated material. Each material, if identified, was documented along with the approximate location. Any materials identified as hazardous are included in Table 1.

## **INSPECTION RESULTS AND RECOMMENDATIONS**

During the completion of the asbestos inspection, twenty nine samples of suspect ACM were collected and are documented in Table 2 along with the Red Cedar sample number, description, friability, material type, ACM classification, sample location, material quantity and laboratory analytical results.

ACM, as defined by the USEPA NESHAP is “any material containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763 Section 1, Polarized Light Microscopy”.

Friable ACM is defined by NESHAP as any material containing more than 1 percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Friable ACM is a concern due the ease of unintentionally disturbing the ACM which may result in “visible emissions” which is known as a Fiber Release Episode.

Non-friable asbestos-containing material is defined as “material containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACM’s are separated into Category I and Category II ACM. Category I ACM is any asbestos containing packing’s, gaskets, resilient floor coverings (vinyl floor tile and linoleum are examples of these) and asphalt roofing products. Category II ACM is stated by NESHAP as any material excluding Category I non-friable ACM such as drywall, plaster or fiberboard insulation.

### **Presumed Asbestos Containing Material**

Presumed Asbestos Containing Materials (PACM) are suspect surfacing, TSI and miscellaneous materials found in buildings constructed prior to 1980 which are classified as and due to the age of the structure, are assumed to be ACM and do not require sample collection and analysis. OSHA dictates that PACM may be “rebutted” following a complete inspection pursuant to AHERA protocol.

No PACM was identified during the completion of this inspection. All suspect materials identified were sampled and analyzed for ACM.

Table 3 lists the location, material description, friability, condition, material type (surfacing, thermal or miscellaneous) and approximate quantity of all PACM documented at the Subject Property.

Table 4 provides a summary all ACM documented at the Subject Property which includes the material location, description, and approximate quantity.

### **Friable ACM's**

A window glazing sample collected from a window in the NW Bedroom and Basement was found to contain up to 10% asbestos following analysis. The assessment to quantify the extent of this material identified ten windows at the following locations that would fall into the same homogenous group. The locations of the windows are listed below:

- Garage (1 window 40" wide x 28" tall)
- Garage (1 window 20" wide x 28" tall)
- Living (1 window 40" wide x 58" tall)
- NW Bedroom (1 window 28" wide x 58" tall)
- NW Bedroom (1 window 28" wide x 46" tall)
- Bathroom (1 window 24" wide x 38" tall)
- Kitchen (2 windows 26" wide x 42" tall)
- Basement (2 windows 30" wide x 14" tall)

### **Category I ACM**

Two types of resilient floor covering (Tan 12x12 Vinyl Tile and Woodgrain 12x12 Vinyl Tile) located within the Building were found to contain up to 10% Chrysotile asbestos. The assessment to quantify the extent of this material identified approximately 401 sq. ft. of this material within the Building.

### **Category II ACM**

No Category II non-friable ACM was identified during the completion of this inspection.

## **RECOMMENDATIONS**

### **Asbestos Containing Materials**

Friable asbestos containing window glazing was identified on ten windows throughout the Building. The locations of these windows that should be abated prior to demolition/renovation activities are listed below:

- Garage (1 window 40" wide x 28" tall)
- Garage (1 window 20" wide x 28" tall)
- Living (1 window 40" wide x 58" tall)
- NW Bedroom (1 window 28" wide x 58" tall)
- NW Bedroom (1 window 28" wide x 46" tall)
- Bathroom (1 window 24" wide x 38" tall)
- Kitchen (2 windows 26" wide x 42" tall)
- Basement (2 windows 30" wide x 14" tall)

Please note: Other different sized windows are located throughout the Building but these windows were assessed and found to be constructed either without window glazing or were sampled and found to not contain asbestos and therefore are not required to be removed.

The Category I resilient floor coverings (Tan 12x12 Vinyl Tile and Woodgrain 12x12 Vinyl Tile) are non-friable ACM's that may be left in place as long as the demolition/renovation activities are completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note: The location of samples obtained during this inspection were in a random fashion and areas that were not identified during this inspection may be damaged or have become damaged since the inspection was completed. If Category I or Category II friable materials are discovered prior to or during the demolition/renovation process, these materials must be abated prior to commencement of any demolition/renovation activities at the Subject Property.

### **Hazardous Materials**

Hazardous Materials identified at the Subject Property and documented in Table 1 which require proper removal and disposal consist of the following items:

- Smoke Detector (6)
- Automobile Tire (4)
- Gallon Container Misc. Paint (2)

### **REGULATORY REQUIREMENTS**

A Notification of Intent to Renovate/Demolish form must be filed with the Michigan Department of Environmental Quality- Air Quality Division at least 10 working days prior to any renovation or demolition activities at a site.

The Notification of Intent to Renovate/Demolish form must also be completed and submitted to the MIOSHA-Asbestos Program whenever demolition, encapsulation and/or renovation activities at a site involving greater than ten lineal feet and/or fifteen square feet of ACM will be completed.

Regulated asbestos containing materials per NESHAP (40 CFR Part 61) which falls into any of the following categories are ACM's that must be removed prior to any renovation/demolition activities at the Subject Property.

- Friable asbestos material.
- Category I non-friable ACM that has become friable.
- Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading.
- Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations.

Asbestos abatement should only be performed by a certified asbestos abatement contractor licensed to complete abatement work. The contractor must also follow the standards and requirements set forth per the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61).

Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-26-185-065-0013-00

Additional information regarding the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61) can be obtained by contacting the associated agency below.

NESHAP Asbestos Program  
Department of Environmental Quality  
Phone: 517-284-6777

MIOSHA-CSHD-Asbestos Program  
State of Michigan  
Phone: 517-284-7680  
Email: asbestos@michigan.gov


**DISCLAIMER**

Red Cedar Consulting performed destructive testing methods in an attempt to access and inspect all areas of the Building. Unfortunately, due to the age of construction along with multiple additions/renovations that may have been completed on the Building, additional inspections may be required if suspect ACM material not documented within this report is encountered during renovation/demolition activities.

This report was prepared at the request and for exclusive use by the Muskegon County Land Bank and may not be reproduced or sold without written permission from Red Cedar Consulting.

We appreciate the opportunity to provide the requested services. Please contact us at (888) 449-4566 with any questions or concerns.

Sincerely,  
**Red Cedar Consulting**



Aaron Paquet  
Michigan/EPA Certified Asbestos Building Inspector  
(A30955)

Red Cedar Consulting

***Attachment 1***  
***APEX Research Laboratory Analytical Results***



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 2244 Reynolds St

**Report To:**

Mr. Aaron Paquet  
 Red Cedar Consulting  
 P.O. Box 13216  
 Lansing, MI 48901

ARI Report # 17-69607  
 Date Collected: 04/12/17  
 Date Received: 04/13/17  
 Date Analyzed: 04/17/17  
 Date Reported: 04/19/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69607 - 01 Cust. #: ES-HM-01A Material: Shingle Roof Location: House Appearance: black, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 30% Other - 70%
Lab ID #: 69607 - 01a Cust. #: ES-HM-01A Material: Green Shingle Location: House Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 30% Other - 70%
Lab ID #: 69607 - 02 Cust. #: ES-HM-01B Material: Shingle Roof Location: House Appearance: black, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 30% Other - 70%

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: 2244 Reynolds St

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69607  
Date Collected: 04/12/17  
Date Received: 04/13/17  
Date Analyzed: 04/17/17  
Date Reported: 04/19/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69607 - 02a Cust. #: ES-HM-01B Material: Green Shingle Location: House Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 30% Other - 70%
Lab ID #: 69607 - 03 Cust. #: ES-HM-02A Material: Shingle Roof Location: Garage Appearance: black, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69607 - 03a Cust. #: ES-HM-02A Material: Red Shingle Location: Garage Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%

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: 2244 Reynolds St

**Report To:**

Mr. Aaron Paquet  
 Red Cedar Consulting  
 P.O. Box 13216  
 Lansing, MI 48901

ARI Report # 17-69607  
 Date Collected: 04/12/17  
 Date Received: 04/13/17  
 Date Analyzed: 04/17/17  
 Date Reported: 04/19/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69607 - 04 Cust. #: ES-HM-02B Material: Shingle Roof Location: Garage Appearance: black, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69607 - 04a Cust. #: ES-HM-02B Material: Red Shingle Location: Garage Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69607 - 05 Cust. #: ES-HM-03A Material: Black Layered Linoleum Location: Appearance: black, fibrous, nonhomogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% 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: 2244 Reynolds St

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69607  
Date Collected: 04/12/17  
Date Received: 04/13/17  
Date Analyzed: 04/17/17  
Date Reported: 04/19/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69607 - 05a Cust. #: ES-HM-03A Material: Grey Linoleum Location: Appearance: grey, fibrous, nonhomogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69607 - 05b Cust. #: ES-HM-03A Material: Fiberboard Location: Appearance: brown, fibrous, homogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 69607 - 06 Cust. #: ES-HM-03B Material: Black Layered Linoleum Location: Appearance: black, fibrous, nonhomogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% 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: 2244 Reynolds St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69607  
Date Collected: 04/12/17  
Date Received: 04/13/17  
Date Analyzed: 04/17/17  
Date Reported: 04/19/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69607 - 06a Cust. #: ES-HM-03B Material: Grey Linoleum Location: Appearance: grey, fibrous, nonhomogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69607 - 06b Cust. #: ES-HM-03B Material: Fiberboard Location: Appearance: brown, fibrous, homogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 69607 - 07 Cust. #: ES-HM-04A Material: 12x12 Tan VFT Location: Appearance: grey, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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ARI Report # 17-69607  
Date Collected: 04/12/17  
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Date Analyzed: 04/17/17  
Date Reported: 04/19/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69607 - 07a Cust. #: ES-HM-04A Material: Mastic Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>YES</b> Chrysotile - 10%	Other - 90%
Lab ID #: 69607 - 08 Cust. #: ES-HM-04B Material: 12x12 Tan VFT Location: Appearance: grey, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69607 - 08a Cust. #: ES-HM-04B Material: Mastic Location: Appearance: Layer: 2 of 2	Asbestos Present:  NOT ANALYZED	

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ARI Report # 17-69607  
Date Collected: 04/12/17  
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Date Analyzed: 04/17/17  
Date Reported: 04/19/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69607 - 09 Cust. #: ES-HM-05A Material: 12x12 Woodgrain VFT Location: Appearance: brown,nonfibrous,homogenous Layer: 1 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69607 - 09a Cust. #: ES-HM-05A Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69607 - 09b Cust. #: ES-HM-05A Material: Grey Floor Tile Location: Appearance: grey,nonfibrous,homogenous Layer: 3 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Robert T. Letarte Jr., Laboratory Director

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Date Analyzed: 04/17/17  
Date Reported: 04/19/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69607 - 09c Cust. #: ES-HM-05A Material: Mastic Location: Appearance: black, fibrous, homogenous Layer: 4 of 4	Asbestos Present: <b>YES</b> Chrysotile - 10%	Other - 90%
Lab ID #: 69607 - 10 Cust. #: ES-HM-05B Material: 12x12 Woodgrain VFT Location: Appearance: brown, nonfibrous, homogenous Layer: 1 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69607 - 10a Cust. #: ES-HM-05B Material: Glue Location: Appearance: clear, nonfibrous, homogenous Layer: 2 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Date Collected: 04/12/17  
Date Received: 04/13/17  
Date Analyzed: 04/17/17  
Date Reported: 04/19/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69607 - 10b Cust. #: ES-HM-05B Material: Grey Floor Tile Location: Appearance: grey,nonfibrous,homogenous Layer: 3 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69607 - 10c Cust. #: ES-HM-05B Material: Mastic Location: Appearance: Layer: 4 of 4	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69607 - 11 Cust. #: ES-HM-06A Material: 1x1 White Textured Ceiling Tile Location: Appearance: brown,fibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%

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ARI Report # 17-69607  
Date Collected: 04/12/17  
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Date Analyzed: 04/17/17  
Date Reported: 04/19/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69607 - 12 Cust. #: ES-HM-06B Material: 1x1 White Textured Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 69607 - 13 Cust. #: ES-HM-07A Material: 1x1 White Pitted Ceiling Tile Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Mineral Wool - 30% Other - 30%
Lab ID #: 69607 - 14 Cust. #: ES-HM-07B Material: 1x1 White Pitted Ceiling Tile Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Mineral Wool - 30% Other - 30%

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Date Analyzed: 04/17/17  
Date Reported: 04/19/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69607 - 15 Cust. #: ES-HM-08A Material: 1x1 White Ceiling Tile w/ Pinholes Location: Appearance: brown, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 69607 - 15a Cust. #: ES-HM-08A Material: Glue Pod Location: Appearance: brown, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69607 - 16 Cust. #: ES-HM-08B Material: 1x1 White Ceiling Tile w/ Pinholes Location: Appearance: brown, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%

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Date Analyzed: 04/17/17  
Date Reported: 04/19/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69607 - 16a Cust. #: ES-HM-08B Material: Glue Pod Location: Appearance: brown,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69607 - 17 Cust. #: ES-HM-09A Material: Drywall Location: Appearance: white,fibrous,nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69607 - 17a Cust. #: ES-HM-09A Material: Joint Compound Location: Appearance: white,fibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> Chrysotile - 0.75%  <b>POINT COUNT RESULT</b>	Other - 99.25%

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Date Analyzed: 04/17/17  
Date Reported: 04/19/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69607 - 18 Cust. #: ES-HM-09B Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69607 - 18a Cust. #: ES-HM-09B Material: Joint Compound Location: Appearance: white, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> Chrysotile - 1.00%  <b>POINT COUNT RESULT</b>	Other - 99.00%
Lab ID #: 69607 - 19 Cust. #: ES-HM-10A Material: House Window Glazing Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 10%	Other - 90%

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Date Analyzed: 04/17/17  
Date Reported: 04/19/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69607 - 20 Cust. #: ES-HM-10B Material: House Window Glazing Location: Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69607 - 21 Cust. #: ES-HM-11A Material: Porch Window Glazing Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Wollastonite - 1% Other - 99%
Lab ID #: 69607 - 22 Cust. #: ES-HM-11B Material: Porch Window Glazing Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Wollastonite - 1% Other - 99%

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Date Collected: 04/12/17  
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Date Analyzed: 04/17/17  
Date Reported: 04/19/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69607 - 23 Cust. #: ES-HM-12A Material: Basement Window Glazing Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 5%	Other - 95%
Lab ID #: 69607 - 24 Cust. #: ES-HM-12B Material: Basement Window Glazing Location: Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69607 - 25 Cust. #: ES-HS-01A Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Date Collected: 04/12/17  
Date Received: 04/13/17  
Date Analyzed: 04/17/17  
Date Reported: 04/19/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69607 - 25a Cust. #: ES-HS-01A Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 5% Other - 95%
Lab ID #: 69607 - 26 Cust. #: ES-HS-01B Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69607 - 26a Cust. #: ES-HS-01B Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 2% Other - 98%

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Date Analyzed: 04/17/17  
Date Reported: 04/19/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69607 - 27 Cust. #: ES-HS-01C Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69607 - 27a Cust. #: ES-HS-01C Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: 69607 - 28 Cust. #: ES-HS-01D Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Date Analyzed: 04/17/17  
Date Reported: 04/19/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69607 - 28a Cust. #: ES-HS-01D Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 5% Other - 95%
Lab ID #: 69607 - 29 Cust. #: ES-HS-01E Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69607 - 29a Cust. #: ES-HS-01E Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 5% Other - 95%

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NVLAP Lab Code 102118-0

**69607**

1 of 3

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189

Phone: 734-449-9990



E-mail: apexresearch@chartermi.net

Fax: 734-449-9991

Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-12-17

Project: 2244 Reynolds St

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: 5 day  TTP All Samples Except ~~Plaster~~

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
 Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
 Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BioSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
 TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	ES-HM-01A	Shingle Roof (House)			
2	ES-HM-01B	" "			
3	ES-HM-02A	Shingle Roof (Garage)			
4	ES-HM-02B	" "			
5	ES-HM-03A	Black layered limestone			
6	ES-HM-03B	" "			
7	ES-HM-04A	12 x 12 Tan VET			
8	ES-HM-04B	" "			
9	ES-HM-05A	12 x 12 Redgran VET			
10	ES-HM-05B	" "			
11	ES-HM-06A	1 x 1 White Texture CT			

Relinquished by: Marko Mateja Received by: UFS  
 Date: 4-12-17 Date: 4-12-17

Relinquished by: \_\_\_\_\_ Received by: \_\_\_\_\_  
 Date: \_\_\_\_\_ Date: \_\_\_\_\_

RECEIVED  
APR 13 2017



89607

2053

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189  
Phone: 734-449-9990  
E-mail: apexresearch@chartermi.net  
Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-12-17

Project: 2294 Reynolds St

Contact Person: Aaron Paquet

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM.  
apaguete@redcedarconsulting.net

Rush 24 hour  
48 hour 72 hour

Other: Slab

TIP All Samples ~~Asbestos~~ ~~Diagnoses~~

Asbestos: Bulk  Wipe  Point Count  PCM   
Lead: Bulk  Wipe  Air  Paint  Soil   
Mold: Bulk  Tape  Biosis  Other  Viable   
TEM: AHERA 7400 Bulk/NOB EPA Level II

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	ES-HM-06B	1 x 1 white texture CT			
13	ES-HM-07A	1 x 1 white fitted CT			
14	ES-HM-07B	" " " "			
15	ES-HM-08A	1 x 1 white CT w/anchors			
16	ES-HM-08B	" " " "			
17	ES-HM-09A	Drywall Joint Compound			
18	ES-HM-09B	" " " "			
19	ES-HM-10A	House window Glazing			
20	ES-HM-10B	" " " "			
21	ES-HM-11A	Porch window Glazing			
22	ES-HM-11B	" " " "			

RECEIVED  
APR 13 2017

Relinquished by: Allye Motta Received by: UPPS  
Date: 4-12-17 Date: 4-12-17

Relinquished by: \_\_\_\_\_ Received by: APR 13 2017  
Date: \_\_\_\_\_ Date: \_\_\_\_\_

69607

3053

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189  
E-mail: apexresearch@chartermi.net  
Phone: 734-449-9990  
Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216  
Lansing, MI 48901

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-12-17

Project: 2244 Reynolds St

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM.  
apaquet@redcedarconsulting.net

Rush 24 hour

48 hour 72 hour

Other: 5 day  All Samples ~~except plates~~ TEM: AHERA 7400 Bulk/NOB EPA Level II

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
28	ES-HY-12A	Basement Windows Glazing			
24	ES-HY-12B	" "			
25	ES-HS-01A	Plaster			
26	ES-HS-01B	" "			
27	ES-HS-01C	" "			
28	ES-HS-01D	" "			
29	ES-HS-01E	" "			

RECEIVED

Relinquished by: [Signature] Received by: UTS

Date: 4-12-17 Date: 4-12-17

Relinquished by: \_\_\_\_\_

Date: \_\_\_\_\_

Received by: [Signature]

Date: APR 13 2017

***Tables***

**Table 1 - Summary of Hazardous Materials, 2244 Reynolds St., Muskegon Heights, Michigan**

<b>Hazardous Materials Description and Location</b>		
<b>Location</b>	<b>Material Description</b>	<b>Quantity</b>
Exterior	Automobile Tire	4
Garage	Gallon Container Misc. Paint	2
Living Room	Smoke Detector	1
Kitchen	Smoke Detector	1
NW Bedroom	Smoke Detector	1
N Bedroom	Smoke Detector	1
NE Bedroom	Smoke Detector	1
Basement	Smoke Detector	1

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2244 Reynolds St., Muskegon Heights, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
ES-HM-01A	Asphalt Shingle House	No	M	Category I	ND/ND	Exterior	NA
ES-HM-01B	Asphalt Shingle House	No	M	Category I	ND/ND	Exterior	NA
ES-HM-02A	Asphalt Shingle Garage	No	M	Category I	ND/ND	Exterior	NA
ES-HM-02B	Asphalt Shingle Garage	No	M	Category I	ND/ND	Exterior	NA
ES-HM-03A	Black Layered Linoleum	No	M	Category I	ND/ND/ND	Kitchen	NA
ES-HM-03B	Black Layered Linoleum	No	M	Category I	ND/ND/ND	Kitchen	NA
ES-HM-04A	Tan 12x12 Vinyl Tile	No	M	Category I	ND/10% CH	NW Bedroom	245 sq. ft.
ES-HM-04B	Tan 12x12 Vinyl Tile	No	M	Category I	ND/NA	NW Bedroom	NA
ES-HM-05A	Woodgrain 12x12 Vinyl Tile	No	M	Category I	ND/ND/ND/10% CH	N Bedroom	156 sq. ft.
ES-HM-05B	Woodgrain 12x12 Vinyl Tile	No	M	Category I	ND/ND/ND/NA	N Bedroom	NA
ES-HM-06A	White 1'x1' Texture Ceiling Tile	Yes	M	Category II	ND	Living Room	NA
ES-HM-06B	White 1'x1' Texture Ceiling Tile	Yes	M	Category II	ND	Living Room	NA
ES-HM-07A	White 1'x1' Pitted Ceiling Tile	Yes	M	Category II	ND	N Bedroom	NA
ES-HM-07B	White 1'x1' Pitted Ceiling Tile	Yes	M	Category II	ND	N Bedroom	NA
ES-HM-08A	White 1'x1' Pinhole Ceiling Tile	Yes	M	Category II	ND/ND	NE Bedroom	NA
ES-HM-08B	White 1'x1' Pinhole Ceiling Tile	Yes	M	Category II	ND/ND	NE Bedroom	NA
ES-HM-09A	Drywall & Joint Compound	Yes	M	Category II	ND/.75% CH – PC	Kitchen Wall	NA
ES-HM-09B	Drywall & Joint Compound	Yes	M	Category II	ND/1.00% CH – PC	Living Room Wall	NA
ES-HM-10A	Glazing House	Yes	M	Category II	10% CH	NW Bedroom	8 Windows
ES-HM-10B	Glazing House	Yes	M	Category II	NA	Living Room	NA
ES-HM-11A	Glazing Porch	Yes	M	Category II	ND	Porch	NA
ES-HM-11B	Glazing Porch	Yes	M	Category II	ND	Porch	NA
ES-HM-12A	Glazing Basement	Yes	M	Category II	5% CH	Basement	2 Windows
ES-HM-12B	Glazing Basement	Yes	M	Category II	NA	Basement	NA
ES-HS-01A	Plaster	No	S	Category II	ND/ND	NW Bedroom Ceiling	NA
ES-HS-01B	Plaster	No	S	Category II	ND/ND	Living Room Ceiling	NA
ES-HS-01C	Plaster	No	S	Category II	ND/ND	Living Room Wall	NA

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2244 Reynolds St., Muskegon Heights, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
ES-HS-01D	Plaster	No	S	Category II	ND/ND	N Bedroom Wall	NA
ES-HS-01E	Plaster	No	S	Category II	ND/ND	NW Bedroom Wall	NA

**Notes:**

Material Types

M = Miscellaneous building material  
 TSI = Thermal System Insulation  
 S = Surfacing Material  
 PC = Point Count Analysis  
 CH = Chrysotile Asbestos

Abbreviations

NQ = Not quantified  
 NA = Not applicable  
 ND = Not detected. Laboratory result is less than 1 % asbestos  
 lin. ft. = linear feet  
 sq. ft. = square feet

Asbestos Containing Material (ACM) is defined as any material containing more than 1 percent asbestos as determined utilizing Polarized Light Microscopy.

**Table 3 - Summary of Presumed Asbestos Containing Materials, 2244 Reynolds St., Muskegon Heights, Michigan**

<b>Asbestos Containing Material Description and Location</b>					
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Condition</b>	<b>Material Type</b>	<b>Approx. Quantity</b>
No Presumed Asbestos Containing Materials Identified					

**Notes:**

Material Types

- M = Miscellaneous building material
- TSI = Thermal System Insulation
- S = Surfacing Material

Abbreviations

- lin. ft. = linear feet
- sq. ft. = square feet

**Table 4 - Summary of All Asbestos Containing Materials, 2244 Reynolds St., Muskegon Heights, Michigan**

<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
NW Bedroom	Tan 12x12 Vinyl Tile	No	90 sq. ft.
NE Bedroom	Tan 12x12 Vinyl Tile	No	155 sq. ft.
N Bedroom	Woodgrain 12x12 Vinyl Tile	No	120 sq. ft.
Rear Entry	Woodgrain 12x12 Vinyl Tile	No	24 sq. ft.
Hallway	Woodgrain 12x12 Vinyl Tile	No	12 sq. ft.
<b>Total</b>			<b>401 sq. ft.</b>
<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Garage (1 window 40" wide x 28" tall)	Glazing	Yes	1 Window
Garage (1 window 20" wide x 28" tall)	Glazing	Yes	1 Window
Living (1 window 40" wide x 58" tall)	Glazing	Yes	1 Window
NW Bedroom (1 window 28" wide x 58" tall)	Glazing	Yes	1 Window
NW Bedroom (1 window 28" wide x 46" tall)	Glazing	Yes	1 Window
Bathroom (1 window 24" wide x 38" tall)	Glazing	Yes	1 Window
Kitchen (2 windows 26" wide x 42" tall)	Glazing	Yes	2 Windows
Basement (2 windows 30" wide x 14" tall)	Glazing	Yes	2 Windows
<b>Total</b>			<b>10 Windows</b>

**Notes:**

Abbreviations

lin. ft. = linear feet

sq. ft. = square feet

**Shaded/Bolded** = Friable ACM and any Category I and Category II non-friable ACM that has a high probability of becoming crumbled, pulverized, or reduced to powder by the demolition or renovation activities that must be properly abated prior to commencement of any demolition/renovation activities.

Demolition/renovation activities completed with intact Category I non-friable ACM are regulated by OSHA and must be completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note that a Negative Pressure Enclosure must be utilized during abatement when Site Conditions Warrant. Examples of these conditions include the abatement of Plaster and Vermiculite insulation, HVAC Duct Wrap in Poor Condition, and Air-O-Cell/Mag Pipe Wrap. Conditions outside of these should be assessed on a case by case basis during the Asbestos Abatement Contractors site walk and Work Plan Preparation.





P.O. Box 13216  
Lansing, MI 48901  
Phone: 888.449.4566  
Fax: 888.448.8739  
www.redcedarconsulting.net

May 12, 2017

Mr. Tim Burgess  
Muskegon County Land Bank  
Land Bank Coordinator  
173 E. Apple Avenue, Suite 104  
Muskegon, MI 49442

**RE: *Asbestos Containing Material and Hazardous Materials Inspection***  
***2321 Hoyt St., Muskegon Heights, MI 49444***  
***Parcel ID: 61-26-185-098-0006-00***

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection 2321 Hoyt St., Muskegon Heights, Michigan (Subject Property). This inspection was completed at the request of the Muskegon County Land Bank to comply with the United States Environmental Protection Agency (USEPA) requirements for demolition and renovation set forth under the National Emissions Standards for Hazardous Air Pollutants (NESHAP, 40 CFR Part 61). This inspection was also completed to comply with the Occupational Safety and Health Administration (OSHA) Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

### **SUBJECT PROPERTY**

The Subject Property is comprised of a .14 acre residential parcel which contains an approximate 1,512 square foot residential building (the Building) constructed in 1915. The Building was constructed on a concrete block basement with two aboveground floors. The exterior walls of the Building were finished with vinyl siding over wood lap while the roof was sealed with asphalt shingles. The Building can be further divided into a front entry, living room, dining room, kitchen, bath, two bedrooms and a rear entry on the first floor while the second floor contains two bedrooms.

### **VISUAL INSPECTION AND SAMPLING**

#### **Asbestos Containing Materials Inspection**

Aaron Paquet and Darrell DeMasters of Red Cedar Consulting (Red Cedar), accredited State Of Michigan/EPA Asbestos Building Inspectors (Accreditation Numbers A30955 and A31159, respectively) who completed training per the Michigan Asbestos Workers Accreditation Act 440, completed an inspection of the Subject Property on April 21, 2017 for suspected asbestos containing building materials.

This inspection, and subsequent sample collection was completed in accordance with the USEPA Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763) assessment and sampling protocol.

During the completion of the inspection, each area of the Subject Property was visually inspected for asbestos containing building materials (ACBM). Following the completion of the visual inspection, Red Cedar staff identified each suspect area of friable and non-friable ACBM and sorted them into one of three homogenous categories for sampling purposes. AHERA defines friable as a material that when dry, may be crumbled, pulverized, or reduced to powder by hand pressure. A homogenous area is defined by OSHA as an area of surfacing, thermal system insulation (TSI) or miscellaneous material that is uniform in color and texture. Surfacing materials are most commonly found in sprayed-on, troweled-on or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members. TSI refers to materials applied to pipes, fittings, boilers, ductwork, or other components to prevent heat loss or gain, or condensation. Any material that does not fall under the surfacing or TSI category, such as floor tile, drywall, and acoustical ceiling tile are placed into the miscellaneous materials category.

Following the completion of the visual inspection, Red Cedar staff identified the following materials as suspect ACBM:

- Vapor Barrier
- Roofing Materials
- Vinyl Flooring
- Linoleum
- 16"x16" Ceiling Tile
- 1'x1' Ceiling Tile
- 2'x2' Ceiling Tile
- Drywall and Joint Compound
- Fiberboard
- Plaster

Red Cedar staff collected thirty seven samples of suspect ACBM separated into seventeen distinct homogenous groups for laboratory analysis. Samples were collected and submitted to APEX Research Inc. Laboratories (APEX) (Accreditation Number 102118-0) for laboratory analysis. Analysis was completed utilizing polarized light microscopy (PLM) which is the Environmental Protection Agency (EPA) approved method for analysis of bulk materials for asbestos. PLM analysis completed pursuant to method (EPA 600/M4-82-020) identifies asbestos fiber bundles by the visual properties displayed when the sample is treated with various dispersion staining liquids. The laboratory report completed following the sample analysis indicates if asbestos is present, and at what percentage along with a description and percentage of other fibrous and non-fibrous materials and sample color. Chain-of-custody documentation was followed from sample collection through shipping and receiving of the samples at the designated laboratory. The documentation assures that samples will meet the quality assurance/quality control measures defined by AHERA. The laboratory analytical report prepared by APEX for the thirty seven samples is included as Attachment A.

## **Hazardous Materials Inspection**

On April 21, 2017 the Subject Property was also inspected for the presence of hazardous materials which include but are not limited to polychlorinated biphenyls (PCBs) and potential mercury containing equipment and any items or containers that may contain or be classified as a hazardous or regulated material. Each material, if identified, was documented along with the approximate location. Any materials identified as hazardous are included in Table 1.

## **INSPECTION RESULTS AND RECOMMENDATIONS**

During the completion of the asbestos inspection, thirty seven samples of suspect ACM were collected and are documented in Table 2 along with the Red Cedar sample number, description, friability, material type, ACM classification, sample location, material quantity and laboratory analytical results.

ACM, as defined by the USEPA NESHAP is “any material containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763 Section 1, Polarized Light Microscopy”.

Friable ACM is defined by NESHAP as any material containing more than 1 percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Friable ACM is a concern due the ease of unintentionally disturbing the ACM which may result in “visible emissions” which is known as a Fiber Release Episode.

Non-friable asbestos-containing material is defined as “material containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACM’s are separated into Category I and Category II ACM. Category I ACM is any asbestos containing packing’s, gaskets, resilient floor coverings (vinyl floor tile and linoleum are examples of these) and asphalt roofing products. Category II ACM is stated by NESHAP as any material excluding Category I non-friable ACM such as drywall, plaster or fiberboard insulation.

## **Presumed Asbestos Containing Material**

Presumed Asbestos Containing Materials (PACM) are suspect surfacing, TSI and miscellaneous materials found in buildings constructed prior to 1980 which are classified as and due to the age of the structure, are assumed to be ACM and do not require sample collection and analysis. OSHA dictates that PACM may be “rebutted” following a complete inspection pursuant to AHERA protocol.

The HVAC Duct Wrap located in the Building was classified as PACM due to the age of the structure and samples were not collected.

Table 3 lists the location, material description, friability, condition, material type (surfacing, thermal or miscellaneous) and approximate quantity of all PACM documented at the Subject Property.

Table 4 provides a summary all ACM documented at the Subject Property which includes the material location, description, and approximate quantity.

### **Friable ACM's**

Duct Wrap identified in the building in conjunction with the forced air heating system is classified as friable ACM. The visual assessment to quantify the extent of this material identified HVAC Duct Wrap at the following locations within the basement, first and second floors:

- Living (1 register, 10 sq. ft.)
- Dining (1 register, 10 sq. ft.)
- Kitchen (1 register, 10 sq. ft.)
- Bathroom (1 register, 10 sq. ft.)
- Basement (1 register, 10 sq. ft.)

### **Category I ACM**

No Category I ACM was identified during the completion of this inspection.

### **Category II ACM**

No Category II non-friable ACM was identified during the completion of this inspection.

## **RECOMMENDATIONS**

### **Asbestos Containing Materials**

HVAC material identified in the Building system and listed below is classified as friable ACM and should be removed prior to any renovation/demolition activities.

- Living (1 register, 10 sq. ft.)
- Dining (1 register, 10 sq. ft.)
- Kitchen (1 register, 10 sq. ft.)
- Bathroom (1 register, 10 sq. ft.)
- Basement (1 register, 10 sq. ft.)

Please note: The location of samples obtained during this inspection were in a random fashion and areas that were not identified during this inspection may be damaged or have become damaged since the inspection was completed. If Category I or Category II friable materials are discovered prior to or during the demolition/renovation process, these materials must be abated prior to commencement of any demolition/renovation activities at the Subject Property.

## **Hazardous Materials**

Hazardous Materials identified at the Subject Property and documented in Table 1 which require proper removal and disposal consist of the following items:

- Smoke Detector (2)
- Thermostat (1)
- 2' Fluorescent Light (Fixture and Ballast Only) (1)
- 2' Fluorescent Bulb (1)
- Gallon Container Misc. Paint (3)

## **REGULATORY REQUIREMENTS**

A Notification of Intent to Renovate/Demolish form must be filed with the Michigan Department of Environmental Quality- Air Quality Division at least 10 working days prior to any renovation or demolition activities at a site.

The Notification of Intent to Renovate/Demolish form must also be completed and submitted to the MIOSHA-Asbestos Program whenever demolition, encapsulation and/or renovation activities at a site involving greater than ten lineal feet and/or fifteen square feet of ACM will be completed.

Regulated asbestos containing materials per NESHAP (40 CFR Part 61) which falls into any of the following categories are ACM's that must be removed prior to any renovation/demolition activities at the Subject Property.

- Friable asbestos material.
- Category I non-friable ACM that has become friable.
- Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading.
- Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations.

Asbestos abatement should only be performed by a certified asbestos abatement contractor licensed to complete abatement work. The contractor must also follow the standards and requirements set forth per the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61).

Additional information regarding the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61) can be obtained by contacting the associated agency below.

NESHAP Asbestos Program  
Department of Environmental Quality  
Phone: 517-284-6777

MIOSHA-CSHD-Asbestos Program  
State of Michigan  
Phone: 517-284-7680  
Email: [asbestos@michigan.gov](mailto:asbestos@michigan.gov)

Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-26-185-098-0006-00

**DISCLAIMER**

Red Cedar Consulting performed destructive testing methods in an attempt to access and inspect all areas of the Building. Unfortunately, due to the age of construction along with multiple additions/renovations that may have been completed on the Building, additional inspections may be required if suspect ACM material not documented within this report is encountered during renovation/demolition activities.

This report was prepared at the request and for exclusive use by the Muskegon County Land Bank and may not be reproduced or sold without written permission from Red Cedar Consulting.

We appreciate the opportunity to provide the requested services. Please contact us at (888) 449-4566 with any questions or concerns.

Sincerely,  
**Red Cedar Consulting**



Aaron Paquet  
Michigan/EPA Certified Asbestos Building Inspector  
(A30955)

Red Cedar Consulting

***Attachment 1***  
***APEX Research Laboratory Analytical Results***



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

ProjeCeiling Tile: 2321 Hoyt St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69749  
Date Collected: 04/21/17  
Date Received: 04/24/17  
Date Analyzed: 04/28/17  
Date Reported: 05/01/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69749 - 01 Cust. #: HS-HM-01A Material: Vapor Barrier Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 65% Other - 35%
Lab ID #: 69749 - 02 Cust. #: HS-HM-01B Material: Vapor Barrier Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 65% Other - 35%
Lab ID #: 69749 - 03 Cust. #: HS-HM-02A Material: Roofing Material Location: Appearance: black, fibrous, homogenous Layer: 1 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 30% Other - 70%

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)

ProjeCeiling Tile: 2321 Hoyt St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69749  
Date Collected: 04/21/17  
Date Received: 04/24/17  
Date Analyzed: 04/28/17  
Date Reported: 05/01/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69749 - 03a Cust. #: HS-HM-02A Material: Grey Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 30% Other - 70%
Lab ID #: 69749 - 03b Cust. #: HS-HM-02A Material: Green Shingle Location: Appearance: black, fibrous, homogenous Layer: 3 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 30% Other - 70%
Lab ID #: 69749 - 03c Cust. #: HS-HM-02A Material: Green Shingle Location: Appearance: black, fibrous, homogenous Layer: 4 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 30% Other - 70%

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)

ProjeCeiling Tile: 2321 Hoyt St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69749  
Date Collected: 04/21/17  
Date Received: 04/24/17  
Date Analyzed: 04/28/17  
Date Reported: 05/01/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69749 - 03d Cust. #: HS-HM-02A Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 5 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 69749 - 03 Cust. #: HS-HM-02B Material: Roofing Material Location: Appearance: black, fibrous, homogenous Layer: 1 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 30% Other - 70%
Lab ID #: 69749 - 03a Cust. #: HS-HM-02B Material: Grey Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 30% Other - 70%

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)

ProjeCeiling Tile: 2321 Hoyt St

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69749  
Date Collected: 04/21/17  
Date Received: 04/24/17  
Date Analyzed: 04/28/17  
Date Reported: 05/01/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69749 - 03b Cust. #: HS-HM-02B Material: Green Shingle Location: Appearance: black, fibrous, homogenous Layer: 3 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 30% Other - 70%
Lab ID #: 69749 - 03c Cust. #: HS-HM-02B Material: Green Shingle Location: Appearance: black, fibrous, homogenous Layer: 4 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 30% Other - 70%
Lab ID #: 69749 - 03d Cust. #: HS-HM-02B Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 5 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 50% Other - 50%

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69749 - 05 Cust. #: HS-HM-03A Material: Tan Vinyl Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 69749 - 06 Cust. #: HS-HM-03B Material: Tan Vinyl Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 69749 - 07 Cust. #: HS-HM-04A Material: Leaf Pattern Linoleum Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69749 - 08 Cust. #: HS-HM-04B Material: Leaf Pattern Linoleum Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69749 - 09 Cust. #: HS-HM-05A Material: 16"x16" White Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 75% Other - 25%
Lab ID #: 69749 - 10 Cust. #: HS-HM-05B Material: 16"x16" White Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 75% Other - 25%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69749 - 11 Cust. #: HS-HM-06A Material: 1x1 White Textured Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 70% Other - 30%
Lab ID #: 69749 - 12 Cust. #: HS-HM-06B Material: 1x1 White Textured Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 70% Other - 30%
Lab ID #: 69749 - 13 Cust. #: HS-HM-07A Material: 1x1 White Smooth Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69749 - 14 Cust. #: HS-HM-07B Material: 1x1 White Smooth Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 69749 - 15 Cust. #: HS-HM-08A Material: 2x2 White Textured Ceiling Tile Location: Appearance: white, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Mineral Wool - 70% Other - 30%
Lab ID #: 69749 - 16 Cust. #: HS-HM-08B Material: 2x2 White Textured Ceiling Tile Location: Appearance: white, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Mineral Wool - 70% Other - 30%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69749 - 17 Cust. #: HS-HM-09A Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69749 - 17a Cust. #: HS-HM-09A Material: Joint Compound Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69749 - 18 Cust. #: HS-HM-09B Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69749 - 18a Cust. #: HS-HM-09B Material: Joint Compound Location: Appearance: white,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69749 - 19 Cust. #: HS-HM-10A Material: House Window Glazing Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 69749 - 20 Cust. #: HS-HM-10B Material: House Window Glazing Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Other - 99%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69749 - 21 Cust. #: HS-HM-11A Material: Grey Linoleum Location: Appearance: grey, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 69749 - 22 Cust. #: HS-HM-11B Material: Grey Linoleum Location: Appearance: grey, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 69749 - 23 Cust. #: HS-HM-12A Material: Floral Linoleum Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 50% Other - 50%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69749 - 24 Cust. #: HS-HM-12B Material: Floral Linoleum Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 69749 - 25 Cust. #: HS-HM-13A Material: Green Linoleum Location: Appearance: green, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69749 - 26 Cust. #: HS-HM-13B Material: Green Linoleum Location: Appearance: green, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69749 - 27 Cust. #: HS-HM-14A Material: Red/Green Linoleum Location: Appearance: red, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69749 - 28 Cust. #: HS-HM-14B Material: Red/Green Linoleum Location: Appearance: red, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69749 - 29 Cust. #: HS-HM-15A Material: Fiberboard Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69749 - 30 Cust. #: HS-HM-15B Material: Fiberboard Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 69749 - 31 Cust. #: HS-HM-16A Material: Basement Window Glazing Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Wollastonite - 1% Other - 99%
Lab ID #: 69749 - 32 Cust. #: HS-HM-16B Material: Basement Window Glazing Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Wollastonite - 1% Other - 99%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69749 - 33 Cust. #: HS-HS-01A Material: Plaster Finish Coat Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69749 - 33a Cust. #: HS-HS-01A Material: Plaster Base Coat Location: Appearance: grey,fibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Hair - 2% Other - 97%
Lab ID #: 69749 - 34 Cust. #: HS-HS-01B Material: Plaster Finish Coat Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69749 - 34a Cust. #: HS-HS-01B Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Hair - 2% Other - 97%
Lab ID #: 69749 - 35 Cust. #: HS-HS-01C Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69749 - 35a Cust. #: HS-HS-01C Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Hair - 2% Other - 96%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69749 - 36 Cust. #: HS-HS-01D Material: Plaster Finish Coat Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69749 - 36a Cust. #: HS-HS-01D Material: Plaster Base Coat Location: Appearance: grey,fibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: 69749 - 37 Cust. #: HS-HS-01E Material: Plaster Finish Coat Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69749 - 37a Cust. #: HS-HS-01E Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Hair - 2% Other - 97%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	
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Apex # **69749**

1 of 4

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189

Phone: 734-449-9990



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-21-17

Project: 2321 *Heart St*

Project #:

Contact Person: Aaron Paquet

## Turn Around Times: (Circle One)

PIM EPA 600, PC all samples with a detection of <5% ACM. [apaguet@redcedarconsulting.net](mailto:apaguet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: 5 days **TTP** All Samples

Asbestos: Bulk  Wipe  Point Count  PCM   
 Lead: Bulk  Wipe  Air  Paint  Soil   
 Mold: Bulk  Tape  BioSIS  Other  Viable   
 TEM: AHERA 7400 Bulk/NOB EPA Level II

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	H5-HM-01A	Vapor Barrier			
2	H5-HM-01B				
3	H5-HM-02A	Roofing Materials			
4	H5-HM-02B	"			
5	H5-HM-03A	Ten Vinyl			
6	H5-HM-03B	"			
7	H5-HM-04A	Deep Patten Grout			
8	H5-HM-04B	"			
9	H5-HM-05A	16" x 16" White CT			
10	H5-HM-05B	"			
11	H5-HM-06A	1 x 1 White textured CT			

Lab Use Only  
 Log-In: \_\_\_\_\_  
 Report: \_\_\_\_\_

**RECEIVED**

Relinquished by: *[Signature]* Received by: *URS*

Date: 4-21-17

Date: 4-21-17

Relinquished by: *[Signature]* Received by: \_\_\_\_\_

Date: 1/25 APR 24 2017

Date: \_\_\_\_\_

69749

294

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990



E-mail: apexresearch@charterni.net Fax: 734-449-9991

Client Name: Red Cedar Consulting

Address: PO Box 13216 Lansing, MI 48901

City, St, Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-21-17

Project: 2321 Hoyt St.

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

PM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: 5 day **(TTP)** All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ Biosis \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
TEM: AHERA 7400 Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	45-441-06B	1x1 white textured CT			
13	45-441-07A	1x1 white textured CT			
14	45-441-07B	.. ..			
15	45-441-08A	2x2 white textured CT			
6	45-441-08B	.. ..			
7	45-441-09A	General of Joint Compounds			
18	45-441-09B	.. ..			
19	45-441-10A	House Windows Sliding			
20	45-441-10B	.. ..			
21	45-441-11A	.. ..			
22	45-441-11B	.. ..			

Relinquished by: [Signature] Received by: URS  
Date: 4-21-17 Date: 4-21-17

Relinquished by: **RECEIVED** Received by: \_\_\_\_\_  
Date: APR 24 2017 Date: \_\_\_\_\_

69749

3 of 4

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189

Phone: 734-449-9990



E-mail: apexresearch@chartermi.net

Fax: 734-449-9991

Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-21-17

Project: 2321 Hoyt St

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

PIM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: 5 day  All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_

Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_

Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ Biosis \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_

TEM: AHRA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
23	45-44-02A	Floral Stillroom			
24	45-44-12B	..			
25	45-44-13A	Green Sunroom			
26	45-44-13B	..			
27	45-44-14A	Red & Green Sunroom			
28	45-44-14B	..			
29	45-44-15A	Floralboard			
30	45-44-15B	..			
31	45-44-16A	Basement Windows Hiding			
32	45-44-16B	..			
33	45-45-01A	Paster			

Relinquished by: APR 21 2017 Received by: USFS  
Date: 4-21-17 Date: 4-21-17

Relinquished by: APR 24 2017 Received by: \_\_\_\_\_  
Date: \_\_\_\_\_ Date: \_\_\_\_\_

RECEIVED

APEX RESEARCH



***Tables***

**Table 1 - Summary of Hazardous Materials, 2321 Hoyt St., Muskegon Heights, Michigan**

<b>Hazardous Materials Description and Location</b>		
<b>Location</b>	<b>Material Description</b>	<b>Quantity</b>
Dining Room	Thermostat	1
Dining Room	2' Fluorescent Light (Fixture and Ballast Only)	1
Dining Room	2' Fluorescent Bulb	1
NE Bedroom	Smoke Detector	1
Basement	Smoke Detector	1
Basement	Gallon Container Misc. Paint	3

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2321 Hoyt St., Muskegon Heights, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
HS-HM-01A	Vapor Barrier	Yes	M	Category II	ND	Exterior	NA
HS-HM-01B	Vapor Barrier	Yes	M	Category II	ND	Exterior	NA
HS-HM-02A	Roofing Materials	No	M	Category I	ND/ND/ND/ ND/ND	Exterior	NA
HS-HM-02B	Roofing Materials	No	M	Category I	ND/ND/ND/ ND/ND	Exterior	NA
HS-HM-03A	Tan Vinyl	No	M	Category I	ND	Bathroom	NA
HS-HM-03B	Tan Vinyl	No	M	Category I	ND	Bathroom	NA
HS-HM-04A	Leaf Pattern Linoleum	No	M	Category I	ND	Closet	NA
HS-HM-04B	Leaf Pattern Linoleum	No	M	Category I	ND	Closet	NA
HS-HM-05A	16"x16" White Ceiling Tile	Yes	M	Category II	ND	NW Bedroom	NA
HS-HM-05B	16"x16" White Ceiling Tile	Yes	M	Category II	ND	NW Bedroom	NA
HS-HM-06A	1'x1' White Textured Ceiling Tile	Yes	M	Category II	ND	Living	NA
HS-HM-06B	1'x1' White Textured Ceiling Tile	Yes	M	Category II	ND	Living	NA
HS-HM-07A	1'x1' White Smooth Ceiling Tile	Yes	M	Category II	ND	Kitchen	NA
HS-HM-07B	1'x1' White Smooth Ceiling Tile	Yes	M	Category II	ND	Dining	NA
HS-HM-08A	2'x2' White Textured Ceiling Tile	Yes	M	Category II	ND	Living	NA
HS-HM-08B	Glazing	Yes	M	Category II	ND	Living	NA
HS-HM-09A	Drywall and Joint Compound	No	M	Category II	ND/ND	NE Bedroom Wall	NA
HS-HM-09B	Drywall and Joint Compound	No	M	Category II	ND/ND	NW Bedroom Wall	NA
HS-HM-10A	House Window Glazing	Yes	M	Category II	ND	NE Bedroom	NA
HS-HM-10B	House Window Glazing	Yes	M	Category II	ND	Living	NA
HS-HM-11A	Gray Linoleum	No	M	Category I	ND	Kitchen	NA
HS-HM-11B	Gray Linoleum	No	M	Category I	ND	Kitchen	NA
HS-HM-12A	Floral Linoleum	No	M	Category I	ND	Attic	NA
HS-HM-12B	Floral Linoleum	No	M	Category I	ND	Attic	NA
HS-HM-13A	Green Linoleum	No	M	Category I	ND	2 <sup>nd</sup> Fl. Closet	NA



**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2321 Hoyt St., Muskegon Heights, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
HS-HM-13B	Green Linoleum	No	M	Category I	ND	2 <sup>nd</sup> Fl. Closet	NA
HS-HM-14A	Red & Green Linoleum	No	M	Category I	ND	2 <sup>nd</sup> Fl. Stairway Landing	NA
HS-HM-14B	Red & Green Linoleum	No	M	Category I	ND	2 <sup>nd</sup> Fl. Stairway Landing	NA
HS-HM-15A	Fiberboard	Yes	M	Category II	ND	2 <sup>nd</sup> Fl. S Bedroom Ceiling	NA
HS-HM-15B	Fiberboard	Yes	M	Category II	ND	2 <sup>nd</sup> Fl. N Bedroom Wall	NA
HS-HM-16A	Basement Window Glazing	Yes	M	Category II	ND	Basement	NA
HS-HM-16B	Basement Window Glazing	Yes	M	Category II	ND	Basement	NA
HS-HS-01A	Plaster	No	S	Category II	ND/ND	Kitchen Ceiling	NA
HS-HS-01B	Plaster	No	S	Category II	ND/ND	NW Bedroom Ceiling	NA
HS-HS-01C	Plaster	No	S	Category II	ND/ND	Living Wall	NA
HS-HS-01D	Plaster	No	S	Category II	ND/ND	Basement Entry Wall	NA
HS-HS-01E	Plaster	No	S	Category II	ND/ND	Bathroom Wall	NA

**Notes:**

Material Types

M = Miscellaneous building material  
 TSI = Thermal System Insulation  
 S = Surfacing Material  
 PC = Point Count Analysis  
 CH = Chrysotile Asbestos

Abbreviations

NQ = Not quantified  
 NA = Not applicable  
 ND = Not detected. Laboratory result is less than 1 % asbestos  
 lin. ft. = linear feet  
 sq. ft. = square feet

Asbestos Containing Material (ACM) is defined as any material containing more than 1 percent asbestos as determined utilizing Polarized Light Microscopy.

**Table 3 - Summary of Presumed Asbestos Containing Materials, 2321 Hoyt St., Muskegon Heights, Michigan**

<b>Asbestos Containing Material Description and Location</b>					
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Condition</b>	<b>Material Type</b>	<b>Approx. Quantity</b>
Living (1 register, 10 sq. ft.) Dining (1 register, 10 sq. ft.) Kitchen (1 register, 10 sq. ft.) Bathroom (1 register, 10 sq. ft.) Basement (1 register, 10 sq. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	50 sq. ft.

**Notes:**

Material Types

- M = Miscellaneous building material
- TSI = Thermal System Insulation
- S = Surfacing Material

Abbreviations

- lin. ft. = linear feet
- sq. ft. = square feet

**Table 4 - Summary of All Asbestos Containing Materials, 2321 Hoyt St., Muskegon Heights, Michigan**

<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Living (1 register, 10 sq. ft.)			
Dining (1 register, 10 sq. ft.)			
Kitchen (1 register, 10 sq. ft.)	HVAC Duct Wrap	Yes	50 sq. ft.
Bathroom (1 register, 10 sq. ft.)			
Basement (1 register, 10 sq. ft.)			
<b>Total</b>			<b>50 sq. ft.</b>

**Notes:**

Abbreviations

lin. ft. = linear feet  
 sq. ft. = square feet

**Shaded/Bolded** = Friable ACM and any Category I and Category II non-friable ACM that has a high probability of becoming crumbled, pulverized, or reduced to powder by the demolition or renovation activities that must be properly abated prior to commencement of any demolition/renovation activities.

Demolition/renovation activities completed with intact Category I non-friable ACM are regulated by OSHA and must be completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note that a Negative Pressure Enclosure must be utilized during abatement when Site Conditions Warrant. Examples of these conditions include the abatement of Plaster and Vermiculite insulation, HVAC Duct Wrap in Poor Condition, and Air-O-Cell/Mag Pipe Wrap. Conditions outside of these should be assessed on a case by case basis during the Asbestos Abatement Contractors site walk and Work Plan Preparation.



P.O. Box 13216  
Lansing, MI 48901  
Phone: 888.449.4566  
Fax: 888.448.8739  
www.redcedarconsulting.net

May 12, 2017

Mr. Tim Burgess  
Muskegon County Land Bank  
Land Bank Coordinator  
173 E. Apple Avenue, Suite 104  
Muskegon, MI 49442

**RE: *Asbestos Containing Material and Hazardous Materials Inspection***  
***2327 Maffett St., Muskegon Heights, MI 49444***  
***Parcel ID: 61-26-185-095-0007-00***

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 2327 Maffett St., Muskegon Heights, Michigan (Subject Property). This inspection was completed at the request of the Muskegon County Land Bank to comply with the United States Environmental Protection Agency (USEPA) requirements for demolition and renovation set forth under the National Emissions Standards for Hazardous Air Pollutants (NESHAP, 40 CFR Part 61). This inspection was also completed to comply with the Occupational Safety and Health Administration (OSHA) Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

### **SUBJECT PROPERTY**

The Subject Property is comprised of a .10 acre residential parcel which contains an approximate 836 square foot residential building (the Building) constructed in 1915. The Building was constructed on a concrete block basement with one aboveground floor. The exterior walls of the Building were finished with wood lap while the roof was sealed with asphalt shingles. The Building can be further divided into a living room, dining room, kitchen, bath, two bedrooms and a rear entry.

### **VISUAL INSPECTION AND SAMPLING**

#### **Asbestos Containing Materials Inspection**

Aaron Paquet and Darrell DeMasters of Red Cedar Consulting (Red Cedar), accredited State Of Michigan/EPA Asbestos Building Inspectors (Accreditation Numbers A30955 and A31159, respectively) who completed training per the Michigan Asbestos Workers Accreditation Act 440, completed an inspection of the Subject Property on April 21, 2017 for suspected asbestos containing building materials.

This inspection, and subsequent sample collection was completed in accordance with the USEPA Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763) assessment and sampling protocol.

During the completion of the inspection, each area of the Subject Property was visually inspected for asbestos containing building materials (ACBM). Following the completion of the visual inspection, Red Cedar staff identified each suspect area of friable and non-friable ACBM and sorted them into one of three homogenous categories for sampling purposes. AHERA defines friable as a material that when dry, may be crumbled, pulverized, or reduced to powder by hand pressure. A homogenous area is defined by OSHA as an area of surfacing, thermal system insulation (TSI) or miscellaneous material that is uniform in color and texture. Surfacing materials are most commonly found in sprayed-on, troweled-on or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members. TSI refers to materials applied to pipes, fittings, boilers, ductwork, or other components to prevent heat loss or gain, or condensation. Any material that does not fall under the surfacing or TSI category, such as floor tile, drywall, and acoustical ceiling tile are placed into the miscellaneous materials category.

Following the completion of the visual inspection, Red Cedar staff identified the following materials as suspect ACBM:

- Roofing Materials
- Vapor Barrier
- Vinyl Flooring
- Drywall and Joint Compound
- Glazing
- Textured Surfacing
- Popcorn Surfacing
- Plaster

Red Cedar staff collected twenty three samples of suspect ACBM separated into nine distinct homogenous groups for laboratory analysis. Samples were collected and submitted to APEX Research Inc. Laboratories (APEX) (Accreditation Number 102118-0) for laboratory analysis. Analysis was completed utilizing polarized light microscopy (PLM) which is the Environmental Protection Agency (EPA) approved method for analysis of bulk materials for asbestos. PLM analysis completed pursuant to method (EPA 600/M4-82-020) identifies asbestos fiber bundles by the visual properties displayed when the sample is treated with various dispersion staining liquids. The laboratory report completed following the sample analysis indicates if asbestos is present, and at what percentage along with a description and percentage of other fibrous and non-fibrous materials and sample color. Chain-of-custody documentation was followed from sample collection through shipping and receiving of the samples at the designated laboratory. The documentation assures that samples will meet the quality assurance/quality control measures defined by AHERA. The laboratory analytical report prepared by APEX for the twenty three samples is included as Attachment A.

## **Hazardous Materials Inspection**

On April 21, 2017 the Subject Property was also inspected for the presence of hazardous materials which include but are not limited to polychlorinated biphenyls (PCBs) and potential mercury containing equipment and any items or containers that may contain or be classified as a hazardous or regulated material. Each material, if identified, was documented along with the approximate location. Any materials identified as hazardous are included in Table 1.

## **INSPECTION RESULTS AND RECOMMENDATIONS**

During the completion of the asbestos inspection, twenty three samples of suspect ACM were collected and are documented in Table 2 along with the Red Cedar sample number, description, friability, material type, ACM classification, sample location, material quantity and laboratory analytical results.

ACM, as defined by the USEPA NESHAP is “any material containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763 Section 1, Polarized Light Microscopy”.

Friable ACM is defined by NESHAP as any material containing more than 1 percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Friable ACM is a concern due the ease of unintentionally disturbing the ACM which may result in “visible emissions” which is known as a Fiber Release Episode.

Non-friable asbestos-containing material is defined as “material containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACM’s are separated into Category I and Category II ACM. Category I ACM is any asbestos containing packing’s, gaskets, resilient floor coverings (vinyl floor tile and linoleum are examples of these) and asphalt roofing products. Category II ACM is stated by NESHAP as any material excluding Category I non-friable ACM such as drywall, plaster or fiberboard insulation.

### **Presumed Asbestos Containing Material**

Presumed Asbestos Containing Materials (PACM) are suspect surfacing, TSI and miscellaneous materials found in buildings constructed prior to 1980 which are classified as and due to the age of the structure, are assumed to be ACM and do not require sample collection and analysis. OSHA dictates that PACM may be “rebutted” following a complete inspection pursuant to AHERA protocol.

The HVAC Duct Wrap located in the Building was classified as PACM due to the age of the structure and samples were not collected.

Table 3 lists the location, material description, friability, condition, material type (surfacing, thermal or miscellaneous) and approximate quantity of all PACM documented at the Subject Property.

Table 4 provides a summary all ACM documented at the Subject Property which includes the material location, description, and approximate quantity.

### **Friable ACM's**

Duct Wrap identified in the building in conjunction with the forced air heating system is classified as friable ACM. The visual assessment to quantify the extent of this material identified HVAC Duct Wrap at the following locations within the basement and first floor:

- Living (1 register, 15 sq. ft.)
- Dining (1 register, 15 sq. ft.)
- Kitchen (1 register, 15 sq. ft.)
- Basement (misc. HVAC wrap on Cold Air Ductwork, 25 sq. ft.)
- Basement (misc. HVAC wrap on Basement Framing, 25 sq. ft.)
- Basement (12 in. dia. HVAC Wrapped Ductwork, 34 lin. ft.)

### **Category I ACM**

No Category I ACM was identified during the completion of this inspection.

### **Category II ACM**

Plaster samples, collected from the Living Room were found to contain up to 2% asbestos following analysis. The assessment to quantify the extent of this material identified approximately 3,151 sq. ft. of plaster within the Building.

Textured Surfacing (over Plaster) samples, collected from the Living and Dining Room were found to contain up to 2% asbestos following analysis. The assessment to quantify the extent of this material identified approximately 305 sq. ft. of textured surfacing within the Building over plaster.

## **RECOMMENDATIONS**

### **Asbestos Containing Materials**

HVAC material identified in the Building system and listed below is classified as friable ACM and should be removed prior to any renovation/demolition activities.

- Living (1 register, 15 sq. ft.)
- Dining (1 register, 15 sq. ft.)
- Kitchen (1 register, 15 sq. ft.)
- Basement (misc. HVAC wrap on Cold Air Ductwork, 25 sq. ft.)
- Basement (misc. HVAC wrap on Basement Framing, 25 sq. ft.)
- Basement (12 in. dia. HVAC Wrapped Ductwork, 34 lin. ft.)

Plaster and Textured Surfacing identified on the interior of the Building must be abated prior to completion of any renovation/demolition activities at the Subject Property. Any Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations must be properly abated.

Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-26-185-095-0007-00

Please note: The location of samples obtained during this inspection were in a random fashion and areas that were not identified during this inspection may be damaged or have become damaged since the inspection was completed. If Category I or Category II friable materials are discovered prior to or during the demolition/renovation process, these materials must be abated prior to commencement of any demolition/renovation activities at the Subject Property.

### **Hazardous Materials**

Hazardous Materials identified at the Subject Property and documented in Table 1 which require proper removal and disposal consist of the following items:

- Smoke Detector (2)
- Thermostat (1)
- 2' Fluorescent Light (Fixture and Ballast Only) (1)
- 2' Fluorescent Bulb (1)
- Gallon Container Misc. Paint (4)

### **REGULATORY REQUIREMENTS**

A Notification of Intent to Renovate/Demolish form must be filed with the Michigan Department of Environmental Quality- Air Quality Division at least 10 working days prior to any renovation or demolition activities at a site.

The Notification of Intent to Renovate/Demolish form must also be completed and submitted to the MIOSHA-Asbestos Program whenever demolition, encapsulation and/or renovation activities at a site involving greater than ten lineal feet and/or fifteen square feet of ACM will be completed.

Regulated asbestos containing materials per NESHAP (40 CFR Part 61) which falls into any of the following categories are ACM's that must be removed prior to any renovation/demolition activities at the Subject Property.

- Friable asbestos material.
- Category I non-friable ACM that has become friable.
- Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading.
- Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations.

Asbestos abatement should only be performed by a certified asbestos abatement contractor licensed to complete abatement work. The contractor must also follow the standards and requirements set forth per the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61).

Additional information regarding the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61) can be obtained by contacting the associated agency below.



Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-26-185-095-0007-00

NESHAP Asbestos Program  
Department of Environmental Quality  
Phone: 517-284-6777

MIOSHA-CSHD-Asbestos Program  
State of Michigan  
Phone: 517-284-7680  
Email: asbestos@michigan.gov

**DISCLAIMER**

Red Cedar Consulting performed destructive testing methods in an attempt to access and inspect all areas of the Building. Unfortunately, due to the age of construction along with multiple additions/renovations that may have been completed on the Building, additional inspections may be required if suspect ACM material not documented within this report is encountered during renovation/demolition activities.

This report was prepared at the request and for exclusive use by the Muskegon County Land Bank and may not be reproduced or sold without written permission from Red Cedar Consulting.

We appreciate the opportunity to provide the requested services. Please contact us at (888) 449-4566 with any questions or concerns.

Sincerely,  
**Red Cedar Consulting**



Aaron Paquet  
Michigan/EPA Certified Asbestos Building Inspector  
(A30955)

Red Cedar Consulting

***Attachment 1***  
***APEX Research Laboratory Analytical Results***



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 2327 Maffett St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69748  
Date Collected: 04/21/17  
Date Received: 04/24/17  
Date Analyzed: 04/28/17  
Date Reported: 05/01/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69748 - 01 Cust. #: MS-HM-01A Material: Roofing Materials Location: Appearance: black, fibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 69748 - 01a Cust. #: MS-HM-01A Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 69748 - 01b Cust. #: MS-HM-01A Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%

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: 2327 Maffett St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69748  
Date Collected: 04/21/17  
Date Received: 04/24/17  
Date Analyzed: 04/28/17  
Date Reported: 05/01/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69748 - 02 Cust. #: MS-HM-01B Material: Roofing Materials Location: Appearance: black, fibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 69748 - 02a Cust. #: MS-HM-01B Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 69748 - 02b Cust. #: MS-HM-01B Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 2327 Maffett St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69748  
Date Collected: 04/21/17  
Date Received: 04/24/17  
Date Analyzed: 04/28/17  
Date Reported: 05/01/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69748 - 03 Cust. #: MS-HM-02A Material: Vapor Barrier Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 95% Other - 5%
Lab ID #: 69748 - 04 Cust. #: MS-HM-02B Material: Vapor Barrier Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 95% Other - 5%
Lab ID #: 69748 - 05 Cust. #: MS-HM-03A Material: Layered Flooring/Linoleum Location: Appearance: beige, fibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 10% Other - 90%

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Robert T. Letarte Jr., Laboratory Director

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Project: 2327 Maffett St

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Lansing, MI 48901

ARI Report # 17-69748  
Date Collected: 04/21/17  
Date Received: 04/24/17  
Date Analyzed: 04/28/17  
Date Reported: 05/01/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69748 - 05a Cust. #: MS-HM-03A Material: Floor Tile Location: Appearance: brown,nonfibrous,homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69748 - 05b Cust. #: MS-HM-03A Material: Mastic Location: Appearance: clear,nonfibrous,homogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69748 - 06 Cust. #: MS-HM-03B Material: Layered Flooring/Linoleum Location: Appearance: beige,fibrous,homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 10% Other - 90%

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Robert T. Letarte Jr., Laboratory Director

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ARI Report # 17-69748  
Date Collected: 04/21/17  
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Date Analyzed: 04/28/17  
Date Reported: 05/01/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69748 - 06a Cust. #: MS-HM-03B Material: Floor Tile Location: Appearance: brown,nonfibrous,homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69748 - 06b Cust. #: MS-HM-03B Material: Mastic Location: Appearance: clear,nonfibrous,homogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69748 - 07 Cust. #: MS-HM-04A Material: Tan Vinyl Layered Location: Appearance: beige,fibrous,nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 10% Other - 90%

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Robert T. Letarte Jr., Laboratory Director

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Lansing, MI 48901

ARI Report # 17-69748  
Date Collected: 04/21/17  
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Date Analyzed: 04/28/17  
Date Reported: 05/01/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69748 - 07a Cust. #: MS-HM-04A Material: Linoleum Location: Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 20% Other - 80%
Lab ID #: 69748 - 08 Cust. #: MS-HM-04B Material: Tan Vinyl Layered Location: Appearance: beige, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 10% Other - 90%
Lab ID #: 69748 - 08a Cust. #: MS-HM-04B Material: Linoleum Location: Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 10% Other - 90%

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Robert T. Letarte Jr., Laboratory Director

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Project: 2327 Maffett St

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P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69748  
Date Collected: 04/21/17  
Date Received: 04/24/17  
Date Analyzed: 04/28/17  
Date Reported: 05/01/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69748 - 09 Cust. #: MS-HM-05A Material: Drywall/Joint Compound Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69748 - 10 Cust. #: MS-HM-05B Material: Drywall/Joint Compound Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69748 - 11 Cust. #: MS-HM-06A Material: Window Glazing Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Robert T. Letarte Jr., Laboratory Director

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Lansing, MI 48901

ARI Report # 17-69748  
Date Collected: 04/21/17  
Date Received: 04/24/17  
Date Analyzed: 04/28/17  
Date Reported: 05/01/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69748 - 12 Cust. #: MS-HM-06B Material: Window Glazing Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69748 - 13 Cust. #: MS-HS-01A Material: Textured Surfacing Top Layer Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69748 - 13a Cust. #: MS-HS-01A Material: Textured Surfacing Bottom Layer Location: Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>YES</b> Chrysotile - 2%	Other - 98%

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

Robert T. Letarte Jr., Laboratory Director

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Lansing, MI 48901

ARI Report # 17-69748  
Date Collected: 04/21/17  
Date Received: 04/24/17  
Date Analyzed: 04/28/17  
Date Reported: 05/01/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69748 - 14 Cust. #: MS-HS-01B Material: Textured Surfacing Top Layer Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69748 - 14a Cust. #: MS-HS-01B Material: Textured Surfacing Bottom Layer Location: Appearance: Layer: 2 of 2	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69748 - 15 Cust. #: MS-HS-01C Material: Textured Surfacing Top Layer Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Robert T. Letarte Jr., Laboratory Director

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ARI Report # 17-69748  
Date Collected: 04/21/17  
Date Received: 04/24/17  
Date Analyzed: 04/28/17  
Date Reported: 05/01/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69748 - 15a Cust. #: MS-HS-01C Material: Textured Surfacing Bottom Layer Location: Appearance: Layer: 2 of 2	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69748 - 16 Cust. #: MS-HS-02A Material: Popcorn Surfacing Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69748 - 17 Cust. #: MS-HS-02B Material: Popcorn Surfacing Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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ARI Report # 17-69748  
Date Collected: 04/21/17  
Date Received: 04/24/17  
Date Analyzed: 04/28/17  
Date Reported: 05/01/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69748 - 17a Cust. #: MS-HS-02B Material: Plaster Finish Coat Location: Appearance: white,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69748 - 18 Cust. #: MS-HS-02C Material: Popcorn Surfacing Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69748 - 18a Cust. #: MS-HS-02C Material: Plaster Finish Coat Location: Appearance: white,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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ARI Report # 17-69748  
Date Collected: 04/21/17  
Date Received: 04/24/17  
Date Analyzed: 04/28/17  
Date Reported: 05/01/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69748 - 19 Cust. #: MS-HS-03A Material: Plaster Top Texture Location: Appearance: white, fibrous, homogenous Layer: 1 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 69748 - 19a Cust. #: MS-HS-03A Material: Plaster Bottom Texture Location: Appearance: beige, fibrous, homogenous Layer: 2 of 4	Asbestos Present: <b>YES</b> Chrysotile - 1.50%  <b>POINT COUNT RESULT</b>	Other - 98.50%
Lab ID #: 69748 - 19b Cust. #: MS-HS-03A Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 3 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Lansing, MI 48901

ARI Report # 17-69748  
Date Collected: 04/21/17  
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Date Analyzed: 04/28/17  
Date Reported: 05/01/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69748 - 19c Cust. #: MS-HS-03A Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 4 of 4	Asbestos Present: <b>YES</b> Chrysotile - 2%	Cellulose - 2% Other - 96%
Lab ID #: 69748 - 20 Cust. #: MS-HS-03B Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69748 - 20a Cust. #: MS-HS-03B Material: Plaster Base Coat Location: Appearance: Layer: 2 of 2	Asbestos Present:  NOT ANALYZED	

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Date Collected: 04/21/17  
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Date Analyzed: 04/28/17  
Date Reported: 05/01/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69748 - 21 Cust. #: MS-HS-03C Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69748 - 21a Cust. #: MS-HS-03C Material: Plaster Base Coat Location: Appearance: Layer: 2 of 2	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69748 - 22 Cust. #: MS-HS-03D Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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Date Collected: 04/21/17  
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Date Analyzed: 04/28/17  
Date Reported: 05/01/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69748 - 22a Cust. #: MS-HS-03D Material: Plaster Base Coat Location: Appearance: Layer: 2 of 2	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69748 - 23 Cust. #: MS-HS-03E Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69748 - 23a Cust. #: MS-HS-03E Material: Plaster Base Coat Location: Appearance: Layer: 2 of 2	Asbestos Present:  NOT ANALYZED	

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NVLAP Lab Code 102118-0

Apex # **69748**

1 of 3

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189  
 Phone: 734-449-9990  
 E-mail: apexresearch@chartermi.net Fax: 734-449-9991



Client Name: Red Cedar Consulting

Date of Survey: 4-21-17

Address: PO Box 13216

Project: 2327 McArthur St

City, St., Zip: Lansing, MI 48901

Project #: \_\_\_\_\_

Phone: (888) 449-4566 Fax: (888) 448-8739

Contact Person: Aaron Paquet

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: Slag All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
 Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
 Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BioSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
 TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab Use Only  
 Log-In \_\_\_\_\_  
 Report \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	MS-HH-01A	Roofing Material			
2	MS-HH-01B	" "			
3	MS-HH-02A	Tapet Benzie			
4	MS-HH-02B	" "			
5	MS-HH-03A	Delayed Flooring			
6	MS-HH-03B	" "			
7	MS-HH-04A	Tom Vinyl Delayed			
8	MS-HH-04B	" "			
9	MS-HH-05A	Delayed + Joint Compound			
10	MS-HH-05B	" "			
11	MS-HH-06A	Window Siding			

RECEIVED

Relinquished by: [Signature] Received by: UPS

Relinquished by: [Signature]

Received by: \_\_\_\_\_

Date: 4-21-17

Date: 4-21-17

Date: 1125 APEX RESEARCH

Date: \_\_\_\_\_

69748

243

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990



E-mail: apexresearch@chartermi.net Fax: 734-449-9991

Client Name: Red Cedar Consulting

Address: PO Box 13216 Lansing, MI 48901

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-21-17

Project: 2327 MacKett St

Project #:

Contact Person: Aaron Paquet

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: Safety  TTP All Samples

Asbestos: Bulk  Wipe  Point Count  PCM

Lead: Bulk  Wipe  Air  Paint  Soil

Mold: Bulk  Tape  BIOSIS  Other  Viable

TEM: AHERA 7400 Bulk/NOB EPA Level II

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	M5-HM-06B	Window Siding			
13	M5-H5-01A	Interior Surfacing			
14	M5-H5-01B	"			
15	M5-H5-01C	"			
16	M5-H5-02A	Open Air Surfacing			
17	M5-H5-02B	"			
18	M5-H5-02C	"			
19	M5-H5-03A	Plaster			
20	M5-H5-03B	"			
21	M5-H5-03C	"			
22	M5-H5-03D	"			

RECEIVED

Lab Use Only  
 Log-In \_\_\_\_\_  
 Report \_\_\_\_\_

Relinquished by: [Signature] Received by: UPS

Date: 4-21-17 Date: 4-21-17

Relinquished by: [Signature]

Date: APEX RESEARCH

Received by: \_\_\_\_\_

Date: \_\_\_\_\_



***Tables***

**Table 1 - Summary of Hazardous Materials, 2327 Maffett St., Muskegon Heights, Michigan**

<b>Hazardous Materials Description and Location</b>		
<b>Location</b>	<b>Material Description</b>	<b>Quantity</b>
Dining	Smoke Detector	2
Dining	Thermostat	1
Kitchen	2' Fluorescent Light (Fixture and Ballast Only)	1
Kitchen	2' Fluorescent Bulb	1
Basement	Gallon Container Misc. Paint	4

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2327 Maffett St., Muskegon Heights, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
MS-HM-01A	Roofing Materials	No	M	Category I	ND/ND/ND	Exterior	NA
MS-HM-01B	Roofing Materials	No	M	Category I	ND/ND/ND	Exterior	NA
MS-HM-02A	Vapor Barrier	Yes	M	Category II	ND	Exterior	NA
MS-HM-02B	Vapor Barrier	Yes	M	Category II	ND	Exterior	NA
MS-HM-03A	Layered Flooring	No	M	Category I	ND/ND/ND	Kitchen	NA
MS-HM-03B	Layered Flooring	No	M	Category I	ND/ND/ND	Kitchen	NA
MS-HM-04A	Tan Vinyl Layered	No	M	Category I	ND/ND	Bathroom	NA
MS-HM-04B	Tan Vinyl Layered	No	M	Category I	ND/ND	Bathroom	NA
MS-HM-05A	Drywall and Joint Compound	No	M	Category II	ND	Bathroom Ceiling	NA
MS-HM-05B	Drywall and Joint Compound	No	M	Category II	ND	Kitchen Ceiling	NA
MS-HM-06A	Window Glazing	Yes	M	Category II	ND	Living	NA
MS-HM-06B	Window Glazing	Yes	M	Category II	ND	Dining	NA
MS-HS-01A	Textured Surfacing	No	S	Category II	ND/2%CH	Living Ceiling	305 sq. ft.
MS-HS-01B	Textured Surfacing	No	S	Category II	ND/NA	Living Ceiling	NA
MS-HS-01C	Textured Surfacing	No	S	Category II	ND/NA	Dining Ceiling	NA
MS-HS-02A	Popcorn Surfacing	No	S	Category II	ND	NE Bedroom Ceiling	NA
MS-HS-02B	Popcorn Surfacing	No	S	Category II	ND/ND	NE Bedroom Ceiling	NA
MS-HS-02C	Popcorn Surfacing	No	S	Category II	ND/ND	NW Bedroom Ceiling	NA
MS-HS-03A	Plaster	No	S	Category II	ND/1.50%CH-PC/ND/2%CH	Living Ceiling	3,151 sq. ft.
MS-HS-03B	Plaster	No	S	Category II	ND/NA	Basement Stairway Ceiling	NA
MS-HS-03C	Plaster	No	S	Category II	ND/NA	Living Wall	NA
MS-HS-03D	Plaster	No	S	Category II	ND/NA	NE Bedroom Wall	NA
MS-HS-03E	Plaster	No	S	Category II	ND/NA	NW Bedroom Wall	NA

**Notes:**

Material Types

M = Miscellaneous building material  
 TSI = Thermal System Insulation  
 S = Surfacing Material

Abbreviations

NQ = Not quantified  
 NA = Not applicable  
 ND = Not detected. Laboratory result is less than 1 % asbestos

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2327 Maffett St., Muskegon Heights, Michigan**

PC = Point Count Analysis  
CH = Chrysotile Asbestos

lin. ft. = linear feet  
sq. ft. = square feet

Asbestos Containing Material (ACM) is defined as any material containing more than 1 percent asbestos as determined utilizing Polarized Light Microscopy.



**Table 3 - Summary of Presumed Asbestos Containing Materials, 2327 Maffett St., Muskegon Heights, Michigan**

<b>Asbestos Containing Material Description and Location</b>					
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Condition</b>	<b>Material Type</b>	<b>Approx. Quantity</b>
Living (1 register, 15 sq. ft.) Dining (1 register, 15 sq. ft.) Kitchen (1 register, 15 sq. ft.) Basement (misc. HVAC wrap on Cold Air Ductwork, 25 sq. ft.) Basement (misc. HVAC wrap on Basement Framing, 25 sq. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	95 sq. ft.
Basement (12 in. dia. HVAC Wrapped Ductwork, 34 lin. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	34 lin. ft.

**Notes:**

Material Types

M = Miscellaneous building material  
 TSI = Thermal System Insulation  
 S = Surfacing Material

Abbreviations

lin. ft. = linear feet  
 sq. ft. = square feet

**Table 4 - Summary of All Asbestos Containing Materials, 2327 Maffett St., Muskegon Heights, Michigan**

<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Living (1 register, 15 sq. ft.)			
Dining (1 register, 15 sq. ft.)			
Kitchen (1 register, 15 sq. ft.)			
Basement (misc. HVAC wrap on Cold Air Ductwork, 25 sq. ft.)	HVAC Duct Wrap	Yes	95 sq. ft.
Basement (misc. HVAC wrap on Basement Framing, 25 sq. ft.)			
<b>Total</b>			<b>95 sq. ft.</b>
<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Basement (12 in. dia. HVAC Wrapped Ductwork, 34 lin. ft.)	HVAC Duct Wrap	Yes	34 lin. ft.
<b>Total</b>			<b>34 lin. ft.</b>
<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
1 <sup>st</sup> Floor	Wall Plaster	No	2,352 sq. ft.
1 <sup>st</sup> Floor	Ceiling Plaster	No	799 sq. ft.
<b>Total</b>			<b>3,151 sq. ft.</b>
<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Living Room Ceiling	Textured Surfacing over Plaster	No	175 sq. ft.
Dining Room Ceiling	Textured Surfacing over Plaster	No	130 sq. ft.
<b>Total</b>			<b>305 sq. ft.</b>

**Notes:**

Abbreviations

lin. ft. = linear feet

sq. ft. = square feet

**Shaded/Bolded** = Friable ACM and any Category I and Category II non-friable ACM that has a high probability of becoming crumbled, pulverized, or reduced to powder by the demolition or renovation activities that must be properly abated prior to commencement of any demolition/renovation activities.

**Table 4 - Summary of All Asbestos Containing Materials, 2327 Maffett St., Muskegon Heights, Michigan**

Demolition/renovation activities completed with intact Category I non-friable ACM are regulated by OSHA and must be completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note that a Negative Pressure Enclosure must be utilized during abatement when Site Conditions Warrant. Examples of these conditions include the abatement of Plaster and Vermiculite insulation, HVAC Duct Wrap in Poor Condition, and Air-O-Cell/Mag Pipe Wrap. Conditions outside of these should be assessed on a case by case basis during the Asbestos Abatement Contractors site walk and Work Plan Preparation.



P.O. Box 13216  
Lansing, MI 48901  
Phone: 888.449.4566  
Fax: 888.448.8739  
www.redcedarconsulting.net

May 12, 2017

Mr. Tim Burgess  
Muskegon County Land Bank  
Land Bank Coordinator  
173 E. Apple Avenue, Suite 104  
Muskegon, MI 49442

**RE: *Asbestos Containing Material and Hazardous Materials Inspection***  
***2340 Leahy St., Muskegon Heights, MI 49444***  
***Parcel ID: 61-26-185-098-0014-00***

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 2340 Leahy St., Muskegon Heights, Michigan (Subject Property). This inspection was completed at the request of the Muskegon County Land Bank to comply with the United States Environmental Protection Agency (USEPA) requirements for demolition and renovation set forth under the National Emissions Standards for Hazardous Air Pollutants (NESHAP, 40 CFR Part 61). This inspection was also completed to comply with the Occupational Safety and Health Administration (OSHA) Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

### **SUBJECT PROPERTY**

The Subject Property is comprised of a .14 acre residential parcel which contains an approximate 694 square foot residential building (the Building) constructed in 1915. The Building was constructed on a concrete block basement with two aboveground floors. The exterior walls of the Building were finished with vinyl siding over asphalt siding while the roof was sealed with asphalt shingles. The Building can be further divided into a living room, dining room, kitchen, bath, and two bedrooms on the first floor while the second floor contains a front entry, living room, closet, kitchen, bath and one bedroom.

### **VISUAL INSPECTION AND SAMPLING**

#### **Asbestos Containing Materials Inspection**

Aaron Paquet and Darrell DeMasters of Red Cedar Consulting (Red Cedar), accredited State Of Michigan/EPA Asbestos Building Inspectors (Accreditation Numbers A30955 and A31159, respectively) who completed training per the Michigan Asbestos Workers Accreditation Act 440, completed an inspection of the Subject Property on April 27, 2017 for suspected asbestos containing building materials.

This inspection, and subsequent sample collection was completed in accordance with the USEPA Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763) assessment and sampling protocol.

During the completion of the inspection, each area of the Subject Property was visually inspected for asbestos containing building materials (ACBM). Following the completion of the visual inspection, Red Cedar staff identified each suspect area of friable and non-friable ACBM and sorted them into one of three homogenous categories for sampling purposes. AHERA defines friable as a material that when dry, may be crumbled, pulverized, or reduced to powder by hand pressure. A homogenous area is defined by OSHA as an area of surfacing, thermal system insulation (TSI) or miscellaneous material that is uniform in color and texture. Surfacing materials are most commonly found in sprayed-on, troweled-on or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members. TSI refers to materials applied to pipes, fittings, boilers, ductwork, or other components to prevent heat loss or gain, or condensation. Any material that does not fall under the surfacing or TSI category, such as floor tile, drywall, and acoustical ceiling tile are placed into the miscellaneous materials category.

Following the completion of the visual inspection, Red Cedar staff identified the following materials as suspect ACBM:

- Asphalt Shingle
- Asphalt Siding
- Linoleum
- 1'x1' Ceiling Tile
- 12"x12" Vinyl Tile
- Drywall
- Glazing
- Plaster

Red Cedar staff collected twenty seven samples of suspect ACBM separated into twelve distinct homogenous groups for laboratory analysis. Samples were collected and submitted to APEX Research Inc. Laboratories (APEX) (Accreditation Number 102118-0) for laboratory analysis. Analysis was completed utilizing polarized light microscopy (PLM) which is the Environmental Protection Agency (EPA) approved method for analysis of bulk materials for asbestos. PLM analysis completed pursuant to method (EPA 600/M4-82-020) identifies asbestos fiber bundles by the visual properties displayed when the sample is treated with various dispersion staining liquids. The laboratory report completed following the sample analysis indicates if asbestos is present, and at what percentage along with a description and percentage of other fibrous and non-fibrous materials and sample color. Chain-of-custody documentation was followed from sample collection through shipping and receiving of the samples at the designated laboratory. The documentation assures that samples will meet the quality assurance/quality control measures defined by AHERA. The laboratory analytical report prepared by APEX for the twenty seven samples is included as Attachment A.

## **Hazardous Materials Inspection**

On April 27, 2017 the Subject Property was also inspected for the presence of hazardous materials which include but are not limited to polychlorinated biphenyls (PCBs) and potential mercury containing equipment and any items or containers that may contain or be classified as a hazardous or regulated material. Each material, if identified, was documented along with the approximate location. Any materials identified as hazardous are included in Table 1.

## **INSPECTION RESULTS AND RECOMMENDATIONS**

During the completion of the asbestos inspection, twenty seven samples of suspect ACM were collected and are documented in Table 2 along with the Red Cedar sample number, description, friability, material type, ACM classification, sample location, material quantity and laboratory analytical results.

ACM, as defined by the USEPA NESHAP is “any material containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763 Section 1, Polarized Light Microscopy”.

Friable ACM is defined by NESHAP as any material containing more than 1 percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Friable ACM is a concern due the ease of unintentionally disturbing the ACM which may result in “visible emissions” which is known as a Fiber Release Episode.

Non-friable asbestos-containing material is defined as “material containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACM’s are separated into Category I and Category II ACM. Category I ACM is any asbestos containing packing’s, gaskets, resilient floor coverings (vinyl floor tile and linoleum are examples of these) and asphalt roofing products. Category II ACM is stated by NESHAP as any material excluding Category I non-friable ACM such as drywall, plaster or fiberboard insulation.

### **Presumed Asbestos Containing Material**

Presumed Asbestos Containing Materials (PACM) are suspect surfacing, TSI and miscellaneous materials found in buildings constructed prior to 1980 which are classified as and due to the age of the structure, are assumed to be ACM and do not require sample collection and analysis. OSHA dictates that PACM may be “rebutted” following a complete inspection pursuant to AHERA protocol.

The HVAC Duct Wrap located in the Building was classified as PACM due to the age of the structure and samples were not collected.

Table 3 lists the location, material description, friability, condition, material type (surfacing, thermal or miscellaneous) and approximate quantity of all PACM documented at the Subject Property.

Table 4 provides a summary all ACM documented at the Subject Property which includes the material location, description, and approximate quantity.

### **Friable ACM's**

A window glazing sample collected from a window in the Dining Room was found to contain up to 1.75% asbestos following analysis. The assessment to quantify the extent of this material identified twenty six windows at the following locations that would fall into the same homogenous group. The locations of the windows are listed below:

- Kitchen (2 windows 28" wide x 46" tall)
- Kitchen (2 windows 24" wide x 30" tall)
- Kitchen (1 window 20" wide x 20" tall)
- Dining Room (3 windows 24" wide x 58" tall)
- Living Room (1 windows 44" wide x 20" tall)
- Living Room (3 windows 28" wide x 58" tall)
- NW Bedroom (2 windows 28" wide x 58" tall)
- Bathroom (1 window 24" wide x 46" tall)
- NE Bedroom (2 windows 28" wide x 58" tall)
- 2nd Fl. Kitchen/Dining Room (2 windows 28" wide x 58" tall)
- 2nd Fl. Living Room (2 windows 28" wide x 46" tall)
- 2nd Fl. Front Entry (1 window 24" wide x 54" tall)
- 2nd Fl. Front Entry (1 window 28" wide x 58" tall)
- 2nd Fl. Bathroom (1 window 28" wide x 46" tall)
- 2nd Fl. S Bedroom (2 windows 28" wide x 46" tall)

Duct Wrap identified in the building in conjunction with the forced air heating system is classified as friable ACM. The visual assessment to quantify the extent of this material identified HVAC Duct Wrap at the following locations within the basement, first and second floors:

- Living (1 register, 10 sq. ft.)
- Kitchen (1 register, 10 sq. ft.)
- Bathroom (1 register, 10 sq. ft.)
- NE Bedroom (1 register, 10 sq. ft.)
- NW Bedroom (1 register, 10 sq. ft.)
- 2nd Fl. Kitchen/Dining Room (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- 2nd Fl. Hallway (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- Basement (12 in. dia. HVAC Wrapped Ductwork, 1 lin. ft.)

### **Category I ACM**

One type of resilient floor covering (Brown & Tan Linoleum) located within the hallway and closet was found to contain up to 20% Chrysotile asbestos. The assessment to quantify the extent of this material identified approximately 55 sq. ft. of this material within the Building.

### **Category II ACM**

No Category II non-friable ACM was identified during the completion of this inspection.

## **RECOMMENDATIONS**

### **Asbestos Containing Materials**

HVAC material identified in the Building system and listed below is classified as friable ACM and should be removed prior to any renovation/demolition activities.

- Living (1 register, 10 sq. ft.)
- Kitchen (1 register, 10 sq. ft.)
- Bathroom (1 register, 10 sq. ft.)
- NE Bedroom (1 register, 10 sq. ft.)
- NW Bedroom (1 register, 10 sq. ft.)
- 2nd Fl. Kitchen/Dining Room (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- 2nd Fl. Hallway (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- Basement (12 in. dia. HVAC Wrapped Ductwork, 1 lin. ft.)

Friable asbestos containing window glazing was identified on twenty six windows throughout the Building. The locations of these windows that should be abated prior to demolition/renovation activities are listed below:

- Kitchen (2 windows 28" wide x 46" tall)
- Kitchen (2 windows 24" wide x 30" tall)
- Kitchen (1 window 20" wide x 20" tall)
- Dining Room (3 windows 24" wide x 58" tall)
- Living Room (1 windows 44" wide x 20" tall)
- Living Room (3 windows 28" wide x 58" tall)
- NW Bedroom (2 windows 28" wide x 58" tall)
- Bathroom (1 window 24" wide x 46" tall)
- NE Bedroom (2 windows 28" wide x 58" tall)
- 2nd Fl. Kitchen/Dining Room (2 windows 28" wide x 58" tall)
- 2nd Fl. Living Room (2 windows 28" wide x 46" tall)
- 2nd Fl. Front Entry (1 window 24" wide x 54" tall)
- 2nd Fl. Front Entry (1 window 28" wide x 58" tall)
- 2nd Fl. Bathroom (1 window 28" wide x 46" tall)
- 2nd Fl. S Bedroom (2 windows 28" wide x 46" tall)
- 

Please note: Other different sized windows are located throughout the Building but these windows were assessed and found to be constructed either without window glazing or were sampled and found to not contain asbestos and therefore are not required to be removed.

The Category I resilient floor covering (Brown & Tan Linoleum) is a non-friable ACM that may be left in place as long as the demolition/renovation activities are completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.



Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-26-185-098-0014-00

Please note: The location of samples obtained during this inspection were in a random fashion and areas that were not identified during this inspection may be damaged or have become damaged since the inspection was completed. If Category I or Category II friable materials are discovered prior to or during the demolition/renovation process, these materials must be abated prior to commencement of any demolition/renovation activities at the Subject Property.

### **Hazardous Materials**

Hazardous Materials identified at the Subject Property and documented in Table 1 which require proper removal and disposal consist of the following items:

- Smoke Detector (6)
- Thermostat (2)

### **REGULATORY REQUIREMENTS**

A Notification of Intent to Renovate/Demolish form must be filed with the Michigan Department of Environmental Quality- Air Quality Division at least 10 working days prior to any renovation or demolition activities at a site.

The Notification of Intent to Renovate/Demolish form must also be completed and submitted to the MIOSHA-Asbestos Program whenever demolition, encapsulation and/or renovation activities at a site involving greater than ten lineal feet and/or fifteen square feet of ACM will be completed.

Regulated asbestos containing materials per NESHAP (40 CFR Part 61) which falls into any of the following categories are ACM's that must be removed prior to any renovation/demolition activities at the Subject Property.

- Friable asbestos material.
- Category I non-friable ACM that has become friable.
- Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading.
- Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations.

Asbestos abatement should only be performed by a certified asbestos abatement contractor licensed to complete abatement work. The contractor must also follow the standards and requirements set forth per the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61).

Additional information regarding the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61) can be obtained by contacting the associated agency below.

NESHAP Asbestos Program  
Department of Environmental Quality  
Phone: 517-284-6777

MIOSHA-CSHD-Asbestos Program  
State of Michigan  
Phone: 517-284-7680  
Email: asbestos@michigan.gov

Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-26-185-098-0014-00

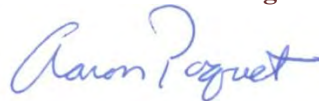
**DISCLAIMER**

Red Cedar Consulting performed destructive testing methods in an attempt to access and inspect all areas of the Building. Unfortunately, due to the age of construction along with multiple additions/renovations that may have been completed on the Building, additional inspections may be required if suspect ACM material not documented within this report is encountered during renovation/demolition activities.

This report was prepared at the request and for exclusive use by the Muskegon County Land Bank and may not be reproduced or sold without written permission from Red Cedar Consulting.

We appreciate the opportunity to provide the requested services. Please contact us at (888) 449-4566 with any questions or concerns.

Sincerely,  
**Red Cedar Consulting**



Aaron Paquet  
Michigan/EPA Certified Asbestos Building Inspector  
(A30955)

Red Cedar Consulting

***Attachment 1***  
***APEX Research Laboratory Analytical Results***



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 2340 Leahy St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69856  
Date Collected: 04/27/17  
Date Received: 04/28/17  
Date Analyzed: 05/04/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69856 - 01 Cust. #: LS-HM-01A Material: Roofing Materials Location: Appearance: black, fibrous, homogenous Layer: 1 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69856 - 01a Cust. #: LS-HM-01A Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69856 - 01b Cust. #: LS-HM-01A Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 3 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Other - 70%

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: 2340 Leahy St

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69856  
Date Collected: 04/27/17  
Date Received: 04/28/17  
Date Analyzed: 05/04/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69856 - 01c Cust. #: LS-HM-01A Material: Tar/Felt Location: Appearance: black, fibrous, nonhomogenous Layer: 4 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69856 - 02 Cust. #: LS-HM-01B Material: Roofing Materials Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69856 - 03 Cust. #: LS-HM-02A Material: Asphalt Siding Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Other - 70%

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: 2340 Leahy St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69856  
Date Collected: 04/27/17  
Date Received: 04/28/17  
Date Analyzed: 05/04/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69856 - 04 Cust. #: LS-HM-02B Material: Asphalt Siding Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 69856 - 05 Cust. #: LS-HM-03A Material: Black/White Linoleum/Floor Tile Location: Appearance: black, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69856 - 05a Cust. #: LS-HM-03A Material: Glue Location: Appearance: clear, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 2340 Leahy St

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69856  
Date Collected: 04/27/17  
Date Received: 04/28/17  
Date Analyzed: 05/04/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69856 - 06 Cust. #: LS-HM-03B Material: Black/White Linoleum/Floor Tile Location: Appearance: black,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69856 - 06a Cust. #: LS-HM-03B Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69856 - 07 Cust. #: LS-HM-04A Material: 12x12 Tan/Grey VFT Location: Appearance: beige,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



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## Test Method, Polarized Light Microscopy (PLM)

Project: 2340 Leahy St

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Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69856  
Date Collected: 04/27/17  
Date Received: 04/28/17  
Date Analyzed: 05/04/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69856 - 07a Cust. #: LS-HM-04A Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69856 - 08 Cust. #: LS-HM-04B Material: 12x12 Tan/Grey VFT Location: Appearance: beige,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69856 - 08a Cust. #: LS-HM-04B Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0





# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 2340 Leahy St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69856  
Date Collected: 04/27/17  
Date Received: 04/28/17  
Date Analyzed: 05/04/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69856 - 09 Cust. #: LS-HM-05A Material: Brown/Tan Linoleum Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 20%	Other - 80%
Lab ID #: 69856 - 10 Cust. #: LS-HM-05B Material: Brown/Tan Linoleum Location: Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69856 - 11 Cust. #: LS-HM-06A Material: 1x1 White Smooth Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 70% Other - 30%

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 2340 Leahy St

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Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69856  
Date Collected: 04/27/17  
Date Received: 04/28/17  
Date Analyzed: 05/04/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69856 - 12 Cust. #: LS-HM-06B Material: 1x1 White Smooth Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 70% Other - 30%
Lab ID #: 69856 - 13 Cust. #: LS-HM-07A Material: Window Glazing Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> Chrysotile - 1.75%  <b>POINT COUNT RESULT</b>	Other - 98.25%
Lab ID #: 69856 - 14 Cust. #: LS-HM-07B Material: Window Glazing Location: Appearance: Layer: of	Asbestos Present:  <b>NOT ANALYZED</b>	

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 2340 Leahy St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69856  
Date Collected: 04/27/17  
Date Received: 04/28/17  
Date Analyzed: 05/04/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69856 - 15 Cust. #: LS-HM-08A Material: Rainbow Linoleum Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 60% Other - 40%
Lab ID #: 69856 - 16 Cust. #: LS-HM-08B Material: Rainbow Linoleum Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 60% Other - 40%
Lab ID #: 69856 - 17 Cust. #: LS-HM-09A Material: 12x12 Blue/White VFT Location: Appearance: blue, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 2340 Leahy St

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Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69856  
Date Collected: 04/27/17  
Date Received: 04/28/17  
Date Analyzed: 05/04/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69856 - 17a Cust. #: LS-HM-09A Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69856 - 18 Cust. #: LS-HM-09B Material: 12x12 Blue/White VFT Location: Appearance: blue,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69856 - 18a Cust. #: LS-HM-09B Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Robert T. Letarte Jr., Laboratory Director

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## Test Method, Polarized Light Microscopy (PLM)

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P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69856  
Date Collected: 04/27/17  
Date Received: 04/28/17  
Date Analyzed: 05/04/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69856 - 19 Cust. #: LS-HM-10A Material: 1x1 White Textured Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 70% Fiberglass - 5% Other - 25%
Lab ID #: 69856 - 20 Cust. #: LS-HM-10B Material: 1x1 White Textured Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 70% Fiberglass - 5% Other - 25%
Lab ID #: 69856 - 21 Cust. #: LS-HM-11A Material: Drywall Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%

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Lansing, MI 48901

ARI Report # 17-69856  
Date Collected: 04/27/17  
Date Received: 04/28/17  
Date Analyzed: 05/04/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69856 - 22 Cust. #: LS-HM-11B Material: Drywall Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69856 - 23 Cust. #: LS-HS-01A Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69856 - 23a Cust. #: LS-HS-01A Material: Plaster Base Coat Location: Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 2% Other - 98%

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Project: 2340 Leahy St

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Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69856  
Date Collected: 04/27/17  
Date Received: 04/28/17  
Date Analyzed: 05/04/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69856 - 24 Cust. #: LS-HS-01B Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69856 - 24a Cust. #: LS-HS-01B Material: Plaster Base Coat Location: Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: 69856 - 25 Cust. #: LS-HS-01C Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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NVLAP Lab Code 102118-0



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## Test Method, Polarized Light Microscopy (PLM)

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Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69856  
Date Collected: 04/27/17  
Date Received: 04/28/17  
Date Analyzed: 05/04/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69856 - 25a Cust. #: LS-HS-01C Material: Plaster Base Coat Location: Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: 69856 - 26 Cust. #: LS-HS-01D Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69856 - 26a Cust. #: LS-HS-01D Material: Plaster Base Coat Location: Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 2% Other - 98%

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Robert T. Letarte Jr., Laboratory Director

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## Test Method, Polarized Light Microscopy (PLM)

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Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69856  
Date Collected: 04/27/17  
Date Received: 04/28/17  
Date Analyzed: 05/04/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69856 - 27 Cust. #: LS-HS-01E Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69856 - 27a Cust. #: LS-HS-01E Material: Plaster Base Coat Location: Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 2% Other - 98%
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

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NVLAP Lab Code 102118-0

Apex #

69856

143

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

E-mail: [apexresearch@chartermi.net](mailto:apexresearch@chartermi.net) Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216 Lansing, MI 48901

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-27-17

Project: 2342

Project #: 2342

Contact Person: Aaron Paquet

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: 5 day  All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BioSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	LS-HH-01A	Roofing Material			
2	LS-HH-01B	" "			
3	LS-HH-02A	Asphalt Sidewalk			
4	LS-HH-02B	" "			
5	LS-HH-03A	Black & White Siding			
6	LS-HH-03B	" "			
7	LS-HH-04A	12x12 tan & grey VET			
8	LS-HH-04B	" "			
9	LS-HH-05A	Brown & tan Siding			
10	LS-HH-05B	" "			
11	LS-HH-06A	1x1 white smooth CT			

RECEIVED

Relinquished by: *[Signature]* Received by: UPS

Date: 4-27-17 Date: 4-27-17

Relinquished by: *[Signature]* Received by: \_\_\_\_\_

Date: 10/20/17 Date: \_\_\_\_\_

69856

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

E-mail: apexresearch@chartermi.net

Fax: 734-449-9991



2 of 3

Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-27-17

Project: 2340 Backlog St

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: Skay All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BioSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	LS-HM-06B	1 x 1 White smooth CT			
13	LS-HM-07A	Skylight Hinging			
14	LS-HM-07B	" "			
15	LS-HM-08A	Rear door Sealant			
16	LS-HM-08B	" "			
17	LS-HM-09A	12 x 12 Blue x White VET			
18	LS-HM-09B	" "			
19	LS-HM-10A	1 x 1 White textured CT			
20	LS-HM-10B	" "			
21	LS-HM-11A	Skylight (No joint compound)			
22	LS-HM-11B	" "			

Relinquished by: Red Cedar Received by: UTS

Date: 4-27-17

Date: 4-27-17

Relinquished by:

Date: APR 29 2017

Received by: \_\_\_\_\_

Date: \_\_\_\_\_

69856

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

E-mail: apexresearch@chartermi.net

Fax: 734-449-9991



3 of 3

Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-27-17

Project: 1340 *Red Cedar*

Project #: \_\_\_\_\_

Contact Person: Aaron Paquet

Lab Use Only  
Log-in \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: *5 day*



Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ Biosis \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
23	LS-HS-01A	<i>Plaster</i>			
24	LS-HS-01B				
25	LS-HS-01C				
26	LS-HS-01D				
27	LS-HS-01E				

Relinquished by: *Michelle Matica* Received by: *JFS*

Date: 4-27-17 Date: 4-27-17

Relinquished by: *[Signature]*

Date: APR 29 2017

Received by: \_\_\_\_\_

Date: \_\_\_\_\_

***Tables***

**Table 1 - Summary of Hazardous Materials, 2340 Leahy St., Muskegon Heights, Michigan**

<b>Hazardous Materials Description and Location</b>		
<b>Location</b>	<b>Material Description</b>	<b>Quantity</b>
1 <sup>st</sup> Floor Living Room	Thermostat	1
1 <sup>st</sup> Floor Living Room	Smoke Detector	1
1 <sup>st</sup> Floor NW Bedroom	Smoke Detector	1
1 <sup>st</sup> Floor NE Bedroom	Smoke Detector	1
1 <sup>st</sup> Floor Hallway	Smoke Detector	1
2 <sup>nd</sup> Floor Living Room	Smoke Detector	1
2 <sup>nd</sup> Floor Hallway	Smoke Detector	1
2 <sup>nd</sup> Floor Hallway	Thermostat	1

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2340 Leahy St., Muskegon Heights, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
LS-HM-01A	Roofing Material	No	M	Category I	ND/ND/ND/ND	Exterior	NA
LS-HM-01B	Roofing Material	No	M	Category I	ND	Exterior	NA
LS-HM-02A	Asphalt Siding	No	M	Category I	ND	Exterior	NA
LS-HM-02B	Asphalt Siding	No	M	Category I	ND	Exterior	NA
LS-HM-03A	Black & White Linoleum	No	M	Category I	ND/ND	Kitchen	NA
LS-HM-03B	Black & White Linoleum	No	M	Category I	ND/ND	Kitchen	NA
LS-HM-04A	Tan & Gray 12x12 Vinyl Floor Tile	No	M	Category I	ND/ND	Bathroom	NA
LS-HM-04B	Tan & Gray 12x12 Vinyl Floor Tile	No	M	Category I	ND/ND	Bathroom	NA
LS-HM-05A	Brown & Tan Linoleum	No	M	Category I	20%CH	Hallway & Closet	55 sq. ft.
LS-HM-05B	Brown & Tan Linoleum	No	M	Category I	NA	Hallway & Closet	NA
LS-HM-06A	White Smooth 1'x1' Ceiling Tile	Yes	M	Category II	ND	Living Room	NA
LS-HM-06B	White Smooth 1'x1' Ceiling Tile	Yes	M	Category II	ND	Dining Room	NA
LS-HM-07A	Window Glazing	Yes	M	Category II	1.75%CH-PC	Dining Room	26 Windows
LS-HM-07B	Window Glazing	Yes	M	Category II	NA	Living Room	NA
LS-HM-08A	Rainbow Linoleum	No	M	Category I	ND	2 <sup>nd</sup> Floor Closet	NA
LS-HM-08B	Rainbow Linoleum	No	M	Category I	ND	2 <sup>nd</sup> Floor Closet	NA
LS-HM-09A	Blue & White 12x12 Vinyl Floor Tile	No	M	Category I	ND/ND	2 <sup>nd</sup> Floor Kitchen	NA
LS-HM-09B	Blue & White 12x12 Vinyl Floor Tile	No	M	Category I	ND/ND	2 <sup>nd</sup> Floor Kitchen	NA
LS-HM-10A	White Textured 1'x1' Ceiling Tile	Yes	M	Category II	ND	2 <sup>nd</sup> Floor Living Room	NA
LS-HM-10B	White Textured 1'x1' Ceiling Tile	Yes	M	Category II	ND	2 <sup>nd</sup> Floor Dining/Kitchen	NA
LS-HM-11A	Drywall (No Joint Compound)	No	M	Category II	ND	2 <sup>nd</sup> Floor Living Room Wall	NA
LS-HM-11B	Drywall (No Joint Compound)	No	M	Category II	ND	2 <sup>nd</sup> Floor Living Room Wall	NA
LS-HS-01A	Plaster	No	S	Category II	ND/ND	Dining Room Ceiling	NA
LS-HS-01B	Plaster	No	S	Category II	ND/ND	Kitchen Ceiling	NA
LS-HS-01C	Plaster	No	S	Category II	ND/ND	NW Bedroom Wall	NA
LS-HS-01D	Plaster	No	S	Category II	ND/ND	NE Bedroom Wall	NA

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2340 Leahy St., Muskegon Heights, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
LS-HS-01E	Plaster	No	S	Category II	ND/ND	2 <sup>nd</sup> Floor Bathroom Wall	NA

**Notes:**

Material Types

M = Miscellaneous building material  
 TSI = Thermal System Insulation  
 S = Surfacing Material  
 PC = Point Count Analysis  
 CH = Chrysotile Asbestos

Abbreviations

NQ = Not quantified  
 NA = Not applicable  
 ND = Not detected. Laboratory result is less than 1 % asbestos  
 lin. ft. = linear feet  
 sq. ft. = square feet

Asbestos Containing Material (ACM) is defined as any material containing more than 1 percent asbestos as determined utilizing Polarized Light Microscopy.



**Table 3 - Summary of Presumed Asbestos Containing Materials, 2340 Leahy St., Muskegon Heights, Michigan**

<b>Asbestos Containing Material Description and Location</b>					
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Condition</b>	<b>Material Type</b>	<b>Approx. Quantity</b>
Living (1 register, 10 sq. ft.) Kitchen (1 register, 10 sq. ft.) Bathroom (1 register, 10 sq. ft.) NE Bedroom (1 register, 10 sq. ft.) NW Bedroom (1 register, 10 sq. ft.) 2 <sup>nd</sup> Fl. Kitchen/Dining Room (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) 2 <sup>nd</sup> Fl. Hallway (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	120 sq. ft.
Basement (12 in. dia. HVAC Wrapped Ductwork, 1 lin. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	1 lin. ft.

**Notes:**

Material Types

M = Miscellaneous building material  
 TSI = Thermal System Insulation  
 S = Surfacing Material

Abbreviations

lin. ft. = linear feet  
 sq. ft. = square feet

**Table 4 - Summary of All Asbestos Containing Materials, 2340 Leahy St., Muskegon Heights, Michigan**

<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Hallway & Closet	Brown & Tan Linoleum	No	55 sq. ft.
<b>Total</b>			<b>55 sq. ft.</b>
<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Living (1 register, 10 sq. ft.) Kitchen (1 register, 10 sq. ft.) Bathroom (1 register, 10 sq. ft.) NE Bedroom (1 register, 10 sq. ft.) NW Bedroom (1 register, 10 sq. ft.) 2 <sup>nd</sup> Fl. Kitchen/Dining Room (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) 2 <sup>nd</sup> Fl. Hallway (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)	HVAC Duct Wrap	Yes	120 sq. ft.
<b>Total</b>			<b>120 sq. ft.</b>
<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Basement (12 in. dia. HVAC Wrapped Ductwork, 1 lin. ft.)	HVAC Duct Wrap	Yes	1 lin. ft.
<b>Total</b>			<b>1 lin. ft.</b>
<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Kitchen (2 windows 28" wide x 46" tall)	Glazing	Yes	2 Windows
Kitchen (2 windows 24" wide x 30" tall)	Glazing	Yes	2 Windows
Kitchen (1 window 20" wide x 20" tall)	Glazing	Yes	1 Window
Dining Room (3 windows 24" wide x 58" tall)	Glazing	Yes	3 Windows
Living Room (1 windows 44" wide x 20" tall)	Glazing	Yes	1 Window
Living Room (3 windows 28" wide x 58" tall)	Glazing	Yes	3 Windows
NW Bedroom (2 windows 28" wide x 58" tall)	Glazing	Yes	2 Windows
Bathroom (1 window 24" wide x 46" tall)	Glazing	Yes	1 Window
NE Bedroom (2 windows 28" wide x 58" tall)	Glazing	Yes	2 Windows

**Table 4 - Summary of All Asbestos Containing Materials, 2340 Leahy St., Muskegon Heights, Michigan**

2 <sup>nd</sup> Fl. Kitchen/Dining (2 windows 28" wide x 58" tall)	Glazing	Yes	2 Windows
2 <sup>nd</sup> Fl. Living Room (2 windows 28" wide x 46" tall)	Glazing	Yes	2 Windows
2 <sup>nd</sup> Fl. Front Entry (1 window 24" wide x 54" tall)	Glazing	Yes	1 Window
2 <sup>nd</sup> Fl. Front Entry (1 window 28" wide x 58" tall)	Glazing	Yes	1 Window
2 <sup>nd</sup> Fl. Bathroom (1 window 28" wide x 46" tall)	Glazing	Yes	1 Window
2 <sup>nd</sup> Fl. S Bedroom (2 windows 28" wide x 46" tall)	Glazing	Yes	2 Windows
<b>Total</b>			<b>26 Windows</b>

**Notes:**

Abbreviations

lin. ft. = linear feet

sq. ft. = square feet

**Shaded/Bolded** = Friable ACM and any Category I and Category II non-friable ACM that has a high probability of becoming crumbled, pulverized, or reduced to powder by the demolition or renovation activities that must be properly abated prior to commencement of any demolition/renovation activities.

Demolition/renovation activities completed with intact Category I non-friable ACM are regulated by OSHA and must be completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note that a Negative Pressure Enclosure must be utilized during abatement when Site Conditions Warrant. Examples of these conditions include the abatement of Plaster and Vermiculite insulation, HVAC Duct Wrap in Poor Condition, and Air-O-Cell/Mag Pipe Wrap. Conditions outside of these should be assessed on a case by case basis during the Asbestos Abatement Contractors site walk and Work Plan Preparation.



P.O. Box 13216  
Lansing, MI 48901  
Phone: 888.449.4566  
Fax: 888.448.8739  
www.redcedarconsulting.net

May 8, 2017

Mr. Tim Burgess  
Muskegon County Land Bank  
Land Bank Coordinator  
173 E. Apple Avenue, Suite 104  
Muskegon, MI 49442

***RE: Asbestos Containing Material and Hazardous Materials Inspection  
2340 Riordan St., Muskegon Heights, MI 49444  
Parcel ID: 61-26-185-102-0014-00***

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 2340 Riordan St., Muskegon Heights, Michigan (Subject Property). This inspection was completed at the request of the Muskegon County Land Bank to comply with the United States Environmental Protection Agency (USEPA) requirements for demolition and renovation set forth under the National Emissions Standards for Hazardous Air Pollutants (NESHAP, 40 CFR Part 61). This inspection was also completed to comply with the Occupational Safety and Health Administration (OSHA) Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

### **SUBJECT PROPERTY**

The Subject Property is comprised of a .14 acre residential parcel which contains an approximate 720 square foot residential building (the Building) constructed in 1915. The Building was constructed on a concrete block basement with one aboveground floor. The exterior walls of the Building were finished with clapboard while the roof was sealed with asphalt shingles. The Building can be further divided into a front entry, living room, dining room, kitchen, bath, and two bedrooms.

### **VISUAL INSPECTION AND SAMPLING**

#### **Asbestos Containing Materials Inspection**

Aaron Paquet and Darrell DeMasters of Red Cedar Consulting (Red Cedar), accredited State Of Michigan/EPA Asbestos Building Inspectors (Accreditation Numbers A30955 and A31159, respectively) who completed training per the Michigan Asbestos Workers Accreditation Act 440, completed an inspection of the Subject Property on April 18, 2017 for suspected asbestos containing building materials.

This inspection, and subsequent sample collection was completed in accordance with the USEPA Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763) assessment and sampling protocol.

During the completion of the inspection, each area of the Subject Property was visually inspected for asbestos containing building materials (ACBM). Following the completion of the visual inspection, Red Cedar staff identified each suspect area of friable and non-friable ACBM and sorted them into one of three homogenous categories for sampling purposes. AHERA defines friable as a material that when dry, may be crumbled, pulverized, or reduced to powder by hand pressure. A homogenous area is defined by OSHA as an area of surfacing, thermal system insulation (TSI) or miscellaneous material that is uniform in color and texture. Surfacing materials are most commonly found in sprayed-on, troweled-on or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members. TSI refers to materials applied to pipes, fittings, boilers, ductwork, or other components to prevent heat loss or gain, or condensation. Any material that does not fall under the surfacing or TSI category, such as floor tile, drywall, and acoustical ceiling tile are placed into the miscellaneous materials category.

Following the completion of the visual inspection, Red Cedar staff identified the following materials as suspect ACBM:

- Roofing Materials
- Linoleum
- 12"x12" Vinyl Tile
- Drywall
- Glazing
- Plaster

Red Cedar staff collected twenty three samples of suspect ACBM separated into ten distinct homogenous groups for laboratory analysis. Samples were collected and submitted to APEX Research Inc. Laboratories (APEX) (Accreditation Number 102118-0) for laboratory analysis. Analysis was completed utilizing polarized light microscopy (PLM) which is the Environmental Protection Agency (EPA) approved method for analysis of bulk materials for asbestos. PLM analysis completed pursuant to method (EPA 600/M4-82-020) identifies asbestos fiber bundles by the visual properties displayed when the sample is treated with various dispersion staining liquids. The laboratory report completed following the sample analysis indicates if asbestos is present, and at what percentage along with a description and percentage of other fibrous and non-fibrous materials and sample color. Chain-of-custody documentation was followed from sample collection through shipping and receiving of the samples at the designated laboratory. The documentation assures that samples will meet the quality assurance/quality control measures defined by AHERA. The laboratory analytical report prepared by APEX for the twenty three samples is included as Attachment A.

### **Hazardous Materials Inspection**

On April 18, 2017 the Subject Property was also inspected for the presence of hazardous materials which include but are not limited to polychlorinated biphenyls (PCBs) and potential mercury containing equipment and any items or containers that may contain or be classified as a hazardous or regulated material. Each material, if identified, was documented along with the approximate location. Any materials identified as hazardous are included in Table 1.

## **INSPECTION RESULTS AND RECOMMENDATIONS**

During the completion of the asbestos inspection, twenty three samples of suspect ACM were collected and are documented in Table 2 along with the Red Cedar sample number, description, friability, material type, ACM classification, sample location, material quantity and laboratory analytical results.

ACM, as defined by the USEPA NESHAP is “any material containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763 Section 1, Polarized Light Microscopy”.

Friable ACM is defined by NESHAP as any material containing more than 1 percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Friable ACM is a concern due the ease of unintentionally disturbing the ACM which may result in “visible emissions” which is known as a Fiber Release Episode.

Non-friable asbestos-containing material is defined as “material containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACM’s are separated into Category I and Category II ACM. Category I ACM is any asbestos containing packing’s, gaskets, resilient floor coverings (vinyl floor tile and linoleum are examples of these) and asphalt roofing products. Category II ACM is stated by NESHAP as any material excluding Category I non-friable ACM such as drywall, plaster or fiberboard insulation.

### **Presumed Asbestos Containing Material**

Presumed Asbestos Containing Materials (PACM) are suspect surfacing, TSI and miscellaneous materials found in buildings constructed prior to 1980 which are classified as and due to the age of the structure, are assumed to be ACM and do not require sample collection and analysis. OSHA dictates that PACM may be “rebutted” following a complete inspection pursuant to AHERA protocol.

No PACM was identified during the completion of this inspection. All suspect materials identified were sampled and analyzed for ACM.

Table 3 lists the location, material description, friability, condition, material type (surfacing, thermal or miscellaneous) and approximate quantity of all PACM documented at the Subject Property.

Table 4 provides a summary all ACM documented at the Subject Property which includes the material location, description, and approximate quantity.

### **Friable ACM’s**

A window glazing sample collected from a window in the NE Bedroom was found to contain up to 10% asbestos following analysis. The assessment to quantify the extent of this material identified eleven windows at the following locations that would fall into the same homogenous group. The locations of the windows are listed below:

- Front Entry (1 window 24” wide x 47” tall)
- Kitchen (2 windows 28” wide x 47” tall)
- Living Room (3 windows 28” wide x 47” tall)

- NE Bedroom (1 window 28" wide x 47" tall)
- NW Bedroom (3 windows 28" wide x 47" tall)
- Bathroom (1 window 24" wide x 38" tall)

### **Category I ACM**

One type of resilient floor covering (Leaf Pattern Linoleum) located within the NW Bedroom was found to contain up to 5% Chrysotile asbestos. The assessment to quantify the extent of this material identified approximately 160 sq. ft. of this material within the Building.

### **Category II ACM**

No Category II non-friable ACM was identified during the completion of this inspection.

## **RECOMMENDATIONS**

### **Asbestos Containing Materials**

Friable asbestos containing window glazing was identified on eleven windows throughout the Building. The locations of these windows that should be abated prior to demolition/renovation activities are listed below:

- Front Entry (1 window 24" wide x 47" tall)
- Kitchen (2 windows 28" wide x 47" tall)
- Living Room (3 windows 28" wide x 47" tall)
- NE Bedroom (1 window 28" wide x 47" tall)
- NW Bedroom (3 windows 28" wide x 47" tall)
- Bathroom (1 window 24" wide x 38" tall)

Please note: Other different sized windows are located throughout the Building but these windows were assessed and found to be constructed either without window glazing or were sampled and found to not contain asbestos and therefore are not required to be removed.

The Category I resilient floor covering (Leaf Pattern Linoleum) is a non-friable ACM that may be left in place as long as the demolition/renovation activities are completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note: The location of samples obtained during this inspection were in a random fashion and areas that were not identified during this inspection may be damaged or have become damaged since the inspection was completed. If Category I or Category II friable materials are discovered prior to or during the demolition/renovation process, these materials must be abated prior to commencement of any demolition/renovation activities at the Subject Property.

## **Hazardous Materials**

Hazardous Materials identified at the Subject Property and documented in Table 1 which require proper removal and disposal consist of the following items:

- Automobile Tires (7)

## **REGULATORY REQUIREMENTS**

A Notification of Intent to Renovate/Demolish form must be filed with the Michigan Department of Environmental Quality- Air Quality Division at least 10 working days prior to any renovation or demolition activities at a site.

The Notification of Intent to Renovate/Demolish form must also be completed and submitted to the MIOSHA-Asbestos Program whenever demolition, encapsulation and/or renovation activities at a site involving greater than ten lineal feet and/or fifteen square feet of ACM will be completed.

Regulated asbestos containing materials per NESHAP (40 CFR Part 61) which falls into any of the following categories are ACM's that must be removed prior to any renovation/demolition activities at the Subject Property.

- Friable asbestos material.
- Category I non-friable ACM that has become friable.
- Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading.
- Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations.

Asbestos abatement should only be performed by a certified asbestos abatement contractor licensed to complete abatement work. The contractor must also follow the standards and requirements set forth per the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61).

Additional information regarding the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61) can be obtained by contacting the associated agency below.

NESHAP Asbestos Program  
Department of Environmental Quality  
Phone: 517-284-6777

MIOSHA-CSHD-Asbestos Program  
State of Michigan  
Phone: 517-284-7680  
Email: asbestos@michigan.gov



Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-26-185-102-0014-00

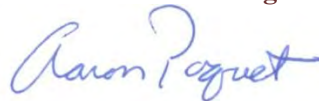
**DISCLAIMER**

Red Cedar Consulting performed destructive testing methods in an attempt to access and inspect all areas of the Building. Unfortunately, due to the age of construction along with multiple additions/renovations that may have been completed on the Building, additional inspections may be required if suspect ACM material not documented within this report is encountered during renovation/demolition activities.

This report was prepared at the request and for exclusive use by the Muskegon County Land Bank and may not be reproduced or sold without written permission from Red Cedar Consulting.

We appreciate the opportunity to provide the requested services. Please contact us at (888) 449-4566 with any questions or concerns.

Sincerely,  
**Red Cedar Consulting**



Aaron Paquet  
Michigan/EPA Certified Asbestos Building Inspector  
(A30955)

Red Cedar Consulting

***Attachment 1***  
***APEX Research Laboratory Analytical Results***



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 2340 Riordan St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69678  
Date Collected: 04/18/17  
Date Received: 04/19/17  
Date Analyzed: 04/20/17  
Date Reported: 04/25/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69678 - 01 Cust. #: RS-HM-01A Material: Roofing Materials Location: Appearance: black, fibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 30% Other - 70%
Lab ID #: 69678 - 01a Cust. #: RS-HM-01A Material: Red Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69678 - 01b Cust. #: RS-HM-01A Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 60% Other - 40%

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: 2340 Riordan St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69678  
Date Collected: 04/18/17  
Date Received: 04/19/17  
Date Analyzed: 04/20/17  
Date Reported: 04/25/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69678 - 02 Cust. #: RS-HM-01B Material: Roofing Materials Location: Appearance: black, fibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 30% Other - 70%
Lab ID #: 69678 - 02a Cust. #: RS-HM-01B Material: Red Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69678 - 02b Cust. #: RS-HM-01B Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 60% Other - 40%

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: 2340 Riordan St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69678  
Date Collected: 04/18/17  
Date Received: 04/19/17  
Date Analyzed: 04/20/17  
Date Reported: 04/25/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69678 - 03 Cust. #: RS-HM-02A Material: Tan Square Linoleum Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69678 - 03a Cust. #: RS-HM-02A Material: Glue Location: Appearance: yellow, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69678 - 04 Cust. #: RS-HM-02B Material: Tan Square Linoleum Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> 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: 2340 Riordan St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69678  
Date Collected: 04/18/17  
Date Received: 04/19/17  
Date Analyzed: 04/20/17  
Date Reported: 04/25/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69678 - 04a Cust. #: RS-HM-02B Material: Glue Location: Appearance: yellow, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 69678 - 05 Cust. #: RS-HM-03A Material: Blue Linoleum Location: Appearance: blue, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 69678 - 06 Cust. #: RS-HM-03B Material: Blue Linoleum Location: Appearance: blue, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> 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: 2340 Riordan St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69678  
Date Collected: 04/18/17  
Date Received: 04/19/17  
Date Analyzed: 04/20/17  
Date Reported: 04/25/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69678 - 07 Cust. #: RS-HM-04A Material: 12x12 Layered VFT Location: Appearance: brown,nonfibrous,homogenous Layer: 1 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69678 - 07a Cust. #: RS-HM-04A Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69678 - 07b Cust. #: RS-HM-04A Material: Beige Floor Tile Location: Appearance: beige,nonfibrous,homogenous Layer: 3 of 4	Asbestos Present: <b>NO</b> 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.



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Date Analyzed: 04/20/17  
Date Reported: 04/25/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69678 - 07c Cust. #: RS-HM-04A Material: Mastic Location: Appearance: black,nonfibrous,homogenous Layer: 4 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 69678 - 08 Cust. #: RS-HM-04B Material: 12x12 Layered VFT Location: Appearance: brown,nonfibrous,homogenous Layer: 1 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69678 - 08a Cust. #: RS-HM-04B Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Date Analyzed: 04/20/17  
Date Reported: 04/25/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69678 - 08b Cust. #: RS-HM-04B Material: Beige Floor Tile Location: Appearance: beige, nonfibrous, homogenous Layer: 3 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69678 - 08c Cust. #: RS-HM-04B Material: Mastic Location: Appearance: black, nonfibrous, homogenous Layer: 4 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 69678 - 09 Cust. #: RS-HM-05A Material: Black/Gold Linoleum Location: Appearance: black, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%

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

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Date Reported: 04/25/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69678 - 10 Cust. #: RS-HM-05B Material: Black/Gold Linoleum Location: Appearance: black, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69678 - 11 Cust. #: RS-HM-06A Material: Leaf Pattern Linoleum/Floor Tile Location: Appearance: black, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>YES</b> Chrysotile - 1.5%  <b>POINT COUNT RESULT</b>	Other - 98.50%
Lab ID #: 69678 - 11a Cust. #: RS-HM-06A Material: Mastic Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>YES</b> Chrysotile - 5%	Other - 95%

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Date Analyzed: 04/20/17  
Date Reported: 04/25/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69678 - 12 Cust. #: RS-HM-06B Material: Leaf Pattern Linoleum/Mastic Location: Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69678 - 13 Cust. #: RS-HM-07A Material: 12x12 Tan VFT/Sheet Flooring Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 69678 - 14 Cust. #: RS-HM-07B Material: 12x12 Tan VFT/Sheet Flooring Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 50% Other - 50%

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ARI Report # 17-69678  
Date Collected: 04/18/17  
Date Received: 04/19/17  
Date Analyzed: 04/20/17  
Date Reported: 04/25/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69678 - 15 Cust. #: RS-HM-08A Material: Window Glazing Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 10%	Other - 90%
Lab ID #: 69678 - 16 Cust. #: RS-HM-08B Material: Window Glazing Location: Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69678 - 17 Cust. #: RS-HM-09A Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%

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

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ARI Report # 17-69678  
Date Collected: 04/18/17  
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Date Analyzed: 04/20/17  
Date Reported: 04/25/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69678 - 18 Cust. #: RS-HM-09B Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69678 - 19 Cust. #: RS-HS-01A Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69678 - 19a Cust. #: RS-HS-01A Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Hair - 2% Other - 97%

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

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Date Analyzed: 04/20/17  
Date Reported: 04/25/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69678 - 20 Cust. #: RS-HS-01B Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69678 - 20a Cust. #: RS-HS-01B Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Hair - 1% Other - 98%
Lab ID #: 69678 - 21 Cust. #: RS-HS-01C Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Date Received: 04/19/17  
Date Analyzed: 04/20/17  
Date Reported: 04/25/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69678 - 21a Cust. #: RS-HS-01C Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Hair - 2% Other - 96%
Lab ID #: 69678 - 22 Cust. #: RS-HS-01D Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69678 - 22a Cust. #: RS-HS-01D Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Hair - 2% Other - 97%

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ARI Report # 17-69678  
Date Collected: 04/18/17  
Date Received: 04/19/17  
Date Analyzed: 04/20/17  
Date Reported: 04/25/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69678 - 23 Cust. #: RS-HS-01E Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69678 - 23a Cust. #: RS-HS-01E Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Hair - 2% Other - 96%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

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# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990



E-mail: apexresearch@chartermi.net Fax: 734-449-9991

Client Name: Red Cedar Consulting

Address: PO Box 13216  
Lansing, MI 48901

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-18-17

Project: 2340 Rindland St

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: 5 day  TTP All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
 Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
 Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BioSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
 TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	RS-HM-014	Roofing Materials			
2	RS-HM-01B	..			
3	RS-HM-02A	Truss Space Spindle			
4	RS-HM-02B	..			
5	RS-HM-03A	Blue Spindle			
6	RS-HM-03B	..			
7	RS-HM-04A	2x12 Staged VFT			
8	RS-HM-04B	..			
9	RS-HM-05A	Black + Red Spindle			
10	RS-HM-05B	..			
11	RS-HM-06A	Red Spindle			

RECEIVED  
APR 19 2017

Relinquished by: *[Signature]* Received by: *[Signature]*

Date: 4-18-17 Date: 4-18-17

Relinquished by: \_\_\_\_\_

Date: \_\_\_\_\_

Received by: *[Signature]*

Date: APR 19 2017

69678

243

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

E-mail: apexresearch@chartermi.net Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-18-17

Project: 2340 Bridle

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: Skry



Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_

Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_

Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BioSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_

TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	RS-441-06B	Red Bottom Sidelum			
13	RS-441-07A	12x12 tile VET			
14	RS-441-07B	" "			
15	RS-441-08A	Window Siding			
16	RS-441-08B	" "			
17	RS-441-09A	Shingles (gypsum compound)			
18	RS-441-09B	" "			
19	RS-445-01A	Plaster			
20	RS-445-01B				
21	RS-445-01C				
22	RS-445-01D				

Relinquished by: [Signature] Date: 4-18-17

Received by: [Signature] Date: 4-18-17

Received by: [Signature] Date: APR 19 2017

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343

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Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log-in \_\_\_\_\_  
Report \_\_\_\_\_

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Rush 24 hour

48 hour 72 hour

Other: Sdey All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_

Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_

Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BIOSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_

TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
23	RS-HS-01E	Plaster			

Relinquished by: [Signature] Received by: US

Date: 4-18-17 Date: 4-18-17

Relinquished by: \_\_\_\_\_

Date: \_\_\_\_\_

Received by: [Signature]

Date: APR 19 2017

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***Tables***

**Table 1 - Summary of Hazardous Materials, 2340 Riordan St., Muskegon Heights, Michigan**

<b>Hazardous Materials Description and Location</b>		
<b>Location</b>	<b>Material Description</b>	<b>Quantity</b>
Exterior	Automobile Tires	7

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2340 Riordan St., Muskegon Heights, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
RS-HM-01A	Roofing Materials	No	M	Category I	ND/ND/ND	Exterior	NA
RS-HM-01B	Roofing Materials	No	M	Category I	ND/ND/ND	Exterior	NA
RS-HM-02A	Tan Square Linoleum	No	M	Category I	ND/ND	Front Entry	NA
RS-HM-02B	Tan Square Linoleum	No	M	Category I	ND/ND	Front Entry	NA
RS-HM-03A	Blue Linoleum	No	M	Category I	ND	Living Room	NA
RS-HM-03B	Blue Linoleum	No	M	Category I	ND	Living Room	NA
RS-HM-04A	12x12 Layered Vinyl Floor Tile	No	M	Category I	ND/ND/ND/ND	Kitchen	NA
RS-HM-04B	12x12 Layered Vinyl Floor Tile	No	M	Category I	ND/ND/ND/ND	Kitchen	NA
RS-HM-05A	Black & Gold Linoleum	No	M	Category I	ND	Bathroom	NA
RS-HM-05B	Black & Gold Linoleum	No	M	Category I	ND	Bathroom	NA
RS-HM-06A	Leaf Pattern Linoleum	No	M	Category I	1.5CH/5%CH	NW Bedroom	160 sq. ft.
RS-HM-06B	Leaf Pattern Linoleum	No	M	Category I	NA	NW Bedroom	NA
RS-HM-07A	12x12 Vinyl Floor Tile	No	M	Category I	ND	N Bedroom	NA
RS-HM-07B	12x12 Vinyl Floor Tile	No	M	Category I	ND	N Bedroom	NA
RS-HM-08A	Glazing	Yes	M	Category II	10%CH	NE Bedroom	11 Windows
RS-HM-08B	Glazing	Yes	M	Category II	NA	NW Bedroom	NA
RS-HM-09A	Drywall (No Joint Compound)	No	M	Category II	ND	Front Entry Wall	NA
RS-HM-09B	Drywall (No Joint Compound)	No	M	Category II	ND	Kitchen Wall	NA
RS-HS-01A	Plaster	No	S	Category II	ND/ND	Living Room Ceiling	NA
RS-HS-01B	Plaster	No	S	Category II	ND/ND	Bathroom Ceiling	NA
RS-HS-01C	Plaster	No	S	Category II	ND/ND	Kitchen Wall	NA
RS-HS-01D	Plaster	No	S	Category II	ND/ND	Living Room Wall	NA
RS-HS-01E	Plaster	No	S	Category II	ND/ND	NW Bedroom Wall	NA

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2340 Riordan St., Muskegon Heights, Michigan**

**Notes:**

Material Types

M = Miscellaneous building material  
TSI = Thermal System Insulation  
S = Surfacing Material  
PC = Point Count Analysis  
CH = Chrysotile Asbestos

Abbreviations

NQ = Not quantified  
NA = Not applicable  
ND = Not detected. Laboratory result is less than 1 % asbestos  
lin. ft. = linear feet  
sq. ft. = square feet

Asbestos Containing Material (ACM) is defined as any material containing more than 1 percent asbestos as determined utilizing Polarized Light Microscopy.

**Table 3 - Summary of Presumed Asbestos Containing Materials, 2340 Riordan St., Muskegon Heights, Michigan**

<b>Asbestos Containing Material Description and Location</b>					
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Condition</b>	<b>Material Type</b>	<b>Approx. Quantity</b>
No Presumed Asbestos Containing Materials Identified					

**Notes:**

Material Types

- M = Miscellaneous building material
- TSI = Thermal System Insulation
- S = Surfacing Material

Abbreviations

- lin. ft. = linear feet
- sq. ft. = square feet



**Table 4 - Summary of All Asbestos Containing Materials, 2340 Riordan St., Muskegon Heights, Michigan**

<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
NW Bedroom	Leaf Pattern Linoleum	No	160 sq. ft.
<b>Total</b>			<b>160 sq. ft.</b>
<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Front Entry (1 window 24" wide x 47" tall)	Glazing	Yes	1 Window
Kitchen (2 windows 28" wide x 47" tall)	Glazing	Yes	2 Windows
Living Room (3 windows 28" wide x 47" tall)	Glazing	Yes	3 Windows
NE Bedroom (1 window 28" wide x 47" tall)	Glazing	Yes	1 Window
NW Bedroom (3 windows 28" wide x 47" tall)	Glazing	Yes	3 Windows
Bathroom (1 window 24" wide x 38" tall)	Glazing	Yes	1 Window
<b>Total</b>			<b>11 Windows</b>

**Notes:**

Abbreviations

lin. ft. = linear feet  
 sq. ft. = square feet

**Shaded/Bolded** = Friable ACM and any Category I and Category II non-friable ACM that has a high probability of becoming crumbled, pulverized, or reduced to powder by the demolition or renovation activities that must be properly abated prior to commencement of any demolition/renovation activities.

Demolition/renovation activities completed with intact Category I non-friable ACM are regulated by OSHA and must be completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note that a Negative Pressure Enclosure must be utilized during abatement when Site Conditions Warrant. Examples of these conditions include the abatement of Plaster and Vermiculite insulation, HVAC Duct Wrap in Poor Condition, and Air-O-Cell/Mag Pipe Wrap. Conditions outside of these should be assessed on a case by case basis during the Asbestos Abatement Contractors site walk and Work Plan Preparation.



P.O. Box 13216  
Lansing, MI 48901  
Phone: 888.449.4566  
Fax: 888.448.8739  
www.redcedarconsulting.net

May 12, 2017

Mr. Tim Burgess  
Muskegon County Land Bank  
Land Bank Coordinator  
173 E. Apple Avenue, Suite 104  
Muskegon, MI 49442

**RE: *Asbestos Containing Material and Hazardous Materials Inspection***  
***2341 Reynolds St., Muskegon Heights, MI 49444***  
***Parcel ID: 61-26-185-099-0011-00***

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 2341 Reynolds St., Muskegon Heights, Michigan (Subject Property). This inspection was completed at the request of the Muskegon County Land Bank to comply with the United States Environmental Protection Agency (USEPA) requirements for demolition and renovation set forth under the National Emissions Standards for Hazardous Air Pollutants (NESHAP, 40 CFR Part 61). This inspection was also completed to comply with the Occupational Safety and Health Administration (OSHA) Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

### **SUBJECT PROPERTY**

The Subject Property is comprised of a .14 acre residential parcel which contains a 264 sq. ft. detached garage and approximate 752 square foot residential building (the Building) constructed in 1915. The Building was constructed on a concrete foundation with one aboveground floor. The exterior walls of the Building were finished with aluminum lap over wood lap which was over lathe and plaster while the roof was sealed with asphalt shingles. The Building can be further divided into a front entry, living room/dining room, kitchen, bath, two bedrooms, hallway and pantry on the first floor.

### **VISUAL INSPECTION AND SAMPLING**

#### **Asbestos Containing Materials Inspection**

Aaron Paquet and Darrell DeMasters of Red Cedar Consulting (Red Cedar), accredited State Of Michigan/EPA Asbestos Building Inspectors (Accreditation Numbers A30955 and A31159, respectively) who completed training per the Michigan Asbestos Workers Accreditation Act 440, completed an inspection of the Subject Property on May 4, 2017 for suspected asbestos containing building materials.

This inspection, and subsequent sample collection was completed in accordance with the USEPA Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763) assessment and sampling protocol.

During the completion of the inspection, each area of the Subject Property was visually inspected for asbestos containing building materials (ACBM). Following the completion of the visual inspection, Red Cedar staff identified each suspect area of friable and non-friable ACBM and sorted them into one of three homogenous categories for sampling purposes. AHERA defines friable as a material that when dry, may be crumbled, pulverized, or reduced to powder by hand pressure. A homogenous area is defined by OSHA as an area of surfacing, thermal system insulation (TSI) or miscellaneous material that is uniform in color and texture. Surfacing materials are most commonly found in sprayed-on, troweled-on or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members. TSI refers to materials applied to pipes, fittings, boilers, ductwork, or other components to prevent heat loss or gain, or condensation. Any material that does not fall under the surfacing or TSI category, such as floor tile, drywall, and acoustical ceiling tile are placed into the miscellaneous materials category.

Following the completion of the visual inspection, Red Cedar staff identified the following materials as suspect ACBM:

- Asphalt Shingle
- Linoleum
- 1'x1' Ceiling Tile
- 12"x12" Vinyl Tile
- Drywall & Joint Compound
- Glazing
- Plaster

Red Cedar staff collected thirty two samples of suspect ACBM separated into thirteen distinct homogenous groups for laboratory analysis. Samples were collected and submitted to APEX Research Inc. Laboratories (APEX) (Accreditation Number 102118-0) for laboratory analysis. Analysis was completed utilizing polarized light microscopy (PLM) which is the Environmental Protection Agency (EPA) approved method for analysis of bulk materials for asbestos. PLM analysis completed pursuant to method (EPA 600/M4-82-020) identifies asbestos fiber bundles by the visual properties displayed when the sample is treated with various dispersion staining liquids. The laboratory report completed following the sample analysis indicates if asbestos is present, and at what percentage along with a description and percentage of other fibrous and non-fibrous materials and sample color. Chain-of-custody documentation was followed from sample collection through shipping and receiving of the samples at the designated laboratory. The documentation assures that samples will meet the quality assurance/quality control measures defined by AHERA. The laboratory analytical report prepared by APEX for the thirty two samples is included as Attachment A.

## **Hazardous Materials Inspection**

On May 4, 2017 the Subject Property was also inspected for the presence of hazardous materials which include but are not limited to polychlorinated biphenyls (PCBs) and potential mercury containing equipment and any items or containers that may contain or be classified as a hazardous or regulated material. Each material, if identified, was documented along with the approximate location. Any materials identified as hazardous are included in Table 1.

## **INSPECTION RESULTS AND RECOMMENDATIONS**

During the completion of the asbestos inspection, thirty two samples of suspect ACM were collected and are documented in Table 2 along with the Red Cedar sample number, description, friability, material type, ACM classification, sample location, material quantity and laboratory analytical results.

ACM, as defined by the USEPA NESHAP is “any material containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763 Section 1, Polarized Light Microscopy”.

Friable ACM is defined by NESHAP as any material containing more than 1 percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Friable ACM is a concern due the ease of unintentionally disturbing the ACM which may result in “visible emissions” which is known as a Fiber Release Episode.

Non-friable asbestos-containing material is defined as “material containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACM’s are separated into Category I and Category II ACM. Category I ACM is any asbestos containing packing’s, gaskets, resilient floor coverings (vinyl floor tile and linoleum are examples of these) and asphalt roofing products. Category II ACM is stated by NESHAP as any material excluding Category I non-friable ACM such as drywall, plaster or fiberboard insulation.

### **Presumed Asbestos Containing Material**

Presumed Asbestos Containing Materials (PACM) are suspect surfacing, TSI and miscellaneous materials found in buildings constructed prior to 1980 which are classified as and due to the age of the structure, are assumed to be ACM and do not require sample collection and analysis. OSHA dictates that PACM may be “rebutted” following a complete inspection pursuant to AHERA protocol.

Vermiculite insulation was identified during the completion of this inspection and was classified as PACM due to the age of the structure and samples were not collected.

Table 3 lists the location, material description, friability, condition, material type (surfacing, thermal or miscellaneous) and approximate quantity of all PACM documented at the Subject Property.

Table 4 provides a summary all ACM documented at the Subject Property which includes the material location, description, and approximate quantity.

### **Friable ACM's**

Vermiculite insulation identified in the Building is classified as friable ACM. The visual assessment to quantify the extent of this material identified approximately 484 sq. ft. at a depth of 4" within the Building's attic.

### **Category I ACM**

No Category I ACM was identified during the completion of this inspection.

### **Category II ACM**

No Category II non-friable ACM was identified during the completion of this inspection.

## **RECOMMENDATIONS**

### **Asbestos Containing Materials**

Vermiculite insulation identified in the Building attic is classified as friable ACM and should be removed prior to any renovation/demolition activities.

Please note: The location of samples obtained during this inspection were in a random fashion and areas that were not identified during this inspection may be damaged or have become damaged since the inspection was completed. If Category I or Category II friable materials are discovered prior to or during the demolition/renovation process, these materials must be abated prior to commencement of any demolition/renovation activities at the Subject Property.

### **Hazardous Materials**

Hazardous Materials identified at the Subject Property and documented in Table 1 which require proper removal and disposal consist of the following items:

- Automobile Tires (4)
- Gallon Container Misc. Paint (4)
- 2' Fluorescent Light (Fixture and Ballast Only) (1)
- 2' Fluorescent Bulb (1)

## **REGULATORY REQUIREMENTS**

A Notification of Intent to Renovate/Demolish form must be filed with the Michigan Department of Environmental Quality- Air Quality Division at least 10 working days prior to any renovation or demolition activities at a site.

The Notification of Intent to Renovate/Demolish form must also be completed and submitted to the MIOSHA-Asbestos Program whenever demolition, encapsulation and/or renovation activities at a site involving greater than ten lineal feet and/or fifteen square feet of ACM will be completed.

Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-26-185-099-0011-00

Regulated asbestos containing materials per NESHAP (40 CFR Part 61) which falls into any of the following categories are ACM's that must be removed prior to any renovation/demolition activities at the Subject Property.

- Friable asbestos material.
- Category I non-friable ACM that has become friable.
- Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading.
- Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations.

Asbestos abatement should only be performed by a certified asbestos abatement contractor licensed to complete abatement work. The contractor must also follow the standards and requirements set forth per the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61).

Additional information regarding the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61) can be obtained by contacting the associated agency below.

NESHAP Asbestos Program  
Department of Environmental Quality  
Phone: 517-284-6777

MIOSHA-CSHD-Asbestos Program  
State of Michigan  
Phone: 517-284-7680  
Email: [asbestos@michigan.gov](mailto:asbestos@michigan.gov)

Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-26-185-099-0011-00

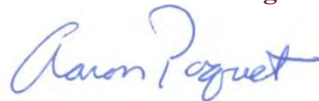
**DISCLAIMER**

Red Cedar Consulting performed destructive testing methods in an attempt to access and inspect all areas of the Building. Unfortunately, due to the age of construction along with multiple additions/renovations that may have been completed on the Building, additional inspections may be required if suspect ACM material not documented within this report is encountered during renovation/demolition activities.

This report was prepared at the request and for exclusive use by the Muskegon County Land Bank and may not be reproduced or sold without written permission from Red Cedar Consulting.

We appreciate the opportunity to provide the requested services. Please contact us at (888) 449-4566 with any questions or concerns.

Sincerely,  
**Red Cedar Consulting**



Aaron Paquet  
Michigan/EPA Certified Asbestos Building Inspector  
(A30955)

Red Cedar Consulting

***Attachment 1***  
***APEX Research Laboratory Analytical Results***





# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 2341 Reynolds St.

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69940  
Date Collected: 05/04/17  
Date Received: 05/05/17  
Date Analyzed: 05/08/17  
Date Reported: 05/11/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69940 - 01 Cust. #: RS-HM-01A Material: Green Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69940 - 01a Cust. #: RS-HM-01A Material: Felt Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 69940 - 02 Cust. #: RS-HM-01B Material: Green Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%

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



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Date Reported: 05/11/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69940 - 02a Cust. #: RS-HM-01B Material: Felt Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 69940 - 03 Cust. #: RS-HM-02A Material: Grey Shingle Location: Appearance: green, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69940 - 03a Cust. #: RS-HM-02A Material: Brown Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%

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Robert T. Letarte Jr., Laboratory Director

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Date Analyzed: 05/08/17  
Date Reported: 05/11/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69940 - 04 Cust. #: RS-HM-02B Material: Grey Shingle Location: Appearance: green, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69940 - 04a Cust. #: RS-HM-02B Material: Brown Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69940 - 05 Cust. #: RS-HM-03A Material: Beige 12x12 VFT Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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Date Collected: 05/04/17  
Date Received: 05/05/17  
Date Analyzed: 05/08/17  
Date Reported: 05/11/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69940 - 05a Cust. #: RS-HM-03A Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69940 - 06 Cust. #: RS-HM-03B Material: Beige 12x12 VFT Location: Appearance: beige,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69940 - 06a Cust. #: RS-HM-03B Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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ARI Report # 17-69940  
Date Collected: 05/04/17  
Date Received: 05/05/17  
Date Analyzed: 05/08/17  
Date Reported: 05/11/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69940 - 07 Cust. #: RS-HM-04A Material: White 12x12 VFT Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69940 - 07a Cust. #: RS-HM-04A Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69940 - 08 Cust. #: RS-HM-04B Material: White 12x12 VFT Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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ARI Report # 17-69940  
Date Collected: 05/04/17  
Date Received: 05/05/17  
Date Analyzed: 05/08/17  
Date Reported: 05/11/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69940 - 08a Cust. #: RS-HM-04B Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69940 - 09 Cust. #: RS-HM-05A Material: Slate 12x12 VFT Location: Appearance: grey,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69940 - 09a Cust. #: RS-HM-05A Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Date Reported: 05/11/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69940 - 10 Cust. #: RS-HM-05B Material: Slate 12x12 VFT Location: Appearance: grey,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69940 - 10a Cust. #: RS-HM-05B Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69940 - 11 Cust. #: RS-HM-05B Material: Beige Mottled 12x12 VFT Location: Appearance: beige,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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ARI Report # 17-69940  
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Date Received: 05/05/17  
Date Analyzed: 05/08/17  
Date Reported: 05/11/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69940 - 11a Cust. #: RS-HM-06B Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69940 - 12 Cust. #: RS-HM-06B Material: Beige Mottled 12x12 VFT Location: Appearance: beige,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69940 - 12a Cust. #: RS-HM-06B Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> 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.



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Date Reported: 05/11/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69940 - 13 Cust. #: RS-HM-07A Material: White 1x1 Ceiling Tile Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 69940 - 14 Cust. #: RS-HM-07B Material: White 1x1 Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 69940 - 15 Cust. #: RS-HM-08A Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> 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: 2341 Reynolds St.

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69940  
Date Collected: 05/04/17  
Date Received: 05/05/17  
Date Analyzed: 05/08/17  
Date Reported: 05/11/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69940 - 15a Cust. #: RS-HM-08A Material: Joint Compound Location: Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> Chrysotile - 0.50%  POINT COUNT RESULT	Other - 99.50%
Lab ID #: 69940 - 16 Cust. #: RS-HM-08B Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69940 - 16a Cust. #: RS-HM-08B Material: Joint Compound Location: Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> Chrysotile - 0.50%  POINT COUNT RESULT	Other - 99.50%

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

Robert T. Letarte Jr., Laboratory Director

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Project: 2341 Reynolds St.

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P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69940  
Date Collected: 05/04/17  
Date Received: 05/05/17  
Date Analyzed: 05/08/17  
Date Reported: 05/11/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69940 - 17 Cust. #: RS-HM-09A Material: Glazing Location: Appearance: beige,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> Chrysotile - 0.25%  POINT COUNT RESULT	Other - 99.75%
Lab ID #: 69940 - 18 Cust. #: RS-HM-09B Material: Glazing Location: Appearance: beige,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> Chrysotile - Trace  POINT COUNT RESULT	Other - 100%
Lab ID #: 69940 - 19 Cust. #: RS-HM-10A Material: Glazing Location: Appearance: beige,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> Chrysotile - 0.50%  POINT COUNT RESULT	Other - 99.50%

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

Robert T. Letarte Jr., Laboratory Director

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Lansing, MI 48901

ARI Report # 17-69940  
Date Collected: 05/04/17  
Date Received: 05/05/17  
Date Analyzed: 05/08/17  
Date Reported: 05/11/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69940 - 20 Cust. #: RS-HM-10B Material: Glazing Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> Chrysotile - 0.25%  POINT COUNT RESULT	Other - 99.75%
Lab ID #: 69940 - 21 Cust. #: RS-HS-01A Material: Plaster Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: 69940 - 22 Cust. #: RS-HS-01B Material: Plaster Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 2% Other - 98%

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

Robert T. Letarte Jr., Laboratory Director

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Lansing, MI 48901

ARI Report # 17-69940  
Date Collected: 05/04/17  
Date Received: 05/05/17  
Date Analyzed: 05/08/17  
Date Reported: 05/11/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69940 - 23 Cust. #: RS-HS-01C Material: Plaster Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: 69940 - 24 Cust. #: RS-HS-01D Material: Plaster Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 5% Other - 95%
Lab ID #: 69940 - 25 Cust. #: RS-HS-01E Material: Plaster Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 2% Other - 98%

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

Robert T. Letarte Jr., Laboratory Director

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Lansing, MI 48901

ARI Report # 17-69940  
Date Collected: 05/04/17  
Date Received: 05/05/17  
Date Analyzed: 05/08/17  
Date Reported: 05/11/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69940 - 26 Cust. #: RS-HS-02A Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69940 - 26a Cust. #: RS-HS-02A Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: 69940 - 27 Cust. #: RS-HS-02B Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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ARI Report # 17-69940  
Date Collected: 05/04/17  
Date Received: 05/05/17  
Date Analyzed: 05/08/17  
Date Reported: 05/11/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69940 - 27a Cust. #: RS-HS-02B Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: 69940 - 28 Cust. #: RS-HS-02C Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69940 - 28a Cust. #: RS-HS-02C Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 2% Other - 98%

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Project: 2341 Reynolds St.

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Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69940  
Date Collected: 05/04/17  
Date Received: 05/05/17  
Date Analyzed: 05/08/17  
Date Reported: 05/11/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69940 - 29 Cust. #: RS-HS-02D Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69940 - 29a Cust. #: RS-HS-02D Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 5% Other - 95%
Lab ID #: 69940 - 30 Cust. #: RS-HS-02E Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Robert T. Letarte Jr., Laboratory Director

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Lansing, MI 48901

ARI Report # 17-69940  
Date Collected: 05/04/17  
Date Received: 05/05/17  
Date Analyzed: 05/08/17  
Date Reported: 05/11/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69940 - 30a Cust. #: RS-HS-02E Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 5% Other - 95%
Lab ID #: 69940 - 31 Cust. #: RS-HM-11A Material: White 1x1 Pinhole Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 69940 - 32 Cust. #: RS-HM-11B Material: White 1x1 Pinhole Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%

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Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0

69940

PJ 143

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189  
E-mail: apexresearch@chartermi.net  
Phone: 734-449-9990  
Fax: 734-449-9991



Client Name: Red Cedar Consulting

Date of Survey: 5-4-17

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

Address: PO Box 13216

Project: 2341 Reynolds ST.

City, St., Zip: Lansing, MI 48901

Project #:

Phone: (888) 449-4566 Fax: (888) 448-8739

Contact Person: Aaron Paquet

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM.  
apaquet@redcedarconsulting.net

Rush 24 hour

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_

48 hour 72 hour

Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_

Other: 5 Day All Samples

Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ Biosis \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_

TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	RS-HM-01A	Grey Shingle			
2	RS-HM-01B	" "			
3	RS-HM-02A	Grey Shingle			
4	RS-HM-02B	" "			
5	RS-HM-03A	Beige 12x12 VFT			
6	RS-HM-03B	" "			
7	RS-HM-04A	White 12x12 VFT			
8	RS-HM-04B	" "			
9	RS-HM-05A	Slate 12x12 VFT			
10	RS-HM-05B	" "			
11	RS-HM-06A	Beige Weathered 12x12 VFT			

Relinquished by: [Signature]  
Date: 5-4-17

Received by: [Signature]  
Date: 5-4-17

Relinquished by: \_\_\_\_\_  
Date: \_\_\_\_\_

Received by: [Signature]  
Date: MAY 05 2017

6994D

25 2 of 3

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189  
Phone: 734-449-9990  
E-mail: apexresearch@chartermi.net  
Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216  
Lansing, MI 48901

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 5-4-17

Project: 2341 Reynolds St.

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

Turn Around Times: (Circle One) PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: 5 Day All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ Biosis \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	RS-HM-06B	Beige Matting 12x12 JFT			
13	RS-HM-07A	White Lvl CT			
14	RS-HM-07B	" "			
15	RS-HM-08A	Drywall & Compound			
16	RS-HM-08B	" "			
17	RS-HM-09A	Clazing			
18	RS-HM-09B	" "			
19	RS-HM-10A	" "			
20	RS-HM-10B	" "			
21	RS-HS-01A	Plaster			
22	RS-HS-01B	" "			

Relinquished by: Date: 5-4-17

Received by: UPS Date: 5-4-17

Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_

Received by: Date: MAY 06 2017

69940

pg 3 of 3

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990



E-mail: apexresearch@charternet.net Fax: 734-449-9991

Client Name: Red Cedar Consulting

Address: PO Box 13216 Lansing, MI 48901

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 5-4-17

Project: 2341 Reynolds St.

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

**Turn Around Times:** (Circle One) P1M EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: 5 Day All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ Biosis \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
23	RS-HS-01C	Plaster			
24	RS-HS-01D				
25	RS-HS-01E				
26	RS-HS-02A				
27	RS-HS-02B				
28	RS-HS-02C				
29	RS-HS-02D				
30	RS-HS-02E				
31	RS-HS-11A	white 1x1 Pinhole CT			
32	RS-HS-11B	1c			

Relinquished by: [Signature] Date: 5-4-17

Received by: [Signature] Date: 5-4-17

Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_

Received by: [Signature] Date: MAY 4 5 2017

***Tables***

**Table 1 - Summary of Hazardous Materials, 2341 Reynolds St., Muskegon Heights, Michigan**

<b>Hazardous Materials Description and Location</b>		
<b>Location</b>	<b>Material Description</b>	<b>Quantity</b>
Exterior	Automobile Tires	4
Living Room	Gallon Container Misc. Paint	4
Kitchen	2' Fluorescent Light (Fixture and Ballast Only)	1
Kitchen	2' Fluorescent Bulb	1

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2341 Reynolds St., Muskegon Heights, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
RS-HM-01A	Green Shingle	No	M	Category I	ND/ND	Exterior	NA
RS-HM-01B	Green Shingle	No	M	Category I	ND/ND	Exterior	NA
RS-HM-02A	Gray Shingle	No	M	Category I	ND/ND	Exterior	NA
RS-HM-02B	Gray Shingle	No	M	Category I	ND/ND	Exterior	NA
RS-HM-03A	Beige 12x12 Vinyl Tile	No	M	Category I	ND/ND	Front Entry	NA
RS-HM-03B	Beige 12x12 Vinyl Tile	No	M	Category I	ND/ND	Front Entry	NA
RS-HM-04A	White 12x12 Vinyl Tile	No	M	Category I	ND/ND	Kitchen	NA
RS-HM-04B	White 12x12 Vinyl Tile	No	M	Category I	ND/ND	Kitchen	NA
RS-HM-05A	Slate 12x12 Vinyl Tile	No	M	Category I	ND/ND	Bathroom	NA
RS-HM-05B	Slate 12x12 Vinyl Tile	No	M	Category I	ND/ND	Bathroom	NA
RS-HM-06A	Beige Mottled 12x12 Vinyl Tile	No	M	Category I	ND/ND	Rear Entry	NA
RS-HM-06B	Beige Mottled 12x12 Vinyl Tile	No	M	Category I	ND/ND	Rear Entry	NA
RS-HM-07A	White 1'x1' Ceiling Tile	Yes	M	Category II	ND	Rear Entry	NA
RS-HM-07B	White 1'x1' Ceiling Tile	Yes	M	Category II	ND	Rear Entry	NA
RS-HM-08A	Drywall & Joint Compound	No	M	Category II	ND/.50%CH-PC	Kitchen Ceiling	NA
RS-HM-08B	Drywall & Joint Compound	No	M	Category II	ND/.50%CH-PC	Living Room Wall	NA
RS-HM-09A	Glazing	Yes	M	Category II	0.25%CH-PC	Front Porch	NA
RS-HM-09B	Glazing	Yes	M	Category II	TRACE CH-PC	Front Porch	NA
RS-HM-10A	Glazing	Yes	M	Category II	0.50%CH-PC	Living Room	NA
RS-HM-10B	Glazing	Yes	M	Category II	0.25%CH-PC	Kitchen	NA
RS-HM-11A	White 1'x1' Pinhole Ceiling Tile	Yes	M	Category II	ND	W Bedroom	NA
RS-HM-11B	White 1'x1' Pinhole Ceiling Tile	Yes	M	Category II	ND	W Bedroom	NA
RS-HS-01A	Plaster	No	S	Category II	ND	S Exterior	NA
RS-HS-01B	Plaster	No	S	Category II	ND	E Exterior	NA
RS-HS-01C	Plaster	No	S	Category II	ND	N Exterior	NA
RS-HS-01D	Plaster	No	S	Category II	ND	NW Exterior	NA
RS-HS-01E	Plaster	No	S	Category II	ND	SE Exterior	NA

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2341 Reynolds St., Muskegon Heights, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
RS-HS-02A	Plaster	No	S	Category II	ND/ND	Kitchen Ceiling	NA
RS-HS-02B	Plaster	No	S	Category II	ND/ND	E Bedroom Ceiling	NA
RS-HS-02C	Plaster	No	S	Category II	ND/ND	Kitchen Wall	NA
RS-HS-02D	Plaster	No	S	Category II	ND/ND	Living Room Wall	NA
RS-HS-02E	Plaster	No	S	Category II	ND/ND	E Bedroom Wall	NA

**Notes:**

Material Types

M = Miscellaneous building material  
 TSI = Thermal System Insulation  
 S = Surfacing Material  
 PC = Point Count Analysis  
 CH = Chrysotile Asbestos

Abbreviations

NQ = Not quantified  
 NA = Not applicable  
 ND = Not detected. Laboratory result is less than 1 % asbestos  
 lin. ft. = linear feet  
 sq. ft. = square feet

Asbestos Containing Material (ACM) is defined as any material containing more than 1 percent asbestos as determined utilizing Polarized Light Microscopy.



**Table 3 - Summary of Presumed Asbestos Containing Materials, 2341 Reynolds St., Muskegon Heights, Michigan**

<b>Asbestos Containing Material Description and Location</b>					
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Condition</b>	<b>Material Type</b>	<b>Approx. Quantity</b>
Attic (484 sq. ft. at 1" depth)	Vermiculite	Yes	Fair	M	484 sq. ft. at 1" depth

**Notes:**

Material Types

M = Miscellaneous building material  
TSI = Thermal System Insulation  
S = Surfacing Material

Abbreviations

lin. ft. = linear feet  
sq. ft. = square feet

**Table 4 - Summary of All Asbestos Containing Materials, 2341 Reynolds St., Muskegon Heights, Michigan**

<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Building Attic	Vermiculite	Yes	484 sq. ft. at 4" depth
	<b>Total</b>		<b>484 sq. ft. at 4" depth</b>

**Notes:**

Abbreviations

lin. ft. = linear feet  
 sq. ft. = square feet

**Shaded/Bolded** = Friable ACM and any Category I and Category II non-friable ACM that has a high probability of becoming crumbled, pulverized, or reduced to powder by the demolition or renovation activities that must be properly abated prior to commencement of any demolition/renovation activities.

Demolition/renovation activities completed with intact Category I non-friable ACM are regulated by OSHA and must be completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note that a Negative Pressure Enclosure must be utilized during abatement when Site Conditions Warrant. Examples of these conditions include the abatement of Plaster and Vermiculite insulation, HVAC Duct Wrap in Poor Condition, and Air-O-Cell/Mag Pipe Wrap. Conditions outside of these should be assessed on a case by case basis during the Asbestos Abatement Contractors site walk and Work Plan Preparation.



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Lansing, MI 48901  
Phone: 888.449.4566  
Fax: 888.448.8739  
www.redcedarconsulting.net

May 11, 2017

Mr. Tim Burgess  
Muskegon County Land Bank  
Land Bank Coordinator  
173 E. Apple Avenue, Suite 104  
Muskegon, MI 49442

**RE: *Asbestos Containing Material and Hazardous Materials Inspection***  
***2345 Reynolds St., Muskegon Heights, MI 49444***  
***Parcel ID: 61-26-185-099-0012-00***

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 2345 Reynolds St., Muskegon Heights, Michigan (Subject Property). This inspection was completed at the request of the Muskegon County Land Bank to comply with the United States Environmental Protection Agency (USEPA) requirements for demolition and renovation set forth under the National Emissions Standards for Hazardous Air Pollutants (NESHAP, 40 CFR Part 61). This inspection was also completed to comply with the Occupational Safety and Health Administration (OSHA) Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

### **SUBJECT PROPERTY**

The Subject Property is comprised of a .14 acre residential parcel which contains a 625 sq. ft. garage (the Building) with an unknown construction date. The Building was constructed on a concrete foundation with one aboveground floor. The exterior walls of the Building were finished with clapboard siding while the roof was sealed with asphalt shingles. The Building can be further divided into one open room.

### **VISUAL INSPECTION AND SAMPLING**

#### **Asbestos Containing Materials Inspection**

Aaron Paquet and Darrell DeMasters of Red Cedar Consulting (Red Cedar), accredited State Of Michigan/EPA Asbestos Building Inspectors (Accreditation Numbers A30955 and A31159, respectively) who completed training per the Michigan Asbestos Workers Accreditation Act 440, completed an inspection of the Subject Property on May 4, 2017 for suspected asbestos containing building materials.

This inspection, and subsequent sample collection was completed in accordance with the USEPA Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763) assessment and sampling protocol.

During the completion of the inspection, each area of the Subject Property was visually inspected for asbestos containing building materials (ACBM). Following the completion of the visual inspection, Red Cedar staff identified each suspect area of friable and non-friable ACBM and sorted them into one of three homogenous categories for sampling purposes. AHERA defines friable as a material that when dry, may be crumbled, pulverized, or reduced to powder by hand pressure. A homogenous area is defined by OSHA as an area of surfacing, thermal system insulation (TSI) or miscellaneous material that is uniform in color and texture. Surfacing materials are most commonly found in sprayed-on, troweled-on or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members. TSI refers to materials applied to pipes, fittings, boilers, ductwork, or other components to prevent heat loss or gain, or condensation. Any material that does not fall under the surfacing or TSI category, such as floor tile, drywall, and acoustical ceiling tile are placed into the miscellaneous materials category.

Following the completion of the visual inspection, Red Cedar staff identified the following materials as suspect ACBM:

- Asphalt Shingle
- Drywall (No Joint Compound)

Red Cedar staff collected four samples of suspect ACBM separated into two distinct homogenous groups for laboratory analysis. Samples were collected and submitted to APEX Research Inc. Laboratories (APEX) (Accreditation Number 102118-0) for laboratory analysis. Analysis was completed utilizing polarized light microscopy (PLM) which is the Environmental Protection Agency (EPA) approved method for analysis of bulk materials for asbestos. PLM analysis completed pursuant to method (EPA 600/M4-82-020) identifies asbestos fiber bundles by the visual properties displayed when the sample is treated with various dispersion staining liquids. The laboratory report completed following the sample analysis indicates if asbestos is present, and at what percentage along with a description and percentage of other fibrous and non-fibrous materials and sample color. Chain-of-custody documentation was followed from sample collection through shipping and receiving of the samples at the designated laboratory. The documentation assures that samples will meet the quality assurance/quality control measures defined by AHERA. The laboratory analytical report prepared by APEX for the four samples is included as Attachment A.

### **Hazardous Materials Inspection**

On May 4, 2017 the Subject Property was also inspected for the presence of hazardous materials which include but are not limited to polychlorinated biphenyls (PCBs) and potential mercury containing equipment and any items or containers that may contain or be classified as a hazardous or regulated material. Each material, if identified, was documented along with the approximate location. Any materials identified as hazardous are included in Table 1.

## **INSPECTION RESULTS AND RECOMMENDATIONS**

During the completion of the asbestos inspection, four samples of suspect ACM were collected and are documented in Table 2 along with the Red Cedar sample number, description, friability, material type, ACM classification, sample location, material quantity and laboratory analytical results.

ACM, as defined by the USEPA NESHAP is “any material containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763 Section 1, Polarized Light Microscopy”.

Friable ACM is defined by NESHAP as any material containing more than 1 percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Friable ACM is a concern due the ease of unintentionally disturbing the ACM which may result in “visible emissions” which is known as a Fiber Release Episode.

Non-friable asbestos-containing material is defined as “material containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACM’s are separated into Category I and Category II ACM. Category I ACM is any asbestos containing packing’s, gaskets, resilient floor coverings (vinyl floor tile and linoleum are examples of these) and asphalt roofing products. Category II ACM is stated by NESHAP as any material excluding Category I non-friable ACM such as drywall, plaster or fiberboard insulation.

### **Presumed Asbestos Containing Material**

Presumed Asbestos Containing Materials (PACM) are suspect surfacing, TSI and miscellaneous materials found in buildings constructed prior to 1980 which are classified as and due to the age of the structure, are assumed to be ACM and do not require sample collection and analysis. OSHA dictates that PACM may be “rebutted” following a complete inspection pursuant to AHERA protocol.

No PACM was identified during the completion of this inspection. All suspect materials identified were sampled and analyzed for ACM.

Table 3 lists the location, material description, friability, condition, material type (surfacing, thermal or miscellaneous) and approximate quantity of all PACM documented at the Subject Property.

Table 4 provides a summary all ACM documented at the Subject Property which includes the material location, description, and approximate quantity.

### **Friable ACM’s**

No friable ACM’s were identified during the completion of this inspection.

### **Category I ACM**

No Category I ACM was identified during the completion of this inspection.

### **Category II ACM**

No Category II non-friable ACM was identified during the completion of this inspection.

## **RECOMMENDATIONS**

### **Asbestos Containing Materials**

No ACM was identified within the Building that would require abatement prior to demolition/renovation of the structure.

Please note: The location of samples obtained during this inspection were in a random fashion and areas that were not identified during this inspection may be damaged or have become damaged since the inspection was completed. If Category I or Category II friable materials are discovered prior to or during the demolition/renovation process, these materials must be abated prior to commencement of any demolition/renovation activities at the Subject Property.

### **Hazardous Materials**

Hazardous Materials identified at the Subject Property and documented in Table 1 which require proper removal and disposal consist of the following items:

- Automobile Tires (4)
- Television (1)

## **REGULATORY REQUIREMENTS**

A Notification of Intent to Renovate/Demolish form must be filed with the Michigan Department of Environmental Quality- Air Quality Division at least 10 working days prior to any renovation or demolition activities at a site.

The Notification of Intent to Renovate/Demolish form must also be completed and submitted to the MIOSHA-Asbestos Program whenever demolition, encapsulation and/or renovation activities at a site involving greater than ten lineal feet and/or fifteen square feet of ACM will be completed.

Regulated asbestos containing materials per NESHAP (40 CFR Part 61) which falls into any of the following categories are ACM's that must be removed prior to any renovation/demolition activities at the Subject Property.

- Friable asbestos material.
- Category I non-friable ACM that has become friable.
- Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading.
- Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations.

Asbestos abatement should only be performed by a certified asbestos abatement contractor licensed to complete abatement work. The contractor must also follow the standards and requirements set forth per the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61).

Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-26-185-099-0012-00

Additional information regarding the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61) can be obtained by contacting the associated agency below.

NESHAP Asbestos Program  
Department of Environmental Quality  
Phone: 517-284-6777

MIOSHA-CSHD-Asbestos Program  
State of Michigan  
Phone: 517-284-7680  
Email: asbestos@michigan.gov


**DISCLAIMER**

Red Cedar Consulting performed destructive testing methods in an attempt to access and inspect all areas of the Building. Unfortunately, due to the age of construction along with multiple additions/renovations that may have been completed on the Building, additional inspections may be required if suspect ACM material not documented within this report is encountered during renovation/demolition activities.

This report was prepared at the request and for exclusive use by the Muskegon County Land Bank and may not be reproduced or sold without written permission from Red Cedar Consulting.

We appreciate the opportunity to provide the requested services. Please contact us at (888) 449-4566 with any questions or concerns.

Sincerely,  
**Red Cedar Consulting**



Aaron Paquet  
Michigan/EPA Certified Asbestos Building Inspector  
(A30955)

Red Cedar Consulting

***Attachment 1***  
***APEX Research Laboratory Analytical Results***





# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 2345 Reynolds St.

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69943  
Date Collected: 05/04/17  
Date Received: 05/05/17  
Date Analyzed: 05/09/17  
Date Reported: 05/11/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69943 - 01 Cust. #: ST-HM-01A Material: Grey Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 20% Other - 80%
Lab ID #: 69943 - 01a Cust. #: ST-HM-01A Material: Grey Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 20% Other - 80%
Lab ID #: 69943 - 02 Cust. #: ST-HM-01B Material: Grey Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 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: 2345 Reynolds St.

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69943  
Date Collected: 05/04/17  
Date Received: 05/05/17  
Date Analyzed: 05/09/17  
Date Reported: 05/11/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69943 - 02a Cust. #: ST-HM-01B Material: Grey Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 20% Other - 80%
Lab ID #: 69943 - 05 Cust. #: ST-HM-02A Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Fiberglass - 2% Other - 83%
Lab ID #: 69943 - 06 Cust. #: ST-HM-02B Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Fiberglass - 2% Other - 83%

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 # **69943**

pg 1 of 1

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

E-mail: [apexresearch@chartermi.net](mailto:apexresearch@chartermi.net)

Fax: 734-449-9991



Client Name: Red Cedar Consulting

Date of Survey: 5-4-17

Address: PO Box 13216

Project: 2345 Reynolds St

City, St., Zip: Lansing, MI 48901

Project #: \_\_\_\_\_

Phone: (888) 449-4566 Fax: (888) 448-8739

Contact Person: Aaron Paquet

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

**Turn Around Times:** (Circle One) PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour  
48 hour 72 hour  
Other: 5 Day **TTP** All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BIOSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	ST-NM-014	Cmy Shingle			
2	ST-NM-018	''			
3	ST-NM-024	Drywall - N/A Jc.			
4	ST-NM-023	''			

Relinquished by: [Signature] Date: 5-4-17  
Received by: URS Date: 5-4-17

Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_  
Received by: [Signature] Date: MAY 05 2017

***Tables***

**Table 1 - Summary of Hazardous Materials, 2345 Reynolds St., Muskegon Heights, Michigan**

<b>Hazardous Materials Description and Location</b>		
<b>Location</b>	<b>Material Description</b>	<b>Quantity</b>
Garage	Automobile Tires	4
Garage	Television	1

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2345 Reynolds St., Muskegon Heights, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
ST-HM-01A	Gray Shingle	No	M	Category I	ND/ND	Exterior	NA
ST-HM-01B	Gray Shingle	No	M	Category I	ND/ND	Exterior	NA
ST-HM-02A	Drywall (No Joint Compound)	No	M	Category II	ND	Interior Wall	NA
ST-HM-02B	Drywall (No Joint Compound)	No	M	Category II	ND	Interior Wall	NA

**Notes:**

Material Types

M = Miscellaneous building material  
 TSI = Thermal System Insulation  
 S = Surfacing Material  
 PC = Point Count Analysis  
 CH = Chrysotile Asbestos

Abbreviations

NQ = Not quantified  
 NA = Not applicable  
 ND = Not detected. Laboratory result is less than 1 % asbestos  
 lin. ft. = linear feet  
 sq. ft. = square feet

Asbestos Containing Material (ACM) is defined as any material containing more than 1 percent asbestos as determined utilizing Polarized Light Microscopy.

**Table 3 - Summary of Presumed Asbestos Containing Materials, 2345 Reynolds St., Muskegon Heights, Michigan**

<b>Asbestos Containing Material Description and Location</b>					
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Condition</b>	<b>Material Type</b>	<b>Approx. Quantity</b>
No Presumed Asbestos Containing Materials Identified					

**Notes:**

Material Types

- M = Miscellaneous building material
- TSI = Thermal System Insulation
- S = Surfacing Material

Abbreviations

- lin. ft. = linear feet
- sq. ft. = square feet

**Table 4 - Summary of All Asbestos Containing Materials, 2345 Reynolds St., Muskegon Heights, Michigan**

<b>Exterior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
No Asbestos Containing Materials Identified			

**Notes:**

Abbreviations

lin. ft. = linear feet

sq. ft. = square feet

**Shaded/Bolded** = Friable ACM and any Category I and Category II non-friable ACM that has a high probability of becoming crumbled, pulverized, or reduced to powder by the demolition or renovation activities that must be properly abated prior to commencement of any demolition/renovation activities.

Demolition/renovation activities completed with intact Category I non-friable ACM are regulated by OSHA and must be completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note that a Negative Pressure Enclosure must be utilized during abatement when Site Conditions Warrant. Examples of these conditions include the abatement of Plaster and Vermiculite insulation, HVAC Duct Wrap in Poor Condition, and Air-O-Cell/Mag Pipe Wrap. Conditions outside of these should be assessed on a case by case basis during the Asbestos Abatement Contractors site walk and Work Plan Preparation.





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Lansing, MI 48901  
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Fax: 888.448.8739  
www.redcedarconsulting.net

May 12, 2017

Mr. Tim Burgess  
Muskegon County Land Bank  
Land Bank Coordinator  
173 E. Apple Avenue, Suite 104  
Muskegon, MI 49442

***RE: Asbestos Containing Material and Hazardous Materials Inspection  
2521 Maffett St., Muskegon Heights, MI 49444  
Parcel ID: 61-26-185-145-0006-00***

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 2521 Maffett St., Muskegon Heights, Michigan (Subject Property). This inspection was completed at the request of the Muskegon County Land Bank to comply with the United States Environmental Protection Agency (USEPA) requirements for demolition and renovation set forth under the National Emissions Standards for Hazardous Air Pollutants (NESHAP, 40 CFR Part 61). This inspection was also completed to comply with the Occupational Safety and Health Administration (OSHA) Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

### **SUBJECT PROPERTY**

The Subject Property is comprised of a .14 acre residential parcel which contains an approximate 1,140 square foot residential building (the Building) constructed in 1915. The Building was constructed on a concrete block basement with one aboveground floor. The exterior walls of the Building were finished with wood lap while the roof was sealed with asphalt shingles. The Building can be further divided into a front entry, living room, dining room, kitchen, bath and two bedrooms.

### **VISUAL INSPECTION AND SAMPLING**

#### **Asbestos Containing Materials Inspection**

Aaron Paquet and Darrell DeMasters of Red Cedar Consulting (Red Cedar), accredited State Of Michigan/EPA Asbestos Building Inspectors (Accreditation Numbers A30955 and A31159, respectively) who completed training per the Michigan Asbestos Workers Accreditation Act 440, completed an inspection of the Subject Property on April 21, 2017 for suspected asbestos containing building materials.

This inspection, and subsequent sample collection was completed in accordance with the USEPA Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763) assessment and sampling protocol.

During the completion of the inspection, each area of the Subject Property was visually inspected for asbestos containing building materials (ACBM). Following the completion of the visual inspection, Red Cedar staff identified each suspect area of friable and non-friable ACBM and sorted them into one of three homogenous categories for sampling purposes. AHERA defines friable as a material that when dry, may be crumbled, pulverized, or reduced to powder by hand pressure. A homogenous area is defined by OSHA as an area of surfacing, thermal system insulation (TSI) or miscellaneous material that is uniform in color and texture. Surfacing materials are most commonly found in sprayed-on, troweled-on or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members. TSI refers to materials applied to pipes, fittings, boilers, ductwork, or other components to prevent heat loss or gain, or condensation. Any material that does not fall under the surfacing or TSI category, such as floor tile, drywall, and acoustical ceiling tile are placed into the miscellaneous materials category.

Following the completion of the visual inspection, Red Cedar staff identified the following materials as suspect ACBM:

- Roofing Materials
- Vapor Barrier
- Vinyl Flooring
- Linoleum
- Drywall and Joint Compound
- Surfacing Material
- Plaster

Red Cedar staff collected sixteen samples of suspect ACBM separated into seven distinct homogenous groups for laboratory analysis. Samples were collected and submitted to APEX Research Inc. Laboratories (APEX) (Accreditation Number 102118-0) for laboratory analysis. Analysis was completed utilizing polarized light microscopy (PLM) which is the Environmental Protection Agency (EPA) approved method for analysis of bulk materials for asbestos. PLM analysis completed pursuant to method (EPA 600/M4-82-020) identifies asbestos fiber bundles by the visual properties displayed when the sample is treated with various dispersion staining liquids. The laboratory report completed following the sample analysis indicates if asbestos is present, and at what percentage along with a description and percentage of other fibrous and non-fibrous materials and sample color. Chain-of-custody documentation was followed from sample collection through shipping and receiving of the samples at the designated laboratory. The documentation assures that samples will meet the quality assurance/quality control measures defined by AHERA. The laboratory analytical report prepared by APEX for the sixteen samples is included as Attachment A.

## **Hazardous Materials Inspection**

On April 21, 2017 the Subject Property was also inspected for the presence of hazardous materials which include but are not limited to polychlorinated biphenyls (PCBs) and potential mercury containing equipment and any items or containers that may contain or be classified as a hazardous or regulated material. Each material, if identified, was documented along with the approximate location. Any materials identified as hazardous are included in Table 1.

## **INSPECTION RESULTS AND RECOMMENDATIONS**

During the completion of the asbestos inspection, sixteen samples of suspect ACM were collected and are documented in Table 2 along with the Red Cedar sample number, description, friability, material type, ACM classification, sample location, material quantity and laboratory analytical results.

ACM, as defined by the USEPA NESHAP is “any material containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763 Section 1, Polarized Light Microscopy”.

Friable ACM is defined by NESHAP as any material containing more than 1 percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Friable ACM is a concern due the ease of unintentionally disturbing the ACM which may result in “visible emissions” which is known as a Fiber Release Episode.

Non-friable asbestos-containing material is defined as “material containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACM’s are separated into Category I and Category II ACM. Category I ACM is any asbestos containing packing’s, gaskets, resilient floor coverings (vinyl floor tile and linoleum are examples of these) and asphalt roofing products. Category II ACM is stated by NESHAP as any material excluding Category I non-friable ACM such as drywall, plaster or fiberboard insulation.

### **Presumed Asbestos Containing Material**

Presumed Asbestos Containing Materials (PACM) are suspect surfacing, TSI and miscellaneous materials found in buildings constructed prior to 1980 which are classified as and due to the age of the structure, are assumed to be ACM and do not require sample collection and analysis. OSHA dictates that PACM may be “rebutted” following a complete inspection pursuant to AHERA protocol.

The HVAC Duct Wrap and Transite Pipe located in the Building was classified as PACM due to the age of the structure and samples were not collected.

Table 3 lists the location, material description, friability, condition, material type (surfacing, thermal or miscellaneous) and approximate quantity of all PACM documented at the Subject Property.

Table 4 provides a summary all ACM documented at the Subject Property which includes the material location, description, and approximate quantity.

### **Friable ACM's**

Duct Wrap identified in the building in conjunction with the forced air heating system is classified as friable ACM. The visual assessment to quantify the extent of this material identified HVAC Duct Wrap at the following locations within the basement and first floor:

- Basement (6 in. dia. Transite Pipe, 10 lin. ft.)
- Basement (Galvanized Water Line with HVAC Wrap, 8 lin. ft.)

### **Category I ACM**

No Category I ACM was identified during the completion of this inspection.

### **Category II ACM**

No Category II non-friable ACM was identified during the completion of this inspection.

## **RECOMMENDATIONS**

### **Asbestos Containing Materials**

HVAC material identified in the Building system and listed below is classified as friable ACM and should be removed prior to any renovation/demolition activities.

- Basement (6 in. dia. Transite Pipe, 10 lin. ft.)
- Basement (Galvanized Water Line with HVAC Wrap, 8 lin. ft.)

Please note: The location of samples obtained during this inspection were in a random fashion and areas that were not identified during this inspection may be damaged or have become damaged since the inspection was completed. If Category I or Category II friable materials are discovered prior to or during the demolition/renovation process, these materials must be abated prior to commencement of any demolition/renovation activities at the Subject Property.

### **Hazardous Materials**

Hazardous Materials identified at the Subject Property and documented in Table 1 which require proper removal and disposal consist of the following items:

- No Hazardous Materials Identified

Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-26-185-145-0006-00

## **REGULATORY REQUIREMENTS**

A Notification of Intent to Renovate/Demolish form must be filed with the Michigan Department of Environmental Quality- Air Quality Division at least 10 working days prior to any renovation or demolition activities at a site.

The Notification of Intent to Renovate/Demolish form must also be completed and submitted to the MIOSHA-Asbestos Program whenever demolition, encapsulation and/or renovation activities at a site involving greater than ten lineal feet and/or fifteen square feet of ACM will be completed.

Regulated asbestos containing materials per NESHAP (40 CFR Part 61) which falls into any of the following categories are ACM's that must be removed prior to any renovation/demolition activities at the Subject Property.

- Friable asbestos material.
- Category I non-friable ACM that has become friable.
- Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading.
- Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations.

Asbestos abatement should only be performed by a certified asbestos abatement contractor licensed to complete abatement work. The contractor must also follow the standards and requirements set forth per the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61).

Additional information regarding the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61) can be obtained by contacting the associated agency below.

NESHAP Asbestos Program  
Department of Environmental Quality  
Phone: 517-284-6777

MIOSHA-CSHD-Asbestos Program  
State of Michigan  
Phone: 517-284-7680  
Email: [asbestos@michigan.gov](mailto:asbestos@michigan.gov)

Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-26-185-145-0006-00

**DISCLAIMER**

Red Cedar Consulting performed destructive testing methods in an attempt to access and inspect all areas of the Building. Unfortunately, due to the age of construction along with multiple additions/renovations that may have been completed on the Building, additional inspections may be required if suspect ACM material not documented within this report is encountered during renovation/demolition activities.

This report was prepared at the request and for exclusive use by the Muskegon County Land Bank and may not be reproduced or sold without written permission from Red Cedar Consulting.

We appreciate the opportunity to provide the requested services. Please contact us at (888) 449-4566 with any questions or concerns.

Sincerely,  
**Red Cedar Consulting**



Aaron Paquet  
Michigan/EPA Certified Asbestos Building Inspector  
(A30955)

Red Cedar Consulting

***Attachment 1***  
***APEX Research Laboratory Analytical Results***



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 2521 Maffett St

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69751  
Date Collected: 04/21/17  
Date Received: 04/24/17  
Date Analyzed: 04/28/17  
Date Reported: 05/01/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69751 - 01 Cust. #: FS-HM-01A Material: Roofing Materials Location: Appearance: black, fibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 15% Other - 85%
Lab ID #: 69751 - 01a Cust. #: FS-HM-01A Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 15% Other - 85%
Lab ID #: 69751 - 01b Cust. #: FS-HM-01A Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 15% Other - 85%

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: 2521 Maffett St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69751  
Date Collected: 04/21/17  
Date Received: 04/24/17  
Date Analyzed: 04/28/17  
Date Reported: 05/01/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69751 - 02 Cust. #: FS-HM-01B Material: Roofing Materials Location: Appearance: black, fibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 15% Other - 85%
Lab ID #: 69751 - 02a Cust. #: FS-HM-01B Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 15% Other - 85%
Lab ID #: 69751 - 02b Cust. #: FS-HM-01B Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 15% Other - 85%

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: 2521 Maffett St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69751  
Date Collected: 04/21/17  
Date Received: 04/24/17  
Date Analyzed: 04/28/17  
Date Reported: 05/01/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69751 - 03 Cust. #: FS-HM-02A Material: Vapor Barrier Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 95% Other - 5%
Lab ID #: 69751 - 04 Cust. #: FS-HM-02B Material: Vapor Barrier Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 95% Other - 5%
Lab ID #: 69751 - 05 Cust. #: FS-HM-03A Material: Tan Vinyl Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Fiberglass - 5% 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: 2521 Maffett St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69751  
Date Collected: 04/21/17  
Date Received: 04/24/17  
Date Analyzed: 04/28/17  
Date Reported: 05/01/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69751 - 06 Cust. #: FS-HM-03B Material: Tan Vinyl Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 5% Other - 85%
Lab ID #: 69751 - 07 Cust. #: FS-HM-04A Material: Yellow Pebble Linoleum Location: Appearance: yellow, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 69751 - 08 Cust. #: FS-HM-04B Material: Yellow Pebble Linoleum Location: Appearance: yellow, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> 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: 2521 Maffett St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69751  
Date Collected: 04/21/17  
Date Received: 04/24/17  
Date Analyzed: 04/28/17  
Date Reported: 05/01/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69751 - 09 Cust. #: FS-HM-05A Material: Drywall Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Fiberglass - 2% Other - 78%
Lab ID #: 69751 - 09a Cust. #: FS-HM-05A Material: Joint Compound Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69751 - 10 Cust. #: FS-HM-05B Material: Drywall Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Fiberglass - 2% Other - 78%

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: 2521 Maffett St

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69751  
Date Collected: 04/21/17  
Date Received: 04/24/17  
Date Analyzed: 04/28/17  
Date Reported: 05/01/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69751 - 10a Cust. #: FS-HM-05B Material: Joint Compound Location: Appearance: white,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69751 - 11 Cust. #: FS-HS-01A Material: Surfacing Material Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69751 - 12 Cust. #: FS-HS-01B Material: Surfacing Material Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> 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: 2521 Maffett St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69751  
Date Collected: 04/21/17  
Date Received: 04/24/17  
Date Analyzed: 04/28/17  
Date Reported: 05/01/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69751 - 13 Cust. #: FS-HS-01C Material: Surfacing Material Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69751 - 14 Cust. #: FS-HS-02A Material: Plaster Finish Coat Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69751 - 14a Cust. #: FS-HS-02A Material: Plaster Base Coat Location: Appearance: grey,fibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 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: 2521 Maffett St

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69751  
Date Collected: 04/21/17  
Date Received: 04/24/17  
Date Analyzed: 04/28/17  
Date Reported: 05/01/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69751 - 15 Cust. #: FS-HS-02B Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69751 - 15a Cust. #: FS-HS-02B Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: 69751 - 16 Cust. #: FS-HS-02C Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> 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: 2521 Maffett St

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69751  
Date Collected: 04/21/17  
Date Received: 04/24/17  
Date Analyzed: 04/28/17  
Date Reported: 05/01/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69751 - 16a Cust. #: FS-HS-02C Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	
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



# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

E-mail: apexresearch@chartermi.net

Fax: 734-449-9991

Apex # **69751**



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-21-17

Project: 1521 Mayfield St

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

PIM EPA 600, PC all samples with a detection of <5% ACM.

Rush 24 hour

48 hour 72 hour

Other: 5 day  TTP All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BioSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
TEM: AHRA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	ES-HM-01A	Roofing Materials			
2	ES-HM-01B	"			
3	ES-HM-02A	Vapor Barrier			
4	ES-HM-02B	"			
5	ES-HM-03A	Ice Vents			
6	ES-HM-03B	"			
7	ES-HM-04A	Yellow Polle Sealant			
8	ES-HM-04B	"			
9	ES-HM-05A	Sealant w/ Spout Compound			
10	ES-HM-05B	"			
11	ES-HS-01A	Surrounding Material			

RECEIVED

Relinquished by: [Signature] Received by: UPS

Date: 4-21-17

Date: 4-21-17

Relinquished by: [Signature] Received by: \_\_\_\_\_

Date: 11/25

APEX RESEARCH

69751

2073

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189  
 Phone: 734-449-9990  
 E-mail: [apexresearch@chartermi.net](mailto:apexresearch@chartermi.net)  
 Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM.

Rush 24 hour

48 hour 72 hour

Other: Stay **TIP** All Samples

Asbestos: Bulk  Wipe  Point Count  PCM   
 Lead: Bulk  Wipe  Air  Paint  Soil   
 Mold: Bulk  Tape  BioSIS  Other  Viable   
 TEM: AHERA 7400 Bulk/NOB  EPA Level II

Date of Survey: 4-21-17

Project: 2521 Mayfield St.

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
 Log-In \_\_\_\_\_  
 Report \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	ES-45-01B	Surfacing Material			
13	ES-45-01C	" "			
14	ES-45-02A	Plaster			
15	ES-45-02B	" "			
16	ES-45-02C	" "			

RECEIVED

Relinquished by: [Signature] Received by: UBS  
 Date: 4-21-17 Date: 4-21-17

APR 24 2017  
 Relinquished by: [Signature] Received by: \_\_\_\_\_  
 Date: APEX RESEARCH Date: \_\_\_\_\_

***Tables***

**Table 1 - Summary of Hazardous Materials, 2521 Maffett St., Muskegon Heights, Michigan**

<b>Hazardous Materials Description and Location</b>		
<b>Location</b>	<b>Material Description</b>	<b>Quantity</b>
No Hazardous Materials Identified		

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2521 Maffett St., Muskegon Heights, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
FS-HM-01A	Roofing Materials	No	M	Category I	ND/ND/ND	Exterior	NA
FS-HM-01B	Roofing Materials	No	M	Category I	ND/ND/ND	Exterior	NA
FS-HM-02A	Vapor Barrier	Yes	M	Category II	ND	Exterior	NA
FS-HM-02B	Vapor Barrier	Yes	M	Category II	ND	Exterior	NA
FS-HM-03A	Tan Vinyl	No	M	Category I	ND	Bathroom	NA
FS-HM-03B	Tan Vinyl	No	M	Category I	ND	Bathroom	NA
FS-HM-04A	Yellow Pebble Linoleum	No	M	Category I	ND	SE Bedroom	NA
FS-HM-04B	Yellow Pebble Linoleum	No	M	Category I	ND	SE Bedroom	NA
FS-HM-05A	Drywall and Joint Compound	No	M	Category I	ND/ND	SW Bedroom Wall	NA
FS-HM-05B	Drywall and Joint Compound	No	M	Category I	ND/ND	Kitchen Wall	NA
FS-HS-01A	Surfacing Material	No	S	Category II	ND	Front Entry Ceiling	NA
FS-HS-01B	Surfacing Material	No	S	Category II	ND	Front Entry Wall	NA
FS-HS-01C	Surfacing Material	No	S	Category II	ND	Front Entry Wall	NA
FS-HS-02A	Plaster	No	S	Category II	ND/ND	Bathroom Ceiling	NA
FS-HS-02B	Plaster	No	S	Category II	ND/ND	Bathroom Wall	NA
FS-HS-02C	Plaster	No	S	Category II	ND/ND	Living Closet Wall	NA

**Notes:**

Material Types

M = Miscellaneous building material  
 TSI = Thermal System Insulation  
 S = Surfacing Material  
 PC = Point Count Analysis  
 CH = Chrysotile Asbestos

Abbreviations

NQ = Not quantified  
 NA = Not applicable  
 ND = Not detected. Laboratory result is less than 1 % asbestos  
 lin. ft. = linear feet  
 sq. ft. = square feet

Asbestos Containing Material (ACM) is defined as any material containing more than 1 percent asbestos as determined utilizing Polarized Light Microscopy.

**Table 3 - Summary of Presumed Asbestos Containing Materials, 2521 Maffett St., Muskegon Heights, Michigan**

<b>Asbestos Containing Material Description and Location</b>					
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Condition</b>	<b>Material Type</b>	<b>Approx. Quantity</b>
Basement (6 in. dia. Transite Pipe, 10 lin. ft.)	Transite Pipe	Yes	Fair	TSI	10 lin. ft.
Basement (Galvanized Water Line with HVAC Wrap, 8 lin. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	8 lin. ft.

**Notes:**

Material Types

- M = Miscellaneous building material
- TSI = Thermal System Insulation
- S = Surfacing Material

Abbreviations

- lin. ft. = linear feet
- sq. ft. = square feet

**Table 4 - Summary of All Asbestos Containing Materials, 2521 Maffett St., Muskegon Heights, Michigan**

<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Basement (6 in. dia. Transite Pipe, 10 lin. ft.)	Transite Pipe	Yes	10 lin. ft.
	<b>Total</b>		<b>10 lin. ft.</b>
<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Basement (Galvanized Water Line with HVAC Wrap, 8 lin. ft.)	HVAC Duct Wrap	Yes	8 lin. ft.
	<b>Total</b>		<b>8 lin. ft.</b>

**Notes:**

Abbreviations

lin. ft. = linear feet

sq. ft. = square feet

**Shaded/Bolded** = Friable ACM and any Category I and Category II non-friable ACM that has a high probability of becoming crumbled, pulverized, or reduced to powder by the demolition or renovation activities that must be properly abated prior to commencement of any demolition/renovation activities.

Demolition/renovation activities completed with intact Category I non-friable ACM are regulated by OSHA and must be completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note that a Negative Pressure Enclosure must be utilized during abatement when Site Conditions Warrant. Examples of these conditions include the abatement of Plaster and Vermiculite insulation, HVAC Duct Wrap in Poor Condition, and Air-O-Cell/Mag Pipe Wrap. Conditions outside of these should be assessed on a case by case basis during the Asbestos Abatement Contractors site walk and Work Plan Preparation.



P.O. Box 13216  
Lansing, MI 48901  
Phone: 888.449.4566  
Fax: 888.448.8739  
www.redcedarconsulting.net

May 8, 2017

Mr. Tim Burgess  
Muskegon County Land Bank  
Land Bank Coordinator  
173 E. Apple Avenue, Suite 104  
Muskegon, MI 49442

**RE: *Asbestos Containing Material and Hazardous Materials Inspection***  
***2529 Ray St., Muskegon Heights, MI 49444***  
***Parcel ID: 61-26-185-159-0008-00***

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 2529 Ray St., Muskegon Heights, Michigan (Subject Property). This inspection was completed at the request of the Muskegon County Land Bank to comply with the United States Environmental Protection Agency (USEPA) requirements for demolition and renovation set forth under the National Emissions Standards for Hazardous Air Pollutants (NESHAP, 40 CFR Part 61). This inspection was also completed to comply with the Occupational Safety and Health Administration (OSHA) Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

### **SUBJECT PROPERTY**

The Subject Property is comprised of a .29 acre residential parcel which contains an approximate 784 square foot residential building (the Building) constructed in 1925. The Building was constructed on a concrete block basement with one aboveground floor. The exterior walls of the Building were finished with vinyl siding while the roof was sealed with asphalt shingles. The Building can be further divided into a front entry, living room, dining room, kitchen, bath, three bedrooms and basement entry on the first floor.

### **VISUAL INSPECTION AND SAMPLING**

#### **Asbestos Containing Materials Inspection**

Aaron Paquet and Darrell DeMasters of Red Cedar Consulting (Red Cedar), accredited State Of Michigan/EPA Asbestos Building Inspectors (Accreditation Numbers A30955 and A31159, respectively) who completed training per the Michigan Asbestos Workers Accreditation Act 440, completed an inspection of the Subject Property on April 20, 2017 for suspected asbestos containing building materials.



This inspection, and subsequent sample collection was completed in accordance with the USEPA Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763) assessment and sampling protocol.

During the completion of the inspection, each area of the Subject Property was visually inspected for asbestos containing building materials (ACBM). Following the completion of the visual inspection, Red Cedar staff identified each suspect area of friable and non-friable ACBM and sorted them into one of three homogenous categories for sampling purposes. AHERA defines friable as a material that when dry, may be crumbled, pulverized, or reduced to powder by hand pressure. A homogenous area is defined by OSHA as an area of surfacing, thermal system insulation (TSI) or miscellaneous material that is uniform in color and texture. Surfacing materials are most commonly found in sprayed-on, troweled-on or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members. TSI refers to materials applied to pipes, fittings, boilers, ductwork, or other components to prevent heat loss or gain, or condensation. Any material that does not fall under the surfacing or TSI category, such as floor tile, drywall, and acoustical ceiling tile are placed into the miscellaneous materials category.

Following the completion of the visual inspection, Red Cedar staff identified the following materials as suspect ACBM:

- Roofing Materials
- Linoleum
- 1'x1' Ceiling Tile
- 2'x4' Ceiling Tile
- Drywall & Joint Compound
- Glazing
- Black Asphalt Siding

Red Cedar staff collected eighteen samples of suspect ACBM separated into nine distinct homogenous groups for laboratory analysis. Samples were collected and submitted to APEX Research Inc. Laboratories (APEX) (Accreditation Number 102118-0) for laboratory analysis. Analysis was completed utilizing polarized light microscopy (PLM) which is the Environmental Protection Agency (EPA) approved method for analysis of bulk materials for asbestos. PLM analysis completed pursuant to method (EPA 600/M4-82-020) identifies asbestos fiber bundles by the visual properties displayed when the sample is treated with various dispersion staining liquids. The laboratory report completed following the sample analysis indicates if asbestos is present, and at what percentage along with a description and percentage of other fibrous and non-fibrous materials and sample color. Chain-of-custody documentation was followed from sample collection through shipping and receiving of the samples at the designated laboratory. The documentation assures that samples will meet the quality assurance/quality control measures defined by AHERA. The laboratory analytical report prepared by APEX for the eighteen samples is included as Attachment A.

## **Hazardous Materials Inspection**

On April 20, 2017 the Subject Property was also inspected for the presence of hazardous materials which include but are not limited to polychlorinated biphenyls (PCBs) and potential mercury containing equipment and any items or containers that may contain or be classified as a hazardous or regulated material. Each material, if identified, was documented along with the approximate location. Any materials identified as hazardous are included in Table 1.

## **INSPECTION RESULTS AND RECOMMENDATIONS**

During the completion of the asbestos inspection, eighteen samples of suspect ACM were collected and are documented in Table 2 along with the Red Cedar sample number, description, friability, material type, ACM classification, sample location, material quantity and laboratory analytical results.

ACM, as defined by the USEPA NESHAP is “any material containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763 Section 1, Polarized Light Microscopy”.

Friable ACM is defined by NESHAP as any material containing more than 1 percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Friable ACM is a concern due the ease of unintentionally disturbing the ACM which may result in “visible emissions” which is known as a Fiber Release Episode.

Non-friable asbestos-containing material is defined as “material containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACM’s are separated into Category I and Category II ACM. Category I ACM is any asbestos containing packing’s, gaskets, resilient floor coverings (vinyl floor tile and linoleum are examples of these) and asphalt roofing products. Category II ACM is stated by NESHAP as any material excluding Category I non-friable ACM such as drywall, plaster or fiberboard insulation.

## **Presumed Asbestos Containing Material**

Presumed Asbestos Containing Materials (PACM) are suspect surfacing, TSI and miscellaneous materials found in buildings constructed prior to 1980 which are classified as and due to the age of the structure, are assumed to be ACM and do not require sample collection and analysis. OSHA dictates that PACM may be “rebutted” following a complete inspection pursuant to AHERA protocol.

The HVAC Duct Wrap located in the Building was classified as PACM due to the age of the structure and samples were not collected.

Table 3 lists the location, material description, friability, condition, material type (surfacing, thermal or miscellaneous) and approximate quantity of all PACM documented at the Subject Property.

Table 4 provides a summary all ACM documented at the Subject Property which includes the material location, description, and approximate quantity.

### **Friable ACM's**

Duct Wrap identified in the building in conjunction with the forced air heating system is classified as friable ACM. The visual assessment to quantify the extent of this material identified HVAC Duct Wrap at the following locations within the basement and first floor:

- Basement (Misc. HVAC tape on boots, 15 sq. ft.)
- Basement (Misc. HVAC wrap on Ductwork, 30 sq. ft.)
- Basement (Misc. HVAC wrap at old drywall ductwork penetrations, 3 at 3 sq. ft., 9 sq. ft.)

### **Category I ACM**

No Category I ACM was identified during the completion of this inspection.

### **Category II ACM**

No Category II non-friable ACM was identified during the completion of this inspection.

## **RECOMMENDATIONS**

### **Asbestos Containing Materials**

HVAC material identified in the Building system and listed below is classified as friable ACM and should be removed prior to any renovation/demolition activities.

- Basement (Misc. HVAC tape on boots, 15 sq. ft.)
- Basement (Misc. HVAC wrap on Ductwork, 30 sq. ft.)
- Basement (Misc. HVAC wrap at old drywall ductwork penetrations, 3 at 3 sq. ft., 9 sq. ft.)

Please note: The location of samples obtained during this inspection were in a random fashion and areas that were not identified during this inspection may be damaged or have become damaged since the inspection was completed. If Category I or Category II friable materials are discovered prior to or during the demolition/renovation process, these materials must be abated prior to commencement of any demolition/renovation activities at the Subject Property.

### **Hazardous Materials**

Hazardous Materials identified at the Subject Property and documented in Table 1 which require proper removal and disposal consist of the following items:

- No Hazardous Materials Identified

Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-26-185-159-0008-00

## **REGULATORY REQUIREMENTS**

A Notification of Intent to Renovate/Demolish form must be filed with the Michigan Department of Environmental Quality- Air Quality Division at least 10 working days prior to any renovation or demolition activities at a site.

The Notification of Intent to Renovate/Demolish form must also be completed and submitted to the MIOSHA-Asbestos Program whenever demolition, encapsulation and/or renovation activities at a site involving greater than ten lineal feet and/or fifteen square feet of ACM will be completed.

Regulated asbestos containing materials per NESHAP (40 CFR Part 61) which falls into any of the following categories are ACM's that must be removed prior to any renovation/demolition activities at the Subject Property.

- Friable asbestos material.
- Category I non-friable ACM that has become friable.
- Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading.
- Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations.

Asbestos abatement should only be performed by a certified asbestos abatement contractor licensed to complete abatement work. The contractor must also follow the standards and requirements set forth per the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61).

Additional information regarding the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61) can be obtained by contacting the associated agency below.

NESHAP Asbestos Program  
Department of Environmental Quality  
Phone: 517-284-6777

MIOSHA-CSHD-Asbestos Program  
State of Michigan  
Phone: 517-284-7680  
Email: [asbestos@michigan.gov](mailto:asbestos@michigan.gov)

Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-26-185-159-0008-00

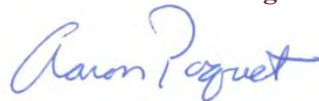
**DISCLAIMER**

Red Cedar Consulting performed destructive testing methods in an attempt to access and inspect all areas of the Building. Unfortunately, due to the age of construction along with multiple additions/renovations that may have been completed on the Building, additional inspections may be required if suspect ACM material not documented within this report is encountered during renovation/demolition activities.

This report was prepared at the request and for exclusive use by the Muskegon County Land Bank and may not be reproduced or sold without written permission from Red Cedar Consulting.

We appreciate the opportunity to provide the requested services. Please contact us at (888) 449-4566 with any questions or concerns.

Sincerely,  
**Red Cedar Consulting**



Aaron Paquet  
Michigan/EPA Certified Asbestos Building Inspector  
(A30955)

Red Cedar Consulting

***Attachment 1***  
***APEX Research Laboratory Analytical Results***



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 2529 Ray St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69722  
Date Collected: 04/20/17  
Date Received: 04/21/17  
Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69722 - 01 Cust. #: RS-HM-01A Material: Roofing Material Location: Appearance: black, fibrous, homogenous Layer: 1 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69722 - 01a Cust. #: RS-HM-01A Material: Green Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69722 - 01b Cust. #: RS-HM-01A Material: Black Shingle Location: Appearance: black, fibrous, homogenous Layer: 3 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%

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: 2529 Ray St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69722  
Date Collected: 04/20/17  
Date Received: 04/21/17  
Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69722 - 01d Cust. #: RS-HM-01A Material: Black Shingle Location: Appearance: black, fibrous, homogenous Layer: 4 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69722 - 02 Cust. #: RS-HM-01B Material: Roofing Material Location: Appearance: black, fibrous, homogenous Layer: 1 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69722 - 02a Cust. #: RS-HM-01B Material: Green Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%

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

Robert T. Letarte Jr., Laboratory Director

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# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 2529 Ray St

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69722  
Date Collected: 04/20/17  
Date Received: 04/21/17  
Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69722 - 02b Cust. #: RS-HM-01B Material: Black Shingle Location: Appearance: black, fibrous, homogenous Layer: 3 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69722 - 02c Cust. #: RS-HM-01B Material: Black Shingle Location: Appearance: black, fibrous, homogenous Layer: 4 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69722 - 03 Cust. #: RS-HM-02A Material: Red/Grey Linoleum Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%

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

Robert T. Letarte Jr., Laboratory Director

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ARI Report # 17-69722  
Date Collected: 04/20/17  
Date Received: 04/21/17  
Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69722 - 04 Cust. #: RS-HM-02B Material: Red/Grey Linoleum Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69722 - 05 Cust. #: RS-HM-03A Material: Grey Vinyl Location: Appearance: grey, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 69722 - 06 Cust. #: RS-HM-03B Material: Grey Vinyl Location: Appearance: grey, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%

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

Robert T. Letarte Jr., Laboratory Director

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Lansing, MI 48901

ARI Report # 17-69722  
Date Collected: 04/20/17  
Date Received: 04/21/17  
Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69722 - 07 Cust. #: RS-HM-04A Material: Grey Linoleum Location: Appearance: grey, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69722 - 08 Cust. #: RS-HM-04B Material: Grey Linoleum Location: Appearance: grey, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69722 - 09 Cust. #: RS-HM-05A Material: 1x1 White Ceiling Tile w/ Pinholes Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 60% Other - 40%

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

Robert T. Letarte Jr., Laboratory Director

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Lansing, MI 48901

ARI Report # 17-69722  
Date Collected: 04/20/17  
Date Received: 04/21/17  
Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69722 - 10 Cust. #: RS-HM-05B Material: 1x1 White Ceiling Tile w/ Pinholes Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 70% Other - 30%
Lab ID #: 69722 - 11 Cust. #: RS-HM-06A Material: 2x4 White Smooth Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 69722 - 12 Cust. #: RS-HM-06B Material: 2x4 White Smooth Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%

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

Robert T. Letarte Jr., Laboratory Director

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ARI Report # 17-69722  
Date Collected: 04/20/17  
Date Received: 04/21/17  
Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69722 - 13 Cust. #: RS-HM-07A Material: Drywall/Joint Compound Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69722 - 14 Cust. #: RS-HM-07B Material: Drywall/Joint Compound Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69722 - 15 Cust. #: RS-HM-08A Material: Black Asphalt Siding Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%

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

Robert T. Letarte Jr., Laboratory Director

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Lansing, MI 48901

ARI Report # 17-69722  
Date Collected: 04/20/17  
Date Received: 04/21/17  
Date Analyzed: 04/26/17  
Date Reported: 04/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69722 - 16 Cust. #: RS-HM-08B Material: Black Asphalt Siding Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69722 - 17 Cust. #: RS-HM-09A Material: Window Glazing Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Wollastonite - 1% Other - 99%
Lab ID #: 69722 - 18 Cust. #: RS-HM-09B Material: Window Glazing Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Wollastonite - 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

**69722**

142

# APEX Research, Inc.

11054 HI Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990



E-mail: apexresearch@chartermi.net

Fax: 734-449-9991

Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-20-17

Project: 2529 Ray St

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: 5 day All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
 Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
 Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ Biosis \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
 TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	RS-HM-01A	Roofing Materials			
2	RS-HM-01B	" "			
3	RS-HM-02A	Red + Gray Sinterium			
4	RS-HM-02B	" " " "			
5	RS-HM-03A	Gray Vinyl			
6	RS-HM-03B	" " " "			
7	RS-HM-04A	Gray Sinterium			
8	RS-HM-04B	" "			
9	RS-HM-05A	1 x 1 white CT w/ spindles			
10	RS-HM-05B	" " " "			
11	RS-HM-06A	2 x 4 white smooth CT			

Relinquished by: [Signature] Received by: UPS

Date: 4-20-17 Date: 4-20-17

Relinquished by: [Signature] Received by: \_\_\_\_\_

Date: 1000 APR 21 2017 Date: \_\_\_\_\_

**RECEIVED**

69722

2 of 2

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189

Phone: 734-449-9990  
E-mail: apexresearch@chartermi.net  
Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216  
Lansing, MI 48901

City, St, Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-20-17

Project: 2529 Ray St

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log-in \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: 5 day  TTP All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BIOSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	RS-14M-04B	2x4 White painted CT			
13	RS-14M-07A	Asphalt & Spout Compounds			
14	RS-14M-07B	" " " "			
15	RS-14M-08A	Black Asphalt Sidewalk			
16	RS-14M-08B	" " " "			
17	RS-14M-09A	Windows Siding			
18	RS-14M-09B	" " " "			

Relinquished by: Will Moore Received by: UPS

Date: 4-20-17 Date: 4-20-17

Relinquished by: **RECEIVED**

Date: APR 21 2017

Received by: \_\_\_\_\_

Date: \_\_\_\_\_



***Tables***

**Table 1 - Summary of Hazardous Materials, 2529 Ray St., Muskegon Heights, Michigan**

<b>Hazardous Materials Description and Location</b>		
<b>Location</b>	<b>Material Description</b>	<b>Quantity</b>
No Hazardous Materials Identified		

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2529 Ray St., Muskegon Heights, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
RS-HM-01A	Roofing Materials	No	M	Category I	ND/ND/ND/ND	Exterior	NA
RS-HM-01B	Roofing Materials	No	M	Category I	ND/ND/ND/ND	Exterior	NA
RS-HM-02A	Red & Gray Linoleum	No	M	Category I	ND	Front Entry	NA
RS-HM-02B	Red & Gray Linoleum	No	M	Category I	ND	Front Entry	NA
RS-HM-03A	Gray Vinyl	No	M	Category I	ND	Bathroom	NA
RS-HM-03B	Gray Vinyl	No	M	Category I	ND	Bathroom	NA
RS-HM-04A	Gray Linoleum	No	M	Category I	ND	N Bedroom	NA
RS-HM-04B	Gray Linoleum	No	M	Category I	ND	N Bedroom	NA
RS-HM-05A	White 1'x1' Ceiling Tile	Yes	M	Category II	ND	Living Room	NA
RS-HM-05B	White 1'x1' Ceiling Tile	Yes	M	Category II	ND	Dining Room	NA
RS-HM-06A	White 2'x4' Ceiling Tile	Yes	M	Category II	ND	Hallway	NA
RS-HM-06B	White 2'x4' Ceiling Tile	Yes	M	Category II	ND	Hallway	NA
RS-HM-07A	Drywall & Joint Compound	No	M	Category II	ND	N Bedroom Ceiling	NA
RS-HM-07B	Drywall & Joint Compound	No	M	Category II	ND	Kitchen Wall	NA
RS-HM-08A	Black Asphalt Siding	No	M	Category I	ND	Exterior	NA
RS-HM-08B	Black Asphalt Siding	No	M	Category I	ND	Exterior	NA
RS-HM-09A	Window Glazing	Yes	M	Category II	ND	Living Room	NA
RS-HM-09B	Window Glazing	Yes	M	Category II	ND	Dining Room	NA

**Notes:**

Material Types

M = Miscellaneous building material  
 TSI = Thermal System Insulation  
 S = Surfacing Material  
 PC = Point Count Analysis  
 CH = Chrysotile Asbestos

Abbreviations

NQ = Not quantified  
 NA = Not applicable  
 ND = Not detected. Laboratory result is less than 1 % asbestos  
 lin. ft. = linear feet  
 sq. ft. = square feet

Asbestos Containing Material (ACM) is defined as any material containing more than 1 percent asbestos as determined utilizing Polarized Light Microscopy.

**Table 3 - Summary of Presumed Asbestos Containing Materials, 2529 Ray St., Muskegon Heights, Michigan**

<b>Asbestos Containing Material Description and Location</b>					
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Condition</b>	<b>Material Type</b>	<b>Approx. Quantity</b>
Basement (Misc. HVAC tape on boots, 15 sq. ft.) Basement (Misc. HVAC wrap on Ductwork, 30 sq. ft.) Basement (Misc. HVAC wrap at old drywall ductwork penetrations, 3 at 6.0 sq. ft., 9 sq. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	54 sq. ft.

**Notes:**

Material Types

- M = Miscellaneous building material
- TSI = Thermal System Insulation
- S = Surfacing Material

Abbreviations

- lin. ft. = linear feet
- sq. ft. = square feet

**Table 4 - Summary of All Asbestos Containing Materials, 2529 Ray St., Muskegon Heights, Michigan**

<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Basement (Misc. HVAC tape on boots, 15 sq. ft.)			
Basement (Misc. HVAC wrap on Ductwork, 30 sq. ft.)	HVAC Duct Wrap	Yes	54 sq. ft.
Basement (Misc. HVAC wrap at old drywall ductwork penetrations, 3 at 3 sq. ft., 9 sq. ft.)			
	<b>Total</b>		<b>54 sq. ft.</b>

**Notes:**

Abbreviations

lin. ft. = linear feet

sq. ft. = square feet

**Shaded/Bolded** = Friable ACM and any Category I and Category II non-friable ACM that has a high probability of becoming crumbled, pulverized, or reduced to powder by the demolition or renovation activities that must be properly abated prior to commencement of any demolition/renovation activities.

Demolition/renovation activities completed with intact Category I non-friable ACM are regulated by OSHA and must be completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note that a Negative Pressure Enclosure must be utilized during abatement when Site Conditions Warrant. Examples of these conditions include the abatement of Plaster and Vermiculite insulation, HVAC Duct Wrap in Poor Condition, and Air-O-Cell/Mag Pipe Wrap. Conditions outside of these should be assessed on a case by case basis during the Asbestos Abatement Contractors site walk and Work Plan Preparation.



P.O. Box 13216  
Lansing, MI 48901  
Phone: 888.449.4566  
Fax: 888.448.8739  
www.redcedarconsulting.net

May 12, 2017

Mr. Tim Burgess  
Muskegon County Land Bank  
Land Bank Coordinator  
173 E. Apple Avenue, Suite 104  
Muskegon, MI 49442

**RE: *Asbestos Containing Material and Hazardous Materials Inspection***  
***2533 Reynolds St., Muskegon Heights, MI 49444***  
***Parcel ID: 61-26-185-149-0009-00***

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 2533 Reynolds St., Muskegon Heights, Michigan (Subject Property). This inspection was completed at the request of the Muskegon County Land Bank to comply with the United States Environmental Protection Agency (USEPA) requirements for demolition and renovation set forth under the National Emissions Standards for Hazardous Air Pollutants (NESHAP, 40 CFR Part 61). This inspection was also completed to comply with the Occupational Safety and Health Administration (OSHA) Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

### **SUBJECT PROPERTY**

The Subject Property is comprised of a .14 acre residential parcel which contains a 360 sq. ft. detached garage and an approximate 2,502 square foot residential building (the Building) constructed in 1920. The Building was constructed on a concrete block basement with two aboveground floors. The exterior walls of the Building were finished with wood lap while the roof was sealed with asphalt shingles. The Building can be further divided into a front entry, living room, kitchen, bath, and three bedrooms on the first floor while the second floor contains a front entry, living room, dining room, kitchen, bathroom and three bedrooms.

### **VISUAL INSPECTION AND SAMPLING**

#### **Asbestos Containing Materials Inspection**

Aaron Paquet and Darrell DeMasters of Red Cedar Consulting (Red Cedar), accredited State Of Michigan/EPA Asbestos Building Inspectors (Accreditation Numbers A30955 and A31159, respectively) who completed training per the Michigan Asbestos Workers Accreditation Act 440, completed an inspection of the Subject Property on April 25, 2017 for suspected asbestos containing building materials.

This inspection, and subsequent sample collection was completed in accordance with the USEPA Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763) assessment and sampling protocol.

During the completion of the inspection, each area of the Subject Property was visually inspected for asbestos containing building materials (ACBM). Following the completion of the visual inspection, Red Cedar staff identified each suspect area of friable and non-friable ACBM and sorted them into one of three homogenous categories for sampling purposes. AHERA defines friable as a material that when dry, may be crumbled, pulverized, or reduced to powder by hand pressure. A homogenous area is defined by OSHA as an area of surfacing, thermal system insulation (TSI) or miscellaneous material that is uniform in color and texture. Surfacing materials are most commonly found in sprayed-on, troweled-on or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members. TSI refers to materials applied to pipes, fittings, boilers, ductwork, or other components to prevent heat loss or gain, or condensation. Any material that does not fall under the surfacing or TSI category, such as floor tile, drywall, and acoustical ceiling tile are placed into the miscellaneous materials category.

Following the completion of the visual inspection, Red Cedar staff identified the following materials as suspect ACBM:

- Roofing Materials
- Vapor Barrier
- Linoleum
- 1'x1' Ceiling Tile
- 2'x4' Ceiling Tile
- 12"x12" Vinyl Tile
- Vinyl Flooring
- Drywall & Joint Compound
- Glazing
- Plaster

Red Cedar staff collected thirty nine samples of suspect ACBM separated into eighteen distinct homogenous groups for laboratory analysis. Samples were collected and submitted to APEX Research Inc. Laboratories (APEX) (Accreditation Number 102118-0) for laboratory analysis. Analysis was completed utilizing polarized light microscopy (PLM) which is the Environmental Protection Agency (EPA) approved method for analysis of bulk materials for asbestos. PLM analysis completed pursuant to method (EPA 600/M4-82-020) identifies asbestos fiber bundles by the visual properties displayed when the sample is treated with various dispersion staining liquids. The laboratory report completed following the sample analysis indicates if asbestos is present, and at what percentage along with a description and percentage of other fibrous and non-fibrous materials and sample color. Chain-of-custody documentation was followed from sample collection through shipping and receiving of the samples at the designated laboratory. The documentation assures that samples will meet the quality assurance/quality control measures defined by AHERA. The laboratory analytical report prepared by APEX for the thirty nine samples is included as Attachment A.

## **Hazardous Materials Inspection**

On April 25, 2017 the Subject Property was also inspected for the presence of hazardous materials which include but are not limited to polychlorinated biphenyls (PCBs) and potential mercury containing equipment and any items or containers that may contain or be classified as a hazardous or regulated material. Each material, if identified, was documented along with the approximate location. Any materials identified as hazardous are included in Table 1.

## **INSPECTION RESULTS AND RECOMMENDATIONS**

During the completion of the asbestos inspection, thirty nine samples of suspect ACM were collected and are documented in Table 2 along with the Red Cedar sample number, description, friability, material type, ACM classification, sample location, material quantity and laboratory analytical results.

ACM, as defined by the USEPA NESHAP is “any material containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763 Section 1, Polarized Light Microscopy”.

Friable ACM is defined by NESHAP as any material containing more than 1 percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Friable ACM is a concern due the ease of unintentionally disturbing the ACM which may result in “visible emissions” which is known as a Fiber Release Episode.

Non-friable asbestos-containing material is defined as “material containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACM’s are separated into Category I and Category II ACM. Category I ACM is any asbestos containing packing’s, gaskets, resilient floor coverings (vinyl floor tile and linoleum are examples of these) and asphalt roofing products. Category II ACM is stated by NESHAP as any material excluding Category I non-friable ACM such as drywall, plaster or fiberboard insulation.

### **Presumed Asbestos Containing Material**

Presumed Asbestos Containing Materials (PACM) are suspect surfacing, TSI and miscellaneous materials found in buildings constructed prior to 1980 which are classified as and due to the age of the structure, are assumed to be ACM and do not require sample collection and analysis. OSHA dictates that PACM may be “rebutted” following a complete inspection pursuant to AHERA protocol.

The HVAC Duct Wrap located in the Building was classified as PACM due to the age of the structure and samples were not collected.

Table 3 lists the location, material description, friability, condition, material type (surfacing, thermal or miscellaneous) and approximate quantity of all PACM documented at the Subject Property.

Table 4 provides a summary all ACM documented at the Subject Property which includes the material location, description, and approximate quantity.



### **Friable ACM's**

A window glazing sample collected from a window in the Kitchen was found to contain up to 5% asbestos following analysis. The assessment to quantify the extent of this material identified thirty seven windows at the following locations that would fall into the same homogenous group. The locations of the windows are listed below:

- Kitchen (2 windows 24" wide x 36" tall)
- Front Entry (10 windows 34" wide x 53" tall)
- NE Bedroom (2 windows 27" wide x 57" tall)
- NE Bedroom (1 window 63" wide x 35" tall)
- Living (1 window 76" wide x 53" tall)
- Living (1 window 94" wide x 53" tall)
- Living (2 windows 27" wide x 57" tall)
- N Bedroom (2 windows 27" wide x 38" tall)
- Bath (1 window 46" wide x 20" tall)
- NW Bedroom (2 windows 27" wide x 53" tall)
- 2nd Fl. W Living (1 window 52" wide x 24" tall)
- 2nd Fl. W Living (1 window 28" wide x 36" tall)
- 2nd Fl. W Kitchen (1 window 28" wide x 36" tall)
- 2nd Fl. NW Bedroom (1 window 28" wide x 36" tall)
- 2nd Fl. W Bath (1 window 28" wide x 36" tall)
- 2nd Fl. E Bath (1 window 28" wide x 36" tall)
- 2nd Fl. E Kitchen (2 windows 28" wide x 36" tall)
- 2nd Fl. E Living (3 windows 28" wide x 36" tall)
- 2nd Fl. NE Bedroom (1 window 28" wide x 36" tall)
- 2nd Fl. N Bedroom (1 window 28" wide x 36" tall)

Duct Wrap identified in the building in conjunction with the forced air heating system is classified as friable ACM. The visual assessment to quantify the extent of this material identified HVAC Duct Wrap at the following locations within the basement, first and second floors:

- Living (2 registers, 20 sq. ft.)
- Bath (1 register, 10 sq. ft.)
- NW Bedroom (1 register, 10 sq. ft.)
- Basement (2 in. wide HVAC Tape on Cold Air Return Ductwork, 35 lin. ft.)

### **Category I ACM**

Five types of resilient floor covering (Black & Gray Layered 12x12 Vinyl Floor Tile, Black Marble Layered 12x12 Vinyl Floor Tile, Yellow Linoleum, Tan & Black Linoleum, Layered Woodgrain 12"x12" Vinyl Floor Tile) located within the Kitchen, NW Bedroom, 2<sup>nd</sup> fl. W Bedroom, 2<sup>nd</sup> fl. E Dining Room and 2<sup>nd</sup> fl. E Kitchen were found to contain up to 30% Chrysotile asbestos. The assessment to quantify the extent of this material identified approximately 939 sq. ft. of this material within the Building.

Asphalt roof samples collected during the completion of the inspection were found to contain up to 10% Chrysotile asbestos. The assessment to quantify the extent of this material identified 1,650 sq. ft. of asphalt roofing materials on the Building and Garage.

### **Category II ACM**

No Category II non-friable ACM was identified during the completion of this inspection.

## **RECOMMENDATIONS**

### **Asbestos Containing Materials**

HVAC material identified in the Building system and listed below is classified as friable ACM and should be removed prior to any renovation/demolition activities.

- Living (2 registers, 20 sq. ft.)
- Bath (1 register, 10 sq. ft.)
- NW Bedroom (1 register, 10 sq. ft.)
- Basement (2 in. wide HVAC Tape on Cold Air Return Ductwork, 35 lin. ft.)

Friable asbestos containing window glazing was identified on thirty seven windows throughout the Building. The locations of these windows that should be abated prior to demolition/renovation activities are listed below:

- Kitchen (2 windows 24" wide x 36" tall)
- Front Entry (10 windows 34" wide x 53" tall)
- NE Bedroom (2 windows 27" wide x 57" tall)
- NE Bedroom (1 window 63" wide x 35" tall)
- Living (1 window 76" wide x 53" tall)
- Living (1 window 94" wide x 53" tall)
- Living (2 windows 27" wide x 57" tall)
- N Bedroom (2 windows 27" wide x 38" tall)
- Bath (1 window 46" wide x 20" tall)
- NW Bedroom (2 windows 27" wide x 53" tall)
- 2nd Fl. W Living (1 window 52" wide x 24" tall)
- 2nd Fl. W Living (1 window 28" wide x 36" tall)
- 2nd Fl. W Kitchen (1 window 28" wide x 36" tall)
- 2nd Fl. NW Bedroom (1 window 28" wide x 36" tall)
- 2nd Fl. W Bath (1 window 28" wide x 36" tall)
- 2nd Fl. E Bath (1 window 28" wide x 36" tall)
- 2nd Fl. E Kitchen (2 windows 28" wide x 36" tall)
- 2nd Fl. E Living (3 windows 28" wide x 36" tall)
- 2nd Fl. NE Bedroom (1 window 28" wide x 36" tall)
- 2nd Fl. N Bedroom (1 window 28" wide x 36" tall)

Please note: Other different sized windows are located throughout the Building but these windows were assessed and found to be constructed either without window glazing or were sampled and found to not contain asbestos and therefore are not required to be removed.

The Category I roofing materials on both the House and Garage and resilient floor coverings (Black & Gray Layered 12x12 Vinyl Floor Tile, Black Marble Layered 12x12 Vinyl Floor Tile, Yellow Linoleum, Tan & Black Linoleum, Layered Woodgrain 12"x12" Vinyl Floor Tile) are non-friable ACM's that may be left in place as long as the demolition/renovation activities are completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note: The location of samples obtained during this inspection were in a random fashion and areas that were not identified during this inspection may be damaged or have become damaged since the inspection was completed. If Category I or Category II friable materials are discovered prior to or during the demolition/renovation process, these materials must be abated prior to commencement of any demolition/renovation activities at the Subject Property.

### **Hazardous Materials**

Hazardous Materials identified at the Subject Property and documented in Table 1 which require proper removal and disposal consist of the following items:

- Automobile Tires (8)
- Television (9)
- Gallon Container Misc. Paint (14)
- Quart Container Misc. Paint (3)
- Thermostat (1)
- Carbon Monoxide Detector (1)

### **REGULATORY REQUIREMENTS**

A Notification of Intent to Renovate/Demolish form must be filed with the Michigan Department of Environmental Quality- Air Quality Division at least 10 working days prior to any renovation or demolition activities at a site.

The Notification of Intent to Renovate/Demolish form must also be completed and submitted to the MIOSHA-Asbestos Program whenever demolition, encapsulation and/or renovation activities at a site involving greater than ten lineal feet and/or fifteen square feet of ACM will be completed.

Regulated asbestos containing materials per NESHAP (40 CFR Part 61) which falls into any of the following categories are ACM's that must be removed prior to any renovation/demolition activities at the Subject Property.

- Friable asbestos material.
- Category I non-friable ACM that has become friable.
- Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading.

Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-26-185-149-0009-00

- Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations.

Asbestos abatement should only be performed by a certified asbestos abatement contractor licensed to complete abatement work. The contractor must also follow the standards and requirements set forth per the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61).

Additional information regarding the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61) can be obtained by contacting the associated agency below.

NESHAP Asbestos Program  
Department of Environmental Quality  
Phone: 517-284-6777

MIOSHA-CSHD-Asbestos Program  
State of Michigan  
Phone: 517-284-7680  
Email: asbestos@michigan.gov

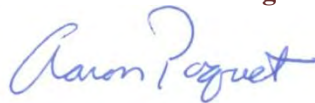
### **DISCLAIMER**

Red Cedar Consulting performed destructive testing methods in an attempt to access and inspect all areas of the Building. Unfortunately, due to the age of construction along with multiple additions/renovations that may have been completed on the Building, additional inspections may be required if suspect ACM material not documented within this report is encountered during renovation/demolition activities.

This report was prepared at the request and for exclusive use by the Muskegon County Land Bank and may not be reproduced or sold without written permission from Red Cedar Consulting.

We appreciate the opportunity to provide the requested services. Please contact us at (888) 449-4566 with any questions or concerns.

Sincerely,  
**Red Cedar Consulting**



Aaron Paquet  
Michigan/EPA Certified Asbestos Building Inspector  
(A30955)

Red Cedar Consulting

***Attachment 1***  
***APEX Research Laboratory Analytical Results***



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 2533 Reynolds St

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69787  
Date Collected: 04/25/17  
Date Received: 04/26/17  
Date Analyzed: 05/02/17  
Date Reported: 05/02/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69787 - 01 Cust. #: RS-HM-01A Material: Roofing Materials Location: House Appearance: black, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69787 - 01a Cust. #: RS-HM-01A Material: Roof Tar Location: House Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>YES</b> Chrysotile - 10%	Other - 90%
Lab ID #: 69787 - 02 Cust. #: RS-HM-01B Material: Roofing Materials Location: House Appearance: black, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%

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: 2533 Reynolds St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69787  
Date Collected: 04/25/17  
Date Received: 04/26/17  
Date Analyzed: 05/02/17  
Date Reported: 05/02/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69787 - 02a Cust. #: RS-HM-01B Material: Roof Tar Location: House Appearance: Layer: 2 of 2	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69787 - 03 Cust. #: RS-HM-02A Material: Roofing Materials Location: Garage Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69787 - 04 Cust. #: RS-HM-02B Material: Roofing Materials Location: Garage Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%

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: 2533 Reynolds St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69787  
Date Collected: 04/25/17  
Date Received: 04/26/17  
Date Analyzed: 05/02/17  
Date Reported: 05/02/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69787 - 05 Cust. #: RS-HM-03A Material: 12x12 Black/Grey Layered VFT Location: Appearance: black,nonfibrous,homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69787 - 05a Cust. #: RS-HM-03A Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69787 - 05b Cust. #: RS-HM-03A Material: Linoleum Location: Appearance: brown,fibrous,nonhomogenous Layer: 3 of 3	Asbestos Present: <b>YES</b> Chrysotile - 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: 2533 Reynolds St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69787  
Date Collected: 04/25/17  
Date Received: 04/26/17  
Date Analyzed: 05/02/17  
Date Reported: 05/02/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69787 - 06 Cust. #: RS-HM-03B Material: 12x12 Black/Grey Layered VFT Location: Appearance: black,nonfibrous,homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69787 - 06a Cust. #: RS-HM-03B Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69787 - 06b Cust. #: RS-HM-03B Material: Linoleum Location: Appearance: Layer: 3 of 3	Asbestos Present:  NOT ANALYZED	

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Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 2533 Reynolds St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69787  
Date Collected: 04/25/17  
Date Received: 04/26/17  
Date Analyzed: 05/02/17  
Date Reported: 05/02/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69787 - 07 Cust. #: RS-HM-04A Material: Cream 4" Squared Vinyl Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 69787 - 08 Cust. #: RS-HM-04B Material: Cream 4" Squared Vinyl Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 69787 - 09 Cust. #: RS-HM-05A Material: Brown Linoleum Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 50% Other - 50%

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Date Analyzed: 05/02/17  
Date Reported: 05/02/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69787 - 10 Cust. #: RS-HM-05B Material: Brown Linoleum Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 69787 - 11 Cust. #: RS-HM-06A Material: 12x12 Black Marble VFT Location: Appearance: black, nonfibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 69787 - 11a Cust. #: RS-HM-06A Material: Glue Location: Appearance: clear, nonfibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Date Analyzed: 05/02/17  
Date Reported: 05/02/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69787 - 11b Cust. #: RS-HM-06A Material: Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 3 of 3	Asbestos Present: <b>YES</b> Chrysotile - 30%	Other - 70%
Lab ID #: 69787 - 12 Cust. #: RS-HM-06B Material: 12x12 Black Marble VFT Location: Appearance: black, nonfibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69787 - 12a Cust. #: RS-HM-06B Material: Glue Location: Appearance: clear, nonfibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Date Reported: 05/02/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69787 - 12b Cust. #: RS-HM-06B Material: Linoleum Location: Appearance: Layer: 3 of 3	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69787 - 13 Cust. #: RS-HM-07A Material: 2x4 White CT w/ Pinholes, Fissures Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Mineral Wool - 30% Other - 30%
Lab ID #: 69787 - 14 Cust. #: RS-HM-07B Material: 2x4 White CT w/ Pinholes, Fissures Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Mineral Wool - 30% Other - 30%

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Date Analyzed: 05/02/17  
Date Reported: 05/02/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69787 - 15 Cust. #: RS-HM-08A Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69787 - 15a Cust. #: RS-HM-08A Material: Joint Compound Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69787 - 16 Cust. #: RS-HM-08B Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69787 - 16a Cust. #: RS-HM-08B Material: Joint Compound Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69787 - 17 Cust. #: RS-HM-09A Material: Tan/Brown Linoleum Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 69787 - 18 Cust. #: RS-HM-09B Material: Tan/Brown Linoleum Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 50% Other - 50%

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Date Analyzed: 05/02/17  
Date Reported: 05/02/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69787 - 19 Cust. #: RS-HM-10A Material: 1x1 White Textured Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 69787 - 20 Cust. #: RS-HM-10B Material: 1x1 White Textured Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 69787 - 21 Cust. #: RS-HM-11A Material: Window Glazing Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 5%	Wollastonite - 2% Other - 93%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69787 - 22 Cust. #: RS-HM-11B Material: Window Glazing Location: Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69787 - 23 Cust. #: RS-HM-12A Material: Vapor Barrier Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 60% Other - 40%
Lab ID #: 69787 - 24 Cust. #: RS-HM-12B Material: Vapor Barrier Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 60% Other - 40%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69787 - 25 Cust. #: RS-HM-13A Material: Yellow Linoleum Location: Appearance: yellow, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 25%	Other - 75%
Lab ID #: 69787 - 26 Cust. #: RS-HM-13B Material: Yellow Linoleum Location: Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69787 - 27 Cust. #: RS-HM-14A Material: Tan/Black Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 30%	Other - 70%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69787 - 28 Cust. #: RS-HM-14B Material: Tan/Black Linoleum Location: Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69787 - 29 Cust. #: RS-HM-15A Material: Layered Woodgrain 12x12 VFT Location: Appearance: brown,nonfibrous,homogenous Layer: 1 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69787 - 29a Cust. #: RS-HM-15A Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Date Analyzed: 05/02/17  
Date Reported: 05/02/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69787 - 29b Cust. #: RS-HM-15A Material: Beige Floor Tile Location: Appearance: beige, nonfibrous, homogenous Layer: 3 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69787 - 29c Cust. #: RS-HM-15A Material: Glue Location: Appearance: clear, nonfibrous, homogenous Layer: 4 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69787 - 29d Cust. #: RS-HM-15A Material: Linoleum Location: Appearance: black, fibrous, nonhomogenous Layer: 5 of 5	Asbestos Present: <b>YES</b> Chrysotile - 30%	Other - 70%

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Date Reported: 05/02/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69787 - 30 Cust. #: RS-HM-15B Material: Layered Woodgrain 12x12 VFT Location: Appearance: brown,nonfibrous,homogenous Layer: 1 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69787 - 30a Cust. #: RS-HM-15B Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69787 - 30b Cust. #: RS-HM-15B Material: Beige Floor Tile Location: Appearance: beige,nonfibrous,homogenous Layer: 3 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69787 - 30c Cust. #: RS-HM-15B Material: Glue Location: Appearance: clear, nonfibrous, homogenous Layer: 4 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69787 - 30d Cust. #: RS-HM-15B Material: Linoleum Location: Appearance: Layer: 5 of 5	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69787 - 31 Cust. #: RS-HM-16A Material: 12x12 Grey VFT Location: Appearance: grey, nonfibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69787 - 31a Cust. #: RS-HM-16A Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69787 - 31b Cust. #: RS-HM-16A Material: Linoleum Location: Appearance: white,fibrous,nonhomogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 69787 - 32 Cust. #: RS-HM-16B Material: 12x12 Grey VFT Location: Appearance: grey,nonfibrous,homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69787 - 32a Cust. #: RS-HM-16B Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69787 - 32b Cust. #: RS-HM-16B Material: Linoleum Location: Appearance: white,fibrous,nonhomogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 69787 - 33 Cust. #: RS-HM-17A Material: Tan Vinyl Location: Appearance: brown,fibrous,nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% 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: 2533 Reynolds St

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69787  
Date Collected: 04/25/17  
Date Received: 04/26/17  
Date Analyzed: 05/02/17  
Date Reported: 05/02/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69787 - 34 Cust. #: RS-HM-17B Material: Tan Vinyl Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 69787 - 35 Cust. #: RS-HS-01A Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69787 - 35a Cust. #: RS-HS-01A Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 2533 Reynolds St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69787  
Date Collected: 04/25/17  
Date Received: 04/26/17  
Date Analyzed: 05/02/17  
Date Reported: 05/02/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69787 - 36 Cust. #: RS-HS-01B Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69787 - 36a Cust. #: RS-HS-01B Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 69787 - 37 Cust. #: RS-HS-01C Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 2533 Reynolds St

**Report To:**

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P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69787  
Date Collected: 04/25/17  
Date Received: 04/26/17  
Date Analyzed: 05/02/17  
Date Reported: 05/02/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69787 - 37a Cust. #: RS-HS-01C Material: Plaster Base Coat Location: Appearance: grey,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69787 - 38 Cust. #: RS-HS-01D Material: Plaster Finish Coat Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69787 - 38a Cust. #: RS-HS-01D Material: Plaster Base Coat Location: Appearance: grey,fibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	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.



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# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 2533 Reynolds St

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69787  
Date Collected: 04/25/17  
Date Received: 04/26/17  
Date Analyzed: 05/02/17  
Date Reported: 05/02/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69787 - 39 Cust. #: RS-HS-01E Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69787 - 39a Cust. #: RS-HS-01E Material: Plaster Base Coat Location: Appearance: grey, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> 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

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NVLAP Lab Code 102118-0

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189  
 Phone: 734-449-9990  
 E-mail: apexresearch@charterni.net  
 Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216  
 Lansing, MI 48901

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Turn Around Times: (Circle One)

Rush 24 hour

48 hour 72 hour

Other: Skag All Samples

Date of Survey: 4-25-17  
 Project: 2533  
 Project #: Roofing Materials  
 Contact Person: Aaron Paquet

PJM EPA 600, PC all samples with a detection of <5% ACM.  
 apexresearch@redcedarconsulting.net

Lab Use Only  
 Log-In \_\_\_\_\_  
 Report \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	RS-441-01A	Roofing Materials (Gutter)			
2	RS-441-01B	.. ..			
3	RS-441-02A	Roofing Materials (Gutter)			
4	RS-441-02B	.. ..			
5	RS-441-03A	12x12 Back of Gutter Tray			
6	RS-441-03B	.. ..			
7	RS-441-04A	Beam 4" spaced Vinyl			
8	RS-441-04B	.. ..			
9	RS-441-05A	Brown Sinterstone			
10	RS-441-05B	.. ..			
11	RS-441-06A	12x12 Back of Gutter Tray			

**RECEIVED**

Relinquished by: APC/McIntee Received by: VP  
 Date: 4-25-17 Date: 4-25-17

Relinquished by: \_\_\_\_\_ Received by: APR 26 2017  
 Date: \_\_\_\_\_ Date: APR 26 2017

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69787

244

# APEX Research, Inc.

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



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-25-17

Project: 2533 Reynolds St

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM.  
apaget@redcedarconsulting.net

Rush 24 hour

48 hour 72 hour

Other: Slab All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BioSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	RS-HM-06B	12x12 Black Marble VET Legend			
13	RS-HM-07A	25x4 White CT w/Black & Yellow Tiles			
14	RS-HM-07B	.. ..			
15	RS-HM-08A	Asphalt & Joint Compound			
16	RS-HM-08B	.. ..			
17	RS-HM-09A	Tan and Brown Dimension			
18	RS-HM-09B	.. ..			
19	RS-HM-10A	1x1 white textured C.T.			
20	RS-HM-10B	.. ..			
21	RS-HM-11A	Window Sillings			
22	RS-HM-11B	.. ..			

RECEIVED

Relinquished by: APX Received by: VPS

Date: 4-25-17 Date: 4-25-17

Relinquished by: \_\_\_\_\_ Received by: APR 26 2017

Date: \_\_\_\_\_ Date: APR 26 2017

APEX RESEARCH

69782

344

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990



E-mail: [apexresearch@charternet.net](mailto:apexresearch@charternet.net)

Fax: 734-449-9991

Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-25-17

Project: 2533 Reynolds St

Project #:

Contact Person: Aaron Paquet

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: Slag

**TTP** All Samples

Asbestos: Bulk  Wipe  Point Count  PCM

Lead: Bulk  Wipe  Air  Paint  Soil

Mold: Bulk  Tape  BioSIS  Other  Viable

TEM: AHERA 7400 Bulk/NOB EPA Level II

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
23	RS-HM-12A	Vapor Barrier			
24	RS-HM-12B	..			
25	RS-HM-13A	Updown Staircase			
26	RS-HM-13B	..			
27	RS-HM-14A	Top v Black Staircase			
28	RS-HM-14B	..			
29	RS-HM-15A	Reynolds Staircase 12X12 VET			
30	RS-HM-15B	..			
31	RS-HM-16A	12X12 Slag VET Slag			
32	RS-HM-16B	..			
33	RS-HM-17A	Top Vinyl			

Relinquished by: Debbie Merten Received by: USBS

Date: 4-25-17

Date: 4-25-17

Relinquished by: \_\_\_\_\_ Received by: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

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APR 26 2017

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# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990



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City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-25-17

Project: 2533 Raymond St

Project #:

Contact Person: Aaron Baquet

Lab Use Only
Log-In _____
Report _____

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apbaquet@redcedarconsulting.net](mailto:apbaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: 5 day **(TTP)** All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_

Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_

Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BioSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_

TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
34	RS-HM-17B	Iron Vents			
35	RS-HS-01A	Plaster			
36	RS-HS-01B				
37	RS-HS-01C				
38	RS-HS-01D				
39	RS-HS-01E	↓			

Relinquished by: A. K. K. K. Received by: URS

Date: 4-25-17 Date: 4-25-17

Relinquished by: \_\_\_\_\_ Received by: \_\_\_\_\_

Date: \_\_\_\_\_ Date: \_\_\_\_\_

**RECEIVED**

APR 26 2017



***Tables***

**Table 1 - Summary of Hazardous Materials, 2533 Reynolds St., Muskegon Heights, Michigan**

<b>Hazardous Materials Description and Location</b>		
<b>Location</b>	<b>Material Description</b>	<b>Quantity</b>
Exterior	Automobile Tires	5
Garage	Automobile Tires	3
Garage	Television	3
Garage	Gallon Container Misc. Paint	14
Garage	Quart Container Misc. Paint	3
1 <sup>st</sup> Floor Living Room	Thermostat	1
1 <sup>st</sup> Floor Kitchen	Carbon Monoxide Detector	1
1 <sup>st</sup> Floor NW Bedroom	Television	1
2 <sup>nd</sup> Floor W Living Room	Television	2
2 <sup>nd</sup> Floor NW Bedroom	Television	1
Basement	Television	2

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2533 Reynolds St., Muskegon Heights, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
RS-HM-01A	Roofing Materials-House	No	M	Category I	ND/10%CH	Exterior	1,650 sq. ft.
RS-HM-01B	Roofing Materials-House	No	M	Category I	ND/NA	Exterior	NA
RS-HM-02A	Roofing Materials-Garage	No	M	Category I	ND	Garage Exterior	864 sq. ft.
RS-HM-02B	Roofing Materials-Garage	No	M	Category I	ND	Garage Exterior	NA
RS-HM-03A	Black & Gray Layered 12x12 Vinyl Floor Tile	No	M	Category I	ND/ND/20%CH	1 <sup>st</sup> Floor Kitchen	260 sq. ft.
RS-HM-03B	Black & Gray Layered 12x12 Vinyl Floor Tile	No	M	Category I	ND/ND/NA	1 <sup>st</sup> Floor Kitchen	NA
RS-HM-04A	Cream 4" Squared Vinyl	No	M	Category I	ND	1 <sup>st</sup> Floor Bathroom	NA
RS-HM-04B	Cream 4" Squared Vinyl	No	M	Category I	ND	1 <sup>st</sup> Floor Bathroom	NA
RS-HM-05A	Brown Linoleum	No	M	Category I	ND	1 <sup>st</sup> Floor Closet	NA
RS-HM-05B	Brown Linoleum	No	M	Category I	ND	1 <sup>st</sup> Floor Closet	NA
RS-HM-06A	Black Marble Layered 12x12 Vinyl Floor Tile	No	M	Category I	ND/ND/30%CH	1 <sup>st</sup> Floor NW Bedroom	235 sq. ft.
RS-HM-06B	Black Marble Layered 12x12 Vinyl Floor Tile	No	M	Category I	ND/ND/NA	1 <sup>st</sup> Floor NW Bedroom	NA
RS-HM-07A	White 2'x4' Ceiling Tile With Pinholes & Fissures	Yes	M	Category II	ND	1 <sup>st</sup> Floor Bathroom	NA
RS-HM-07B	White 2'x4' Ceiling Tile With Pinholes & Fissures	Yes	M	Category II	ND	1 <sup>st</sup> Floor Bathroom	NA
RS-HM-08A	Drywall & Joint Compound	No	M	Category II	ND/ND	1 <sup>st</sup> Floor N Bedroom Wall	NA
RS-HM-08B	Drywall & Joint Compound	No	M	Category II	ND/ND	1 <sup>st</sup> Floor Kitchen Wall	NA
RS-HM-09A	Tan & Brown Linoleum	No	M	Category I	ND	1 <sup>st</sup> Floor Closet	NA
RS-HM-09B	Tan & Brown Linoleum	No	M	Category I	ND	1 <sup>st</sup> Floor Closet	NA
RS-HM-10A	White Textured 1'x1' Ceiling Tile	Yes	M	Category II	ND	1 <sup>st</sup> Floor Hall Closet	NA
RS-HM-10B	White Textured 1'x1' Ceiling Tile	Yes	M	Category II	ND	1 <sup>st</sup> Floor Hall Closet	NA
RS-HM-11A	Window Glazing	Yes	M	Category II	5%CH	1 <sup>st</sup> Floor Kitchen	37 Windows
RS-HM-11B	Window Glazing	Yes	M	Category II	NA	1 <sup>st</sup> Floor Front Entry	NA
RS-HM-12A	Vapor Barrier	Yes	M	Category II	ND	Exterior Under Wood Siding	NA

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2533 Reynolds St., Muskegon Heights, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
RS-HM-12B	Vapor Barrier	Yes	M	Category II	ND	Exterior Under Wood Siding	NA
RS-HM-13A	Yellow Linoleum	No	M	Category I	25%CH	2 <sup>nd</sup> Floor W Living Room	150 sq. ft.
RS-HM-13B	Yellow Linoleum	No	M	Category I	NA	2 <sup>nd</sup> Floor W Living Room	NA
RS-HM-14A	Tan & Black Linoleum	No	M	Category I	30%CH	2 <sup>nd</sup> Floor E Dining Room	70 sq. ft.
RS-HM-14B	Tan & Black Linoleum	No	M	Category I	NA	2 <sup>nd</sup> Floor E Dining Room	NA
RS-HM-15A	Layered Woodgrain 12"x12" Vinyl Floor Tile	No	M	Category I	ND/ND/ND/N D/30%CH	2 <sup>nd</sup> Floor E Kitchen	225 sq. ft.
RS-HM-15B	Layered Woodgrain 12"x12" Vinyl Floor Tile	No	M	Category I	ND/ND/ND/N D/NA	2 <sup>nd</sup> Floor E Kitchen	NA
RS-HM-16A	Layered Gray 12"x12" Vinyl Floor Tile	No	M	Category I	ND/ND/ND	2 <sup>nd</sup> Floor W Kitchen	NA
RS-HM-16B	Layered Gray 12"x12" Vinyl Floor Tile	No	M	Category I	ND/ND/ND	2 <sup>nd</sup> Floor W Kitchen	NA
RS-HM-17A	Tan Vinyl	No	M	Category I	ND	2 <sup>nd</sup> Floor E Bathroom	NA
RS-HM-17B	Tan Vinyl	No	M	Category I	ND	2 <sup>nd</sup> Floor E Bathroom	NA
RS-HS-01A	Plaster	No	S	Category II	ND/ND	1 <sup>st</sup> Floor Kitchen Ceiling	NA
RS-HS-01B	Plaster	No	S	Category II	ND/ND	1 <sup>st</sup> Floor NE Bedroom Ceiling	NA
RS-HS-01C	Plaster	No	S	Category II	ND/ND	1 <sup>st</sup> Floor Kitchen Wall	NA
RS-HS-01D	Plaster	No	S	Category II	ND/ND	1 <sup>st</sup> Floor Living Room Wall	NA
RS-HS-01E	Plaster	No	S	Category II	ND/ND	2 <sup>nd</sup> Floor NE Bedroom Wall	NA

**Notes:**

Material Types

M = Miscellaneous building material  
 TSI = Thermal System Insulation  
 S = Surfacing Material  
 PC = Point Count Analysis  
 CH = Chrysotile Asbestos

Abbreviations

NQ = Not quantified  
 NA = Not applicable  
 ND = Not detected. Laboratory result is less than 1 % asbestos  
 lin. ft. = linear feet  
 sq. ft. = square feet

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2533 Reynolds St., Muskegon Heights, Michigan**

Asbestos Containing Material (ACM) is defined as any material containing more than 1 percent asbestos as determined utilizing Polarized Light Microscopy.

**Table 3 - Summary of Presumed Asbestos Containing Materials, 2533 Reynolds St., Muskegon Heights, Michigan**

<b>Asbestos Containing Material Description and Location</b>					
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Condition</b>	<b>Material Type</b>	<b>Approx. Quantity</b>
Living (2 registers, 20 sq. ft.) Bath (1 register, 10 sq. ft.) NW Bedroom (1 register, 10 sq. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	40 sq. ft.
Basement (2 in. wide HVAC Tape on Cold Air Return Ductwork, 35 lin. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	35 lin. ft.

**Notes:**

Material Types

- M = Miscellaneous building material
- TSI = Thermal System Insulation
- S = Surfacing Material

Abbreviations

- lin. ft. = linear feet
- sq. ft. = square feet

**Table 4 - Summary of All Asbestos Containing Materials, 2533 Reynolds St., Muskegon Heights, Michigan**

<b>Exterior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Building Roof	Asphalt Shingles	No	1,650 sq. ft.
<b>Total</b>			<b>1,650 sq. ft.</b>
<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
1 <sup>st</sup> Fl. Kitchen	Black & Gray Layered 12x12 Vinyl Floor Tile	No	260 sq. ft.
1 <sup>st</sup> Fl. NW Bedroom	Black Marble Layered 12x12 Vinyl Floor Tile	No	165 sq. ft.
2 <sup>nd</sup> Fl. Dining Room	Black Marble Layered 12x12 Vinyl Floor Tile	No	70 sq. ft.
2 <sup>nd</sup> Fl. W Living Room	Yellow Linoleum	No	150 sq. ft.
2 <sup>nd</sup> Fl. E Dining Room	Tan & Black Linoleum	No	70 sq. ft.
2 <sup>nd</sup> Fl. E Kitchen	Layered Woodgrain 12"x12" Vinyl Floor Tile	No	176 sq. ft.
2 <sup>nd</sup> Fl. E Living	Layered Woodgrain 12"x12" Vinyl Floor Tile	No	48 sq. ft.
<b>Total</b>			<b>939 sq. ft.</b>
<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Living (2 registers, 20 sq. ft.)	HVAC Duct Wrap	Yes	40 sq. ft.
Bath (1 register, 10 sq. ft.)			
NW Bedroom (1 register, 10 sq. ft.)			
<b>Total</b>			<b>40 sq. ft.</b>
<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Basement (2 in. wide HVAC Tape on Cold Air Return Ductwork, 35 lin. ft.)	HVAC Duct Wrap	Yes	35 lin. ft.
<b>Total</b>			<b>35 lin. ft.</b>

**Table 4 - Summary of All Asbestos Containing Materials, 2533 Reynolds St., Muskegon Heights, Michigan**

<b>Interior - Asbestos Containing Materials</b>				
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>	
Kitchen (2 windows 24" wide x 36" tall)	Glazing	Yes	2 Windows	
Front Entry (10 windows 34" wide x 53" tall)	Glazing	Yes	10 Windows	
NE Bedroom (2 windows 27" wide x 57" tall)	Glazing	Yes	2 Windows	
NE Bedroom (1 window 63" wide x 35" tall)	Glazing	Yes	1 Window	
Living (1 window 76" wide x 53" tall)	Glazing	Yes	1 Window	
Living (1 window 94" wide x 53" tall)	Glazing	Yes	1 Window	
Living (2 windows 27" wide x 57" tall)	Glazing	Yes	2 Windows	
N Bedroom (2 windows 27" wide x 38" tall)	Glazing	Yes	2 Windows	
Bath (1 window 46" wide x 20" tall)	Glazing	Yes	1 Window	
NW Bedroom (2 windows 27" wide x 53" tall)	Glazing	Yes	2 Windows	
2 <sup>nd</sup> Fl. W Living (1 window 52" wide x 24" tall)	Glazing	Yes	1 Window	
2 <sup>nd</sup> Fl. W Living (1 window 28" wide x 36" tall)	Glazing	Yes	1 Window	
2 <sup>nd</sup> Fl. W Kitchen (1 window 28" wide x 36" tall)	Glazing	Yes	1 Window	
2 <sup>nd</sup> Fl. NW Bedroom (1 window 28" wide x 36" tall)	Glazing	Yes	1 Window	
2 <sup>nd</sup> Fl. W Bath (1 window 28" wide x 36" tall)	Glazing	Yes	1 Window	
2 <sup>nd</sup> Fl. E Bath (1 window 28" wide x 36" tall)	Glazing	Yes	1 Window	
2 <sup>nd</sup> Fl. E Kitchen (2 windows 28" wide x 36" tall)	Glazing	Yes	2 Windows	
2 <sup>nd</sup> Fl. E Living (3 windows 28" wide x 36" tall)	Glazing	Yes	3 Windows	
2 <sup>nd</sup> Fl. NE Bedroom (1 window 28" wide x 36" tall)	Glazing	Yes	1 Window	
2 <sup>nd</sup> Fl. N Bedroom (1 window 28" wide x 36" tall)	Glazing	Yes	1 Window	
<b>Total</b>			<b>37 Windows</b>	

**Notes:**

Abbreviations

lin. ft. = linear feet

sq. ft. = square feet

**Shaded/Bolded** = Friable ACM and any Category I and Category II non-friable ACM that has a high probability of becoming crumbled, pulverized, or reduced to powder by the demolition or renovation activities that must be properly abated prior to commencement of any demolition/renovation activities.



**Table 4 - Summary of All Asbestos Containing Materials, 2533 Reynolds St., Muskegon Heights, Michigan**

Demolition/renovation activities completed with intact Category I non-friable ACM are regulated by OSHA and must be completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note that a Negative Pressure Enclosure must be utilized during abatement when Site Conditions Warrant. Examples of these conditions include the abatement of Plaster and Vermiculite insulation, HVAC Duct Wrap in Poor Condition, and Air-O-Cell/Mag Pipe Wrap. Conditions outside of these should be assessed on a case by case basis during the Asbestos Abatement Contractors site walk and Work Plan Preparation.



P.O. Box 13216  
Lansing, MI 48901  
Phone: 888.449.4566  
Fax: 888.448.8739  
www.redcedarconsulting.net

May 8, 2017

Mr. Tim Burgess  
Muskegon County Land Bank  
Land Bank Coordinator  
173 E. Apple Avenue, Suite 104  
Muskegon, MI 49442

***RE: Asbestos Containing Material and Hazardous Materials Inspection  
2633 Reynolds St., Muskegon Heights, MI 49444  
Parcel ID: 61-26-540-003-0013-00***

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 2633 Reynolds St., Muskegon Heights, Michigan (Subject Property). This inspection was completed at the request of the Muskegon County Land Bank to comply with the United States Environmental Protection Agency (USEPA) requirements for demolition and renovation set forth under the National Emissions Standards for Hazardous Air Pollutants (NESHAP, 40 CFR Part 61). This inspection was also completed to comply with the Occupational Safety and Health Administration (OSHA) Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

### **SUBJECT PROPERTY**

The Subject Property is comprised of a .12 acre residential parcel which contains an approximate 942 square foot residential building (the Building) constructed in 1925. The Building was constructed on a concrete block basement with one aboveground floor. The exterior walls of the Building were finished with vinyl siding over wood lap while the roof was sealed with asphalt shingles. The Building can be further divided into a front entry, living room, kitchen, bath, two bedrooms, storage area and a rear entry.

### **VISUAL INSPECTION AND SAMPLING**

#### **Asbestos Containing Materials Inspection**

Aaron Paquet and Darrell DeMasters of Red Cedar Consulting (Red Cedar), accredited State Of Michigan/EPA Asbestos Building Inspectors (Accreditation Numbers A30955 and A31159, respectively) who completed training per the Michigan Asbestos Workers Accreditation Act 440, completed an inspection of the Subject Property on April 12, 2017 for suspected asbestos containing building materials.

This inspection, and subsequent sample collection was completed in accordance with the USEPA Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763) assessment and sampling protocol.

During the completion of the inspection, each area of the Subject Property was visually inspected for asbestos containing building materials (ACBM). Following the completion of the visual inspection, Red Cedar staff identified each suspect area of friable and non-friable ACBM and sorted them into one of three homogenous categories for sampling purposes. AHERA defines friable as a material that when dry, may be crumbled, pulverized, or reduced to powder by hand pressure. A homogenous area is defined by OSHA as an area of surfacing, thermal system insulation (TSI) or miscellaneous material that is uniform in color and texture. Surfacing materials are most commonly found in sprayed-on, troweled-on or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members. TSI refers to materials applied to pipes, fittings, boilers, ductwork, or other components to prevent heat loss or gain, or condensation. Any material that does not fall under the surfacing or TSI category, such as floor tile, drywall, and acoustical ceiling tile are placed into the miscellaneous materials category.

Following the completion of the visual inspection, Red Cedar staff identified the following materials as suspect ACBM:

- Asphalt Shingle
- Vapor Barrier
- Linoleum
- 1'x1' Ceiling Tile
- 12"x12" Vinyl Tile
- Drywall & Joint Compound
- Glazing
- Plaster

Red Cedar staff collected twenty five samples of suspect ACBM separated into eleven distinct homogenous groups for laboratory analysis. Samples were collected and submitted to APEX Research Inc. Laboratories (APEX) (Accreditation Number 102118-0) for laboratory analysis. Analysis was completed utilizing polarized light microscopy (PLM) which is the Environmental Protection Agency (EPA) approved method for analysis of bulk materials for asbestos. PLM analysis completed pursuant to method (EPA 600/M4-82-020) identifies asbestos fiber bundles by the visual properties displayed when the sample is treated with various dispersion staining liquids. The laboratory report completed following the sample analysis indicates if asbestos is present, and at what percentage along with a description and percentage of other fibrous and non-fibrous materials and sample color. Chain-of-custody documentation was followed from sample collection through shipping and receiving of the samples at the designated laboratory. The documentation assures that samples will meet the quality assurance/quality control measures defined by AHERA. The laboratory analytical report prepared by APEX for the twenty five samples is included as Attachment A.

## **Hazardous Materials Inspection**

On April 12, 2017 the Subject Property was also inspected for the presence of hazardous materials which include but are not limited to polychlorinated biphenyls (PCBs) and potential mercury containing equipment and any items or containers that may contain or be classified as a hazardous or regulated material. Each material, if identified, was documented along with the approximate location. Any materials identified as hazardous are included in Table 1.

## **INSPECTION RESULTS AND RECOMMENDATIONS**

During the completion of the asbestos inspection, twenty five samples of suspect ACM were collected and are documented in Table 2 along with the Red Cedar sample number, description, friability, material type, ACM classification, sample location, material quantity and laboratory analytical results.

ACM, as defined by the USEPA NESHAP is “any material containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763 Section 1, Polarized Light Microscopy”.

Friable ACM is defined by NESHAP as any material containing more than 1 percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Friable ACM is a concern due the ease of unintentionally disturbing the ACM which may result in “visible emissions” which is known as a Fiber Release Episode.

Non-friable asbestos-containing material is defined as “material containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACM’s are separated into Category I and Category II ACM. Category I ACM is any asbestos containing packing’s, gaskets, resilient floor coverings (vinyl floor tile and linoleum are examples of these) and asphalt roofing products. Category II ACM is stated by NESHAP as any material excluding Category I non-friable ACM such as drywall, plaster or fiberboard insulation.

## **Presumed Asbestos Containing Material**

Presumed Asbestos Containing Materials (PACM) are suspect surfacing, TSI and miscellaneous materials found in buildings constructed prior to 1980 which are classified as and due to the age of the structure, are assumed to be ACM and do not require sample collection and analysis. OSHA dictates that PACM may be “rebutted” following a complete inspection pursuant to AHERA protocol.

No PACM was identified during the completion of this inspection. All suspect materials identified were sampled and analyzed for ACM.

Table 3 lists the location, material description, friability, condition, material type (surfacing, thermal or miscellaneous) and approximate quantity of all PACM documented at the Subject Property.

Table 4 provides a summary all ACM documented at the Subject Property which includes the material location, description, and approximate quantity.

**Friable ACM's**

No friable ACM's were identified during the completion of this inspection.

**Category I ACM**

No Category I ACM was identified during the completion of this inspection.

**Category II ACM**

No Category II non-friable ACM was identified during the completion of this inspection.

**RECOMMENDATIONS**

**Asbestos Containing Materials**

No ACM was identified within the Building that would require abatement prior to demolition/renovation of the structure.

Please note: The location of samples obtained during this inspection were in a random fashion and areas that were not identified during this inspection may be damaged or have become damaged since the inspection was completed. If Category I or Category II friable materials are discovered prior to or during the demolition/renovation process, these materials must be abated prior to commencement of any demolition/renovation activities at the Subject Property.

**Hazardous Materials**

Hazardous Materials identified at the Subject Property and documented in Table 1 which require proper removal and disposal consist of the following items:

- Thermostat (1)

**REGULATORY REQUIREMENTS**

A Notification of Intent to Renovate/Demolish form must be filed with the Michigan Department of Environmental Quality- Air Quality Division at least 10 working days prior to any renovation or demolition activities at a site.

The Notification of Intent to Renovate/Demolish form must also be completed and submitted to the MIOSHA-Asbestos Program whenever demolition, encapsulation and/or renovation activities at a site involving greater than ten lineal feet and/or fifteen square feet of ACM will be completed.

Regulated asbestos containing materials per NESHAP (40 CFR Part 61) which falls into any of the following categories are ACM's that must be removed prior to any renovation/demolition activities at the Subject Property.

- Friable asbestos material.

Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-26-540-003-0013-00

- Category I non-friable ACM that has become friable.
- Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading.
- Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations.

Asbestos abatement should only be performed by a certified asbestos abatement contractor licensed to complete abatement work. The contractor must also follow the standards and requirements set forth per the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61).

Additional information regarding the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61) can be obtained by contacting the associated agency below.

NESHAP Asbestos Program  
Department of Environmental Quality  
Phone: 517-284-6777

MIOSHA-CSHD-Asbestos Program  
State of Michigan  
Phone: 517-284-7680  
Email: asbestos@michigan.gov

### **DISCLAIMER**

Red Cedar Consulting performed destructive testing methods in an attempt to access and inspect all areas of the Building. Unfortunately, due to the age of construction along with multiple additions/renovations that may have been completed on the Building, additional inspections may be required if suspect ACM material not documented within this report is encountered during renovation/demolition activities.

This report was prepared at the request and for exclusive use by the Muskegon County Land Bank and may not be reproduced or sold without written permission from Red Cedar Consulting.

We appreciate the opportunity to provide the requested services. Please contact us at (888) 449-4566 with any questions or concerns.

Sincerely,  
**Red Cedar Consulting**



Aaron Paquet  
Michigan/EPA Certified Asbestos Building Inspector  
(A30955)

Red Cedar Consulting

***Attachment 1***  
***APEX Research Laboratory Analytical Results***



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 2633 Reynolds St

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69608  
Date Collected: 04/12/17  
Date Received: 04/13/17  
Date Analyzed: 04/17/17  
Date Reported: 04/19/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69608 - 01 Cust. #: RS-HM-01A Material: House Vapor Barrier Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 90% Other - 10%
Lab ID #: 69608 - 02 Cust. #: RS-HM-01B Material: House Vapor Barrier Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 90% Other - 10%
Lab ID #: 69608 - 03 Cust. #: RS-HM-02A Material: Shingle Roof Brown Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 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: 2633 Reynolds St

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Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69608  
Date Collected: 04/12/17  
Date Received: 04/13/17  
Date Analyzed: 04/17/17  
Date Reported: 04/19/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69608 - 04 Cust. #: RS-HM-02B Material: Shingle Roof Brown Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 20% Other - 80%
Lab ID #: 69608 - 05 Cust. #: RS-HM-03A Material: Shingle Roof Black Location: Appearance: black, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 25% Other - 75%
Lab ID #: 69608 - 05a Cust. #: RS-HM-03A Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 20% Other - 80%

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

Robert T. Letarte Jr., Laboratory Director

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# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 2633 Reynolds St

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Mr. Aaron Paquet  
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P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69608  
Date Collected: 04/12/17  
Date Received: 04/13/17  
Date Analyzed: 04/17/17  
Date Reported: 04/19/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69608 - 06 Cust. #: RS-HM-03B Material: Shingle Roof Black Location: Appearance: black, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 25% Other - 75%
Lab ID #: 69608 - 06a Cust. #: RS-HM-03B Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 20% Other - 80%
Lab ID #: 69608 - 07 Cust. #: RS-HM-04A Material: 12x12 Wood Grain VFT Location: Appearance: brown, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 2633 Reynolds St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69608  
Date Collected: 04/12/17  
Date Received: 04/13/17  
Date Analyzed: 04/17/17  
Date Reported: 04/19/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69608 - 07a Cust. #: RS-HM-04A Material: Mastic Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69608 - 08 Cust. #: RS-HM-04B Material: 12x12 Wood Grain VFT Location: Appearance: brown,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69608 - 08a Cust. #: RS-HM-04B Material: Mastic Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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## Test Method, Polarized Light Microscopy (PLM)

Project: 2633 Reynolds St

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Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69608  
Date Collected: 04/12/17  
Date Received: 04/13/17  
Date Analyzed: 04/17/17  
Date Reported: 04/19/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69608 - 09 Cust. #: RS-HM-05A Material: Tan Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 25% Fiberglass - 5% Other - 70%
Lab ID #: 69608 - 10 Cust. #: RS-HM-05B Material: Tan Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 25% Fiberglass - 5% Other - 70%
Lab ID #: 69608 - 11 Cust. #: RS-HM-06A Material: 12x12 White VFT Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> 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.



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Project: 2633 Reynolds St

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P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69608  
Date Collected: 04/12/17  
Date Received: 04/13/17  
Date Analyzed: 04/17/17  
Date Reported: 04/19/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69608 - 11a Cust. #: RS-HM-06A Material: Mastic Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69608 - 12 Cust. #: RS-HM-06B Material: 12x12 White VFT Location: Appearance: beige,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69608 - 12a Cust. #: RS-HM-06B Material: Mastic Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> 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.



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ARI Report # 17-69608  
Date Collected: 04/12/17  
Date Received: 04/13/17  
Date Analyzed: 04/17/17  
Date Reported: 04/19/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69608 - 13 Cust. #: RS-HM-07A Material: Texture Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69608 - 13a Cust. #: RS-HM-07A Material: 1x1 White Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 95% Other - 5%
Lab ID #: 69608 - 14 Cust. #: RS-HM-07B Material: Texture Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> 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



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ARI Report # 17-69608  
Date Collected: 04/12/17  
Date Received: 04/13/17  
Date Analyzed: 04/17/17  
Date Reported: 04/19/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69608 - 14a Cust. #: RS-HM-07B Material: 1x1 White Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 95% Other - 5%
Lab ID #: 69608 - 15 Cust. #: RS-HM-08A Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69608 - 15a Cust. #: RS-HM-08A Material: Joint Compound Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> 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



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Project: 2633 Reynolds St

**Report To:**  
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Lansing, MI 48901

ARI Report # 17-69608  
Date Collected: 04/12/17  
Date Received: 04/13/17  
Date Analyzed: 04/17/17  
Date Reported: 04/19/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69608 - 16 Cust. #: RS-HM-08B Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69608 - 16a Cust. #: RS-HM-08B Material: Joint Compound Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69608 - 17 Cust. #: RS-HM-09A Material: House Window Glazing Location: Appearance: white, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Wollastonite - 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: 2633 Reynolds St

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69608  
Date Collected: 04/12/17  
Date Received: 04/13/17  
Date Analyzed: 04/17/17  
Date Reported: 04/19/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69608 - 18 Cust. #: RS-HM-09B Material: House Window Glazing Location: Appearance: white, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Wollastonite - 2% Other - 98%
Lab ID #: 69608 - 19 Cust. #: RS-HM-10A Material: Front Entry Window Glazing Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69608 - 20 Cust. #: RS-HM-10B Material: Front Entry Window Glazing Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> 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: 2633 Reynolds St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69608  
Date Collected: 04/12/17  
Date Received: 04/13/17  
Date Analyzed: 04/17/17  
Date Reported: 04/19/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69608 - 21 Cust. #: RS-HS-01A Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69608 - 21a Cust. #: RS-HS-01A Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 69608 - 22 Cust. #: RS-HS-01B Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> 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.



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# Certificate of Laboratory Analysis

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ARI Report # 17-69608  
Date Collected: 04/12/17  
Date Received: 04/13/17  
Date Analyzed: 04/17/17  
Date Reported: 04/19/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69608 - 22a Cust. #: RS-HS-01B Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 69608 - 23 Cust. #: RS-HS-01C Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69608 - 23a Cust. #: RS-HS-01C Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 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: 2633 Reynolds St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69608  
Date Collected: 04/12/17  
Date Received: 04/13/17  
Date Analyzed: 04/17/17  
Date Reported: 04/19/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69608 - 24 Cust. #: RS-HS-01D Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69608 - 24a Cust. #: RS-HS-01D Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 69608 - 25 Cust. #: RS-HS-01E Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> 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: 2633 Reynolds St

**Report To:**

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ARI Report # 17-69608  
Date Collected: 04/12/17  
Date Received: 04/13/17  
Date Analyzed: 04/17/17  
Date Reported: 04/19/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69608 - 25a Cust. #: RS-HS-01E Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	
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

69608

1083

# ARLX Research, Inc.

11054 HI Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

E-mail: apexresearch@chartermi.net

Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-12-17

Project: 2633 Reynolds ST

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: Sday

**TTP** All Samples ~~Asbestos~~ ~~Paint~~ ~~Lead~~ ~~Mold~~

Asbestos: Bulk  x Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ Biosis \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	RS-HM-01A	House Vapor Barrier			
2	RS-HM-01B	" "			
3	RS-HM-02A	Shingle Roof Brown			
4	RS-HM-02B	" "			
5	RS-HM-03A	Shingle Roof Black			
6	RS-HM-03B	" "			
7	RS-HM-04A	12x12 Woodgrain VET			
8	RS-HM-04B	" "			
9	RS-HM-05A	Tan Linoleum			
10	RS-HM-05B	" "			
11	RS-HM-06A	12x12 White VET			

Relinquished by: [Signature] Date: 4-12-17

Received by: UPS Date: 4-12-17

Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_

Received by: [Signature] Date: APR 13 2017

69608

2053

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990



E-mail: apexresearch@chartermi.net Fax: 734-449-9991

Client Name: Red Cedar Consulting

Date of Survey: 4-12-17

Address: PO Box 13216

Project: 2633 Reynolds St.

City, St., Zip: Lansing, MI 48901

Project #:

Phone: (888) 449-4566 Fax: (888) 448-8739

Contact Person: Aaron Paquet

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour  
48 hour 72 hour  
Other: Sday

**ITP** All Samples except asbestos TEM: \_\_\_\_\_

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ Biosis \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
HERA 7400 Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	RS-HM-06B	12x12 White VET			
13	RS-HM-07A	1x1 Textured White CT			
14	RS-HM-07B	" " " "			
15	RS-HM-08A	Drywall + Joint Compound			
16	RS-HM-08B	" " " "			
17	RS-HM-09A	House Windows Glazing			
18	RS-HM-09B	" " " "			
19	RS-HM-10A	Front Entry Windows Glazing			
20	RS-HM-10B	" " " "			
21	RS-HS-01A	Plaster			
22	RS-HS-01B	" "			

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

Relinquished by: [Signature] Date: 4-12-17  
Received by: [Signature] Date: 4-12-17

Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_  
Received by: [Signature] Date: APR 13 2017

69608

3053

# APEX Research, Inc.

E-mail: apexresearch@chartermi.net

Fax: 734-449-9991



11054 Hi Tech Drive, Whitmore Lake, MI 48189  
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Date of Survey: 4-12-17

Project: 2633 Reynolds St

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: 5 day **TTP** All Samples except plates

TEM: AHERA 7400

Bulk/NOB

EPA Level II

Asbestos: Bulk

Wipe \_\_\_\_\_

Point Count \_\_\_\_\_

PCM \_\_\_\_\_

Lead: Bulk \_\_\_\_\_

Wipe \_\_\_\_\_

Air \_\_\_\_\_

Paint \_\_\_\_\_

Soil \_\_\_\_\_

Mold: Bulk \_\_\_\_\_

Tape \_\_\_\_\_

BioSIS \_\_\_\_\_

Other \_\_\_\_\_

Viabile \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
23	RS-HS-01C	Plaster			
24	RS-HS-01D				
25	RS-HS-01E	↓			

Relinquished by: Ashton Received by: UPS

Date: 4-12-17

Date: 4-12-17

Relinquished by: \_\_\_\_\_

Date: \_\_\_\_\_

Received by: **RECEIVED**

Date: APR 13 2017



***Tables***

**Table 1 - Summary of Hazardous Materials, 2633 Reynolds St., Muskegon Heights, Michigan**

<b>Hazardous Materials Description and Location</b>		
<b>Location</b>	<b>Material Description</b>	<b>Quantity</b>
Living Room	Thermostat	1

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2633 Reynolds St., Muskegon Heights, Michigan**

<b>Sample Number</b>	<b>Sample Description</b>	<b>Friable</b>	<b>Material Type</b>	<b>Material Classification</b>	<b>% Asbestos Laboratory Result</b>	<b>Sample Location</b>	<b>Approx. Material Quantity</b>
RS-HM-01A	House Vapor Barrier	Yes	M	Category II	ND	Exterior	NA
RS-HM-01B	House Vapor Barrier	Yes	M	Category II	ND	Exterior	NA
RS-HM-02A	Shingle Roof Brown	No	M	Category I	ND	Exterior	NA
RS-HM-02B	Shingle Roof Brown	No	M	Category I	ND	Exterior	NA
RS-HM-03A	Shingle Roof Black	No	M	Category I	ND/ND	Exterior	NA
RS-HM-03B	Shingle Roof Black	No	M	Category I	ND/ND	Exterior	NA
RS-HM-04A	12x12 Woodgrain Vinyl Tile	No	M	Category I	ND/ND	Kitchen	NA
RS-HM-04B	12x12 Woodgrain Vinyl Tile	No	M	Category I	ND/ND	Kitchen	NA
RS-HM-05A	Tan Linoleum	No	M	Category I	ND	Bathroom	NA
RS-HM-05B	Tan Linoleum	No	M	Category I	ND	Bathroom	NA
RS-HM-06A	12x12 White Vinyl Tile	No	M	Category I	ND/ND	Rear Entry	NA
RS-HM-06B	12x12 White Vinyl Tile	No	M	Category I	ND/ND	Storage Room	NA
RS-HM-07A	1'x1' Textured White Ceiling Tile	Yes	M	Category II	ND/ND	N Bedroom	NA
RS-HM-07B	1'x1' Textured White Ceiling Tile	Yes	M	Category II	ND/ND	Front Entry	NA
RS-HM-08A	Drywall & Joint Compound	Yes	M	Category II	ND/ND	Rear Entry Ceiling	NA
RS-HM-08B	Drywall & Joint Compound	Yes	M	Category II	ND/ND	Rear Entry Wall	NA
RS-HM-09A	House Window Glazing	Yes	M	Category II	ND	NE Bedroom	NA
RS-HM-09B	House Window Glazing	Yes	M	Category II	ND	N Bedroom	NA
RS-HM-10A	Front Entry Window Glazing	Yes	M	Category II	ND	Front Entry	NA
RS-HM-10B	Front Entry Window Glazing	Yes	M	Category II	ND	Front Entry	NA
RS-HS-01A	Plaster	No	S	Category II	ND/ND	N Bedroom Ceiling	NA
RS-HS-01B	Plaster	No	S	Category II	ND/ND	NE Bedroom Ceiling	NA
RS-HS-01C	Plaster	No	S	Category II	ND/ND	N Bedroom Wall	NA
RS-HS-01D	Plaster	No	S	Category II	ND/ND	NE Bedroom Wall	NA
RS-HS-01E	Plaster	No	S	Category II	ND/ND	Closet Wall	NA

**Notes:**

Material Types

Abbreviations

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2633 Reynolds St., Muskegon Heights, Michigan**

M = Miscellaneous building material  
TSI = Thermal System Insulation  
S = Surfacing Material  
PC = Point Count Analysis  
CH = Chrysotile Asbestos

NQ = Not quantified  
NA = Not applicable  
ND = Not detected. Laboratory result is less than 1 % asbestos  
lin. ft. = linear feet  
sq. ft. = square feet

Asbestos Containing Material (ACM) is defined as any material containing more than 1 percent asbestos as determined utilizing Polarized Light Microscopy.

**Table 3 - Summary of Presumed Asbestos Containing Materials, 2633 Reynolds St., Muskegon Heights, Michigan**

<b>Asbestos Containing Material Description and Location</b>					
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Condition</b>	<b>Material Type</b>	<b>Approx. Quantity</b>
No Presumed Asbestos Containing Materials Identified					

**Notes:**

Material Types

- M = Miscellaneous building material
- TSI = Thermal System Insulation
- S = Surfacing Material

Abbreviations

- lin. ft. = linear feet
- sq. ft. = square feet

**Table 4 - Summary of All Asbestos Containing Materials, 2633 Reynolds St., Muskegon Heights, Michigan**

<b>Exterior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
No Asbestos Containing Materials Identified			

**Notes:**

Abbreviations

lin. ft. = linear feet

sq. ft. = square feet

**Shaded/Bolded** = Friable ACM and any Category I and Category II non-friable ACM that has a high probability of becoming crumbled, pulverized, or reduced to powder by the demolition or renovation activities that must be properly abated prior to commencement of any demolition/renovation activities.

Demolition/renovation activities completed with intact Category I non-friable ACM are regulated by OSHA and must be completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note that a Negative Pressure Enclosure must be utilized during abatement when Site Conditions Warrant. Examples of these conditions include the abatement of Plaster and Vermiculite insulation, HVAC Duct Wrap in Poor Condition, and Air-O-Cell/Mag Pipe Wrap. Conditions outside of these should be assessed on a case by case basis during the Asbestos Abatement Contractors site walk and Work Plan Preparation.



P.O. Box 13216  
Lansing, MI 48901  
Phone: 888.449.4566  
Fax: 888.448.8739  
www.redcedarconsulting.net

May 12, 2017

Mr. Tim Burgess  
Muskegon County Land Bank  
Land Bank Coordinator  
173 E. Apple Avenue, Suite 104  
Muskegon, MI 49442

***RE: Asbestos Containing Material and Hazardous Materials Inspection  
2910 Mason Blvd., Muskegon Heights, MI 49444  
Parcel ID: 61-26-635-257-0003-00***

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 2910 Mason Blvd., Muskegon Heights, Michigan (Subject Property). This inspection was completed at the request of the Muskegon County Land Bank to comply with the United States Environmental Protection Agency (USEPA) requirements for demolition and renovation set forth under the National Emissions Standards for Hazardous Air Pollutants (NESHAP, 40 CFR Part 61). This inspection was also completed to comply with the Occupational Safety and Health Administration (OSHA) Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

### **SUBJECT PROPERTY**

The Subject Property is comprised of a .12 acre residential parcel which contains an approximate 538 square foot residential building (the Building) constructed in 1916. The Building was constructed on a concrete block crawl space with two aboveground floors. The exterior walls of the Building were finished with Transite siding over a vapor barrier while the roof was sealed with asphalt shingles. The Building can be further divided into a living room, kitchen, bath, and a bedroom on the first floor while the second floor contains one open room.

### **VISUAL INSPECTION AND SAMPLING**

#### **Asbestos Containing Materials Inspection**

Aaron Paquet and Darrell DeMasters of Red Cedar Consulting (Red Cedar), accredited State Of Michigan/EPA Asbestos Building Inspectors (Accreditation Numbers A30955 and A31159, respectively) who completed training per the Michigan Asbestos Workers Accreditation Act 440, completed an inspection of the Subject Property on April 21, 2017 for suspected asbestos containing building materials.

This inspection, and subsequent sample collection was completed in accordance with the USEPA Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763) assessment and sampling protocol.

During the completion of the inspection, each area of the Subject Property was visually inspected for asbestos containing building materials (ACBM). Following the completion of the visual inspection, Red Cedar staff identified each suspect area of friable and non-friable ACBM and sorted them into one of three homogenous categories for sampling purposes. AHERA defines friable as a material that when dry, may be crumbled, pulverized, or reduced to powder by hand pressure. A homogenous area is defined by OSHA as an area of surfacing, thermal system insulation (TSI) or miscellaneous material that is uniform in color and texture. Surfacing materials are most commonly found in sprayed-on, troweled-on or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members. TSI refers to materials applied to pipes, fittings, boilers, ductwork, or other components to prevent heat loss or gain, or condensation. Any material that does not fall under the surfacing or TSI category, such as floor tile, drywall, and acoustical ceiling tile are placed into the miscellaneous materials category.

Following the completion of the visual inspection, Red Cedar staff identified the following materials as suspect ACBM:

- Roofing Materials
- 12"x12" Vinyl Tile
- Linoleum
- 1'x1' Ceiling Tile
- Drywall
- Glazing
- Vapor Barrier
- Joint Compound

Red Cedar staff collected sixteen samples of suspect ACBM separated into eight distinct homogenous groups for laboratory analysis. Samples were collected and submitted to APEX Research Inc. Laboratories (APEX) (Accreditation Number 102118-0) for laboratory analysis. Analysis was completed utilizing polarized light microscopy (PLM) which is the Environmental Protection Agency (EPA) approved method for analysis of bulk materials for asbestos. PLM analysis completed pursuant to method (EPA 600/M4-82-020) identifies asbestos fiber bundles by the visual properties displayed when the sample is treated with various dispersion staining liquids. The laboratory report completed following the sample analysis indicates if asbestos is present, and at what percentage along with a description and percentage of other fibrous and non-fibrous materials and sample color. Chain-of-custody documentation was followed from sample collection through shipping and receiving of the samples at the designated laboratory. The documentation assures that samples will meet the quality assurance/quality control measures defined by AHERA. The laboratory analytical report prepared by APEX for the sixteen samples is included as Attachment A.



## **Hazardous Materials Inspection**

On April 21, 2017 the Subject Property was also inspected for the presence of hazardous materials which include but are not limited to polychlorinated biphenyls (PCBs) and potential mercury containing equipment and any items or containers that may contain or be classified as a hazardous or regulated material. Each material, if identified, was documented along with the approximate location. Any materials identified as hazardous are included in Table 1.

## **INSPECTION RESULTS AND RECOMMENDATIONS**

During the completion of the asbestos inspection, sixteen samples of suspect ACM were collected and are documented in Table 2 along with the Red Cedar sample number, description, friability, material type, ACM classification, sample location, material quantity and laboratory analytical results.

ACM, as defined by the USEPA NESHAP is “any material containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763 Section 1, Polarized Light Microscopy”.

Friable ACM is defined by NESHAP as any material containing more than 1 percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Friable ACM is a concern due the ease of unintentionally disturbing the ACM which may result in “visible emissions” which is known as a Fiber Release Episode.

Non-friable asbestos-containing material is defined as “material containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACM’s are separated into Category I and Category II ACM. Category I ACM is any asbestos containing packing’s, gaskets, resilient floor coverings (vinyl floor tile and linoleum are examples of these) and asphalt roofing products. Category II ACM is stated by NESHAP as any material excluding Category I non-friable ACM such as drywall, plaster or fiberboard insulation.

### **Presumed Asbestos Containing Material**

Presumed Asbestos Containing Materials (PACM) are suspect surfacing, TSI and miscellaneous materials found in buildings constructed prior to 1980 which are classified as and due to the age of the structure, are assumed to be ACM and do not require sample collection and analysis. OSHA dictates that PACM may be “rebutted” following a complete inspection pursuant to AHERA protocol.

The Cementitious “Transite” Siding on the Building was classified as PACM due to the age of the structure and samples were not collected.

Table 3 lists the location, material description, friability, condition, material type (surfacing, thermal or miscellaneous) and approximate quantity of all PACM documented at the Subject Property.

Table 4 provides a summary all ACM documented at the Subject Property which includes the material location, description, and approximate quantity.

### **Friable ACM's**

No friable ACM's were identified during the completion of this inspection.

### **Category I ACM**

No Category I ACM was identified during the completion of this inspection.

### **Category II ACM**

The cementitious "Transite" siding located on the exterior of the Building was classified as PACM and no samples were collected. The visual assessment to quantify the extent of this material identified 1,064 sq. ft. of cementitious (Transite) siding on the Building.

## **RECOMMENDATIONS**

### **Asbestos Containing Materials**

Transite siding was identified on the exterior of the Building and must be abated prior to completion of any demolition activities at the Subject Property. In demolition, all cementitious ACM must be removed prior to demolition due to the likelihood of becoming regulated due to the demolition process.

Please note: The location of samples obtained during this inspection were in a random fashion and areas that were not identified during this inspection may be damaged or have become damaged since the inspection was completed. If Category I or Category II friable materials are discovered prior to or during the demolition/renovation process, these materials must be abated prior to commencement of any demolition/renovation activities at the Subject Property.

### **Hazardous Materials**

Hazardous Materials identified at the Subject Property and documented in Table 1 which require proper removal and disposal consist of the following items:

- Television (2)

## **REGULATORY REQUIREMENTS**

A Notification of Intent to Renovate/Demolish form must be filed with the Michigan Department of Environmental Quality- Air Quality Division at least 10 working days prior to any renovation or demolition activities at a site.

The Notification of Intent to Renovate/Demolish form must also be completed and submitted to the MIOSHA-Asbestos Program whenever demolition, encapsulation and/or renovation activities at a site involving greater than ten lineal feet and/or fifteen square feet of ACM will be completed.

Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-26-635-257-0003-00

Regulated asbestos containing materials per NESHAP (40 CFR Part 61) which falls into any of the following categories are ACM's that must be removed prior to any renovation/demolition activities at the Subject Property.

- Friable asbestos material.
- Category I non-friable ACM that has become friable.
- Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading.
- Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations.

Asbestos abatement should only be performed by a certified asbestos abatement contractor licensed to complete abatement work. The contractor must also follow the standards and requirements set forth per the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61).

Additional information regarding the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61) can be obtained by contacting the associated agency below.

NESHAP Asbestos Program  
Department of Environmental Quality  
Phone: 517-284-6777

MIOSHA-CSHD-Asbestos Program  
State of Michigan  
Phone: 517-284-7680  
Email: [asbestos@michigan.gov](mailto:asbestos@michigan.gov)

## **DISCLAIMER**

Red Cedar Consulting performed destructive testing methods in an attempt to access and inspect all areas of the Building. Unfortunately, due to the age of construction along with multiple additions/renovations that may have been completed on the Building, additional inspections may be required if suspect ACM material not documented within this report is encountered during renovation/demolition activities.

This report was prepared at the request and for exclusive use by the Muskegon County Land Bank and may not be reproduced or sold without written permission from Red Cedar Consulting.

We appreciate the opportunity to provide the requested services. Please contact us at (888) 449-4566 with any questions or concerns.

Sincerely,  
**Red Cedar Consulting**



Aaron Paquet  
Michigan/EPA Certified Asbestos Building Inspector  
(A30955)

Red Cedar Consulting

***Attachment 1***  
***APEX Research Laboratory Analytical Results***



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 2910 Mason Blvd

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69747  
Date Collected: 04/21/17  
Date Received: 04/24/17  
Date Analyzed: 04/28/17  
Date Reported: 05/01/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69747 - 01 Cust. #: MB-HM-01A Material: Roofing Materials Location: Appearance: black, fibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 30% Other - 70%
Lab ID #: 69747 - 01a Cust. #: MB-HM-01A Material: White Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69747 - 01b Cust. #: MB-HM-01A Material: Black Shingle Location: Appearance: black, fibrous, homogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%

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: 2910 Mason Blvd

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69747  
Date Collected: 04/21/17  
Date Received: 04/24/17  
Date Analyzed: 04/28/17  
Date Reported: 05/01/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69747 - 02 Cust. #: MB-HM-01B Material: Roofing Materials Location: Appearance: black, fibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 30% Other - 70%
Lab ID #: 69747 - 02a Cust. #: MB-HM-01B Material: White Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69747 - 02b Cust. #: MB-HM-01B Material: Black Shingle Location: Appearance: black, fibrous, homogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%

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Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



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## Test Method, Polarized Light Microscopy (PLM)

Project: 2910 Mason Blvd

**Report To:**

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Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69747  
Date Collected: 04/21/17  
Date Received: 04/24/17  
Date Analyzed: 04/28/17  
Date Reported: 05/01/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69747 - 03 Cust. #: MB-HM-02A Material: 12x12 Grey VFT Location: Appearance: brown,nonfibrous,homogenous Layer: 1 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69747 - 03a Cust. #: MB-HM-02A Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69747 - 03b Cust. #: MB-HM-02A Material: Beige Sheet Flooring Location: Appearance: beige,fibrous,nonhomogenous Layer: 3 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%

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

Robert T. Letarte Jr., Laboratory Director

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# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 2910 Mason Blvd

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Lansing, MI 48901

ARI Report # 17-69747  
Date Collected: 04/21/17  
Date Received: 04/24/17  
Date Analyzed: 04/28/17  
Date Reported: 05/01/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69747 - 03c Cust. #: MB-HM-02A Material: Green Sheet Flooring Location: Appearance: green, fibrous, nonhomogenous Layer: 4 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69747 - 04 Cust. #: MB-HM-02B Material: 12x12 Grey VFT Location: Appearance: brown, nonfibrous, homogenous Layer: 1 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69747 - 04a Cust. #: MB-HM-02B Material: Glue Location: Appearance: clear, nonfibrous, homogenous Layer: 2 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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ARI Report # 17-69747  
Date Collected: 04/21/17  
Date Received: 04/24/17  
Date Analyzed: 04/28/17  
Date Reported: 05/01/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69747 - 04b Cust. #: MB-HM-02B Material: Beige Sheet Flooring Location: Appearance: beige, fibrous, nonhomogenous Layer: 3 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69747 - 04c Cust. #: MB-HM-02B Material: Green Sheet Flooring Location: Appearance: green, fibrous, nonhomogenous Layer: 4 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69747 - 05 Cust. #: MB-HM-03A Material: Layered Vinyl Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%

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

Robert T. Letarte Jr., Laboratory Director

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ARI Report # 17-69747  
Date Collected: 04/21/17  
Date Received: 04/24/17  
Date Analyzed: 04/28/17  
Date Reported: 05/01/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69747 - 05a Cust. #: MB-HM-03A Material: White Sheet Flooring Location: Appearance: white, fibrous, nonhomogenous Layer: 2 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69747 - 05b Cust. #: MB-HM-03A Material: Sheet Flooring Location: Appearance: white, fibrous, nonhomogenous Layer: 3 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69747 - 05c Cust. #: MB-HM-03A Material: Filler Location: Appearance: white, nonfibrous, homogenous Layer: 4 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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ARI Report # 17-69747  
Date Collected: 04/21/17  
Date Received: 04/24/17  
Date Analyzed: 04/28/17  
Date Reported: 05/01/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69747 - 06 Cust. #: MB-HM-03B Material: Layered Vinyl Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 69747 - 06a Cust. #: MB-HM-03B Material: White Sheet Flooring Location: Appearance: white, fibrous, nonhomogenous Layer: 2 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69747 - 06b Cust. #: MB-HM-03B Material: Sheet Flooring Location: Appearance: white, fibrous, nonhomogenous Layer: 3 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%

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ARI Report # 17-69747  
Date Collected: 04/21/17  
Date Received: 04/24/17  
Date Analyzed: 04/28/17  
Date Reported: 05/01/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69747 - 06c Cust. #: MB-HM-03B Material: Filler Location: Appearance: white, nonfibrous, homogenous Layer: 4 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69747 - 07 Cust. #: MB-HM-04A Material: 1x1 White Smooth Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 69747 - 08 Cust. #: MB-HM-04B Material: 1x1 White Smooth Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%

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

Robert T. Letarte Jr., Laboratory Director

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Lansing, MI 48901

ARI Report # 17-69747  
Date Collected: 04/21/17  
Date Received: 04/24/17  
Date Analyzed: 04/28/17  
Date Reported: 05/01/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69747 - 09 Cust. #: MB-HM-05A Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69747 - 10 Cust. #: MB-HM-05B Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69747 - 11 Cust. #: MB-HM-06A Material: Window Glazing Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Wollastonite - 1% Other - 99%

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

Robert T. Letarte Jr., Laboratory Director

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Project: 2910 Mason Blvd

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Lansing, MI 48901

ARI Report # 17-69747  
Date Collected: 04/21/17  
Date Received: 04/24/17  
Date Analyzed: 04/28/17  
Date Reported: 05/01/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69747 - 12 Cust. #: MB-HM-06B Material: Window Glazing Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Wollastonite - 1% Other - 99%
Lab ID #: 69747 - 13 Cust. #: MB-HM-07A Material: Vapor Barrier Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 69747 - 14 Cust. #: MB-HM-07B Material: Vapor Barrier Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 50% Other - 50%

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Robert T. Letarte Jr., Laboratory Director

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Lansing, MI 48901

ARI Report # 17-69747  
Date Collected: 04/21/17  
Date Received: 04/24/17  
Date Analyzed: 04/28/17  
Date Reported: 05/01/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69747 - 15 Cust. #: MB-HM-08A Material: Joint Compound on Paneling Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 69747 - 16 Cust. #: MB-HM-08B Material: Joint Compound on Paneling Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Other - 99%
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

Apex # **69747**

1 of 2

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189  
 Phone: 734-449-9990  
 E-mail: apexresearch@charterni.net  
 Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216  
 Lansing, MI 48901

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Turn Around Times: (Circle One) P1M EPA 600, PC all samples with a detection of <5% ACM.

Rush 24 hour

48 hour 72 hour

Other: 5 days All Samples

Date of Survey: 4-21-17

Project: 2910 Mason Blvd

Project #:

Contact Person: Aaron Paquet

apauquet@redcedarconsulting.net

Lab Use Only  
 Log-In \_\_\_\_\_  
 Report \_\_\_\_\_

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
 Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
 Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BioSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
 TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	MB-HM-01A	Roofing Materials			
2	MB-HM-01B	..			
3	MB-HM-02A	12x12 tile VT <u>Sequoy</u>			
4	MB-HM-02B	..			
5	MB-HM-03A	Sequoy Vinyl Siding			
6	MB-HM-03B	..			
7	MB-HM-04A	1x1 white panel CT			
8	MB-HM-04B	..			
9	MB-HM-05A	Sequoy			
10	MB-HM-05B	..			
11	MB-HM-06A	Whitmore Sliding			

Relinquished by: [Signature] Received by: VP5  
 Date: 4-21-17 Date: 4-21-17

Relinquished by: [Signature] Received by: \_\_\_\_\_  
 Date: 1125 APR 24 2017 Date: \_\_\_\_\_



69747

242

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990  
E-mail: apexresearch@chartermi.net Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-21-17

Project: 2910 Mason Blvd

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

P1M EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: 5 day

**TTP** All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BioSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	MB-14M-06B	Window Siding			
13	MB-14M-07A	Vapor Barrier			
14	MB-14M-07B	..			
15	MB-14M-08A	Joint Compound on Paneling			
16	MB-14M-08B	..			

Relinquished by: [Signature] Received by: URS  
Date: 4-21-17 Date: 4-21-17

**RECEIVED**

Relinquished by: [Signature] Received by: \_\_\_\_\_  
Date: \_\_\_\_\_ Date: \_\_\_\_\_

***Tables***

**Table 1 - Summary of Hazardous Materials, 2910 Mason Blvd., Muskegon Heights, Michigan**

<b>Hazardous Materials Description and Location</b>		
<b>Location</b>	<b>Material Description</b>	<b>Quantity</b>
Exterior	Television	1
Kitchen	Television	1

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2910 Mason Blvd., Muskegon Heights, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
MB-HM-01A	Roofing Materials	No	M	Category I	ND/ND/ND	Exterior	NA
MB-HM-01B	Roofing Materials	No	M	Category I	ND/ND/ND	Exterior	NA
MB-HM-02A	12"x12" Gray Vinyl Tile Layered	No	M	Category I	ND/ND/ND/ND	Kitchen	NA
MB-HM-02B	12"x12" Gray Vinyl Tile Layered	No	M	Category I	ND/ND/ND/ND	Kitchen	NA
MB-HM-03A	Layered Vinyl Linoleum	No	M	Category I	ND/ND/ND/ND	Bathroom	NA
MB-HM-03B	Layered Vinyl Linoleum	No	M	Category I	ND/ND/ND/ND	Bathroom	NA
MB-HM-04A	1'x1' White Smooth Ceiling Tile	Yes	M	Category II	ND	Living	NA
MB-HM-04B	1'x1' White Smooth Ceiling Tile	Yes	M	Category II	ND	Kitchen	NA
MB-HM-05A	Drywall	No	M	Category II	ND	Living Ceiling	NA
MB-HM-05B	Drywall	No	M	Category II	ND	Living Wall	NA
MB-HM-06A	Window Glazing	Yes	M	Category II	ND	Kitchen	NA
MB-HM-06B	Window Glazing	Yes	M	Category II	ND	Living	NA
MB-HM-07A	Vapor Barrier	Yes	M	Category II	ND	Exterior	NA
MB-HM-07B	Vapor Barrier	Yes	M	Category II	ND	Exterior	NA
MB-HM-08A	Joint Compound on Paneling	No	M	Category II	ND	Living Ceiling	NA
MB-HM-08B	Joint Compound On Paneling	No	M	Category II	ND	Living Ceiling	NA

**Notes:**

Material Types

M = Miscellaneous building material  
 TSI = Thermal System Insulation  
 S = Surfacing Material  
 PC = Point Count Analysis  
 CH = Chrysotile Asbestos

Abbreviations

NQ = Not quantified  
 NA = Not applicable  
 ND = Not detected. Laboratory result is less than 1 % asbestos  
 lin. ft. = linear feet  
 sq. ft. = square feet

Asbestos Containing Material (ACM) is defined as any material containing more than 1 percent asbestos as determined utilizing Polarized Light Microscopy.

**Table 3 - Summary of Presumed Asbestos Containing Materials, 2910 Mason Blvd., Muskegon Heights, Michigan**

<b>Asbestos Containing Material Description and Location</b>					
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Condition</b>	<b>Material Type</b>	<b>Approx. Quantity</b>
Building Exterior	Transite Siding	No	Fair	M	1,064 sq. ft.

**Notes:**

Material Types

- M = Miscellaneous building material
- TSI = Thermal System Insulation
- S = Surfacing Material

Abbreviations

- lin. ft. = linear feet
- sq. ft. = square feet

**Table 4 - Summary of All Asbestos Containing Materials, 2910 Mason Blvd., Muskegon Heights, Michigan**

<b>Exterior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Building Exterior	Transite Siding	No	1,064 sq. ft.
		<b>Total</b>	<b>1,064 sq. ft.</b>

**Notes:**

Abbreviations

lin. ft. = linear feet

sq. ft. = square feet

**Shaded/Bolded** = Friable ACM and any Category I and Category II non-friable ACM that has a high probability of becoming crumbled, pulverized, or reduced to powder by the demolition or renovation activities that must be properly abated prior to commencement of any demolition/renovation activities.

Demolition/renovation activities completed with intact Category I non-friable ACM are regulated by OSHA and must be completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note that a Negative Pressure Enclosure must be utilized during abatement when Site Conditions Warrant. Examples of these conditions include the abatement of Plaster and Vermiculite insulation, HVAC Duct Wrap in Poor Condition, and Air-O-Cell/Mag Pipe Wrap. Conditions outside of these should be assessed on a case by case basis during the Asbestos Abatement Contractors site walk and Work Plan Preparation.



P.O. Box 13216  
Lansing, MI 48901  
Phone: 888.449.4566  
Fax: 888.448.8739  
www.redcedarconsulting.net

May 12, 2017

Mr. Tim Burgess  
Muskegon County Land Bank  
Land Bank Coordinator  
173 E. Apple Avenue, Suite 104  
Muskegon, MI 49442

***RE: Asbestos Containing Material and Hazardous Materials Inspection  
2917 Wood St., Muskegon Heights, MI 49444  
Parcel ID: 61-26-635-257-0020-00***

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 2917 Wood St., Muskegon Heights, Michigan (Subject Property). This inspection was completed at the request of the Muskegon County Land Bank to comply with the United States Environmental Protection Agency (USEPA) requirements for demolition and renovation set forth under the National Emissions Standards for Hazardous Air Pollutants (NESHAP, 40 CFR Part 61). This inspection was also completed to comply with the Occupational Safety and Health Administration (OSHA) Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

### **SUBJECT PROPERTY**

The Subject Property is comprised of a .12 acre residential parcel which contains an approximate 878 square foot residential building (the Building) constructed in 1920. The Building was constructed on a concrete block basement with one aboveground floor. The exterior walls of the Building were finished with Transite siding while the roof was sealed with asphalt shingles. The Building can be further divided into a living room, kitchen, bath, two bedrooms and a rear entry.

### **VISUAL INSPECTION AND SAMPLING**

#### **Asbestos Containing Materials Inspection**

Aaron Paquet and Darrell DeMasters of Red Cedar Consulting (Red Cedar), accredited State Of Michigan/EPA Asbestos Building Inspectors (Accreditation Numbers A30955 and A31159, respectively) who completed training per the Michigan Asbestos Workers Accreditation Act 440, completed an inspection of the Subject Property on April 24, 2017 for suspected asbestos containing building materials.

This inspection, and subsequent sample collection was completed in accordance with the USEPA Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763) assessment and sampling protocol.

During the completion of the inspection, each area of the Subject Property was visually inspected for asbestos containing building materials (ACBM). Following the completion of the visual inspection, Red Cedar staff identified each suspect area of friable and non-friable ACBM and sorted them into one of three homogenous categories for sampling purposes. AHERA defines friable as a material that when dry, may be crumbled, pulverized, or reduced to powder by hand pressure. A homogenous area is defined by OSHA as an area of surfacing, thermal system insulation (TSI) or miscellaneous material that is uniform in color and texture. Surfacing materials are most commonly found in sprayed-on, troweled-on or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members. TSI refers to materials applied to pipes, fittings, boilers, ductwork, or other components to prevent heat loss or gain, or condensation. Any material that does not fall under the surfacing or TSI category, such as floor tile, drywall, and acoustical ceiling tile are placed into the miscellaneous materials category.

Following the completion of the visual inspection, Red Cedar staff identified the following materials as suspect ACBM:

- Roofing Materials
- Vapor Barrier
- Vinyl Flooring
- Linoleum
- Drywall & Joint Compound
- Glazing

Red Cedar staff collected twelve samples of suspect ACBM separated into six distinct homogenous groups for laboratory analysis. Samples were collected and submitted to APEX Research Inc. Laboratories (APEX) (Accreditation Number 102118-0) for laboratory analysis. Analysis was completed utilizing polarized light microscopy (PLM) which is the Environmental Protection Agency (EPA) approved method for analysis of bulk materials for asbestos. PLM analysis completed pursuant to method (EPA 600/M4-82-020) identifies asbestos fiber bundles by the visual properties displayed when the sample is treated with various dispersion staining liquids. The laboratory report completed following the sample analysis indicates if asbestos is present, and at what percentage along with a description and percentage of other fibrous and non-fibrous materials and sample color. Chain-of-custody documentation was followed from sample collection through shipping and receiving of the samples at the designated laboratory. The documentation assures that samples will meet the quality assurance/quality control measures defined by AHERA. The laboratory analytical report prepared by APEX for the twelve samples is included as Attachment A.

### **Hazardous Materials Inspection**

On April 24, 2017 the Subject Property was also inspected for the presence of hazardous materials which include but are not limited to polychlorinated biphenyls (PCBs) and potential mercury containing equipment and any items or containers that may contain or be classified as a hazardous or regulated material. Each material, if identified, was documented along with the approximate location. Any materials identified as hazardous are included in Table 1.



## **INSPECTION RESULTS AND RECOMMENDATIONS**

During the completion of the asbestos inspection, twelve samples of suspect ACM were collected and are documented in Table 2 along with the Red Cedar sample number, description, friability, material type, ACM classification, sample location, material quantity and laboratory analytical results.

ACM, as defined by the USEPA NESHAP is “any material containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763 Section 1, Polarized Light Microscopy”.

Friable ACM is defined by NESHAP as any material containing more than 1 percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Friable ACM is a concern due the ease of unintentionally disturbing the ACM which may result in “visible emissions” which is known as a Fiber Release Episode.

Non-friable asbestos-containing material is defined as “material containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACM’s are separated into Category I and Category II ACM. Category I ACM is any asbestos containing packing’s, gaskets, resilient floor coverings (vinyl floor tile and linoleum are examples of these) and asphalt roofing products. Category II ACM is stated by NESHAP as any material excluding Category I non-friable ACM such as drywall, plaster or fiberboard insulation.

### **Presumed Asbestos Containing Material**

Presumed Asbestos Containing Materials (PACM) are suspect surfacing, TSI and miscellaneous materials found in buildings constructed prior to 1980 which are classified as and due to the age of the structure, are assumed to be ACM and do not require sample collection and analysis. OSHA dictates that PACM may be “rebutted” following a complete inspection pursuant to AHERA protocol.

The Cementitious “Transite” Siding on the Building was classified as PACM due to the age of the structure and samples were not collected.

Table 3 lists the location, material description, friability, condition, material type (surfacing, thermal or miscellaneous) and approximate quantity of all PACM documented at the Subject Property.

Table 4 provides a summary all ACM documented at the Subject Property which includes the material location, description, and approximate quantity.

### **Friable ACM's**

No friable ACM's were identified during the completion of this inspection.

### **Category I ACM**

Asphalt roof samples collected during the completion of the inspection were found to contain up to 5% Chrysotile asbestos. The assessment to quantify the extent of this material identified 1,296 sq. ft. of asphalt roofing materials on the Building.

### **Category II ACM**

The cementitious "Transite" siding located on the exterior of the Building and the Transite debris scattered across the Property was classified as PACM and no samples were collected. The visual assessment to quantify the extent of this material identified 1,152 sq. ft. of cementitious (Transite) siding on the Building.

## **RECOMMENDATIONS**

### **Asbestos Containing Materials**

Transite Siding/Debris was identified on the exterior of the Building and must be abated prior to completion of any demolition activities at the Subject Property. In demolition, all cementitious ACM must be removed prior to demolition due to the likelihood of becoming regulated due to the demolition process.

The Category I roofing materials are non-friable ACM's that may be left in place as long as the demolition/renovation activities are completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note: The location of samples obtained during this inspection were in a random fashion and areas that were not identified during this inspection may be damaged or have become damaged since the inspection was completed. If Category I or Category II friable materials are discovered prior to or during the demolition/renovation process, these materials must be abated prior to commencement of any demolition/renovation activities at the Subject Property.

### **Hazardous Materials**

Hazardous Materials identified at the Subject Property and documented in Table 1 which require proper removal and disposal consist of the following items:

- No Hazardous Materials Identified

Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-26-635-257-0020-00

## **REGULATORY REQUIREMENTS**

A Notification of Intent to Renovate/Demolish form must be filed with the Michigan Department of Environmental Quality- Air Quality Division at least 10 working days prior to any renovation or demolition activities at a site.

The Notification of Intent to Renovate/Demolish form must also be completed and submitted to the MIOSHA-Asbestos Program whenever demolition, encapsulation and/or renovation activities at a site involving greater than ten lineal feet and/or fifteen square feet of ACM will be completed.

Regulated asbestos containing materials per NESHAP (40 CFR Part 61) which falls into any of the following categories are ACM's that must be removed prior to any renovation/demolition activities at the Subject Property.

- Friable asbestos material.
- Category I non-friable ACM that has become friable.
- Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading.
- Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations.

Asbestos abatement should only be performed by a certified asbestos abatement contractor licensed to complete abatement work. The contractor must also follow the standards and requirements set forth per the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61).

Additional information regarding the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61) can be obtained by contacting the associated agency below.

NESHAP Asbestos Program  
Department of Environmental Quality  
Phone: 517-284-6777

MIOSHA-CSHD-Asbestos Program  
State of Michigan  
Phone: 517-284-7680  
Email: [asbestos@michigan.gov](mailto:asbestos@michigan.gov)

Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-26-635-257-0020-00

**DISCLAIMER**

Red Cedar Consulting performed destructive testing methods in an attempt to access and inspect all areas of the Building. Unfortunately, due to the age of construction along with multiple additions/renovations that may have been completed on the Building, additional inspections may be required if suspect ACM material not documented within this report is encountered during renovation/demolition activities.

This report was prepared at the request and for exclusive use by the Muskegon County Land Bank and may not be reproduced or sold without written permission from Red Cedar Consulting.

We appreciate the opportunity to provide the requested services. Please contact us at (888) 449-4566 with any questions or concerns.

Sincerely,  
**Red Cedar Consulting**



Aaron Paquet  
Michigan/EPA Certified Asbestos Building Inspector  
(A30955)

Red Cedar Consulting

***Attachment 1***  
***APEX Research Laboratory Analytical Results***



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 2917 Wood St

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69784  
Date Collected: 04/24/17  
Date Received: 04/26/17  
Date Analyzed: 05/02/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69784 - 01 Cust. #: WS-HM-01A Material: Vapor Barrier Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 69784 - 02 Cust. #: WS-HM-010B Material: Vapor Barrier Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 69784 - 03 Cust. #: WS-HM-02A Material: Roofing Materials Location: Appearance: black, fibrous, homogenous Layer: 1 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 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: 2917 Wood St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69784  
Date Collected: 04/24/17  
Date Received: 04/26/17  
Date Analyzed: 05/02/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69784 - 03a Cust. #: WS-HM-02A Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 20% Other - 80%
Lab ID #: 69784 - 03b Cust. #: WS-HM-02A Material: Vapor Barrier Location: Appearance: black, fibrous, homogenous Layer: 3 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 25% Other - 75%
Lab ID #: 69784 - 03c Cust. #: WS-HM-02A Material: Asphaltic Tar Location: Appearance: black, fibrous, homogenous Layer: 4 of 4	Asbestos Present: <b>YES</b> Chrysotile - 5%	Other - 95%

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

Robert T. Letarte Jr., Laboratory Director

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# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 2917 Wood St

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Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69784  
Date Collected: 04/24/17  
Date Received: 04/26/17  
Date Analyzed: 05/02/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69784 - 04 Cust. #: WS-HM-02B Material: Roofing Materials Location: Appearance: black, fibrous, homogenous Layer: 1 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 20% Other - 80%
Lab ID #: 69784 - 04a Cust. #: WS-HM-02B Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 20% Other - 80%
Lab ID #: 69784 - 04b Cust. #: WS-HM-02B Material: Vapor Barrier Location: Appearance: black, fibrous, homogenous Layer: 3 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 25% Other - 75%

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

Robert T. Letarte Jr., Laboratory Director

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# Certificate of Laboratory Analysis

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Project: 2917 Wood St

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P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69784  
Date Collected: 04/24/17  
Date Received: 04/26/17  
Date Analyzed: 05/02/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69784 - 04c Cust. #: WS-HM-02B Material: Asphaltic Tar Location: Appearance: Layer: 4 of 4	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69784 - 05 Cust. #: WS-HM-03A Material: Tan Vinyl Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Fiberglass - 10% Other - 70%
Lab ID #: 69784 - 05a Cust. #: WS-HM-03A Material: Floor Filler Location: Appearance: grey, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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Lansing, MI 48901

ARI Report # 17-69784  
Date Collected: 04/24/17  
Date Received: 04/26/17  
Date Analyzed: 05/02/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69784 - 06 Cust. #: WS-HM-03B Material: Tan Vinyl Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Fiberglass - 10% Other - 70%
Lab ID #: 69784 - 06a Cust. #: WS-HM-03B Material: Floor Filler Location: Appearance: grey, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69784 - 07 Cust. #: WS-HM-04A Material: Red Linoleum Location: Appearance: red, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%

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.



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# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 2917 Wood St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69784  
Date Collected: 04/24/17  
Date Received: 04/26/17  
Date Analyzed: 05/02/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69784 - 08 Cust. #: WS-HM-04B Material: Red Linoleum Location: Appearance: red, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 69784 - 09 Cust. #: WS-HM-05A Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Fiberglass - 2% Other - 83%
Lab ID #: 69784 - 09a Cust. #: WS-HM-05A Material: Joint Compound Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> 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: 2917 Wood St

**Report To:**

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Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69784  
Date Collected: 04/24/17  
Date Received: 04/26/17  
Date Analyzed: 05/02/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69784 - 10 Cust. #: WS-HM-05B Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Fiberglass - 2% Other - 83%
Lab ID #: 69784 - 10a Cust. #: WS-HM-05B Material: Joint Compound Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69784 - 11 Cust. #: WS-HM-06A Material: Window Glazing Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> 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: 2917 Wood St

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Lansing, MI 48901

ARI Report # 17-69784  
Date Collected: 04/24/17  
Date Received: 04/26/17  
Date Analyzed: 05/02/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69784 - 12 Cust. #: WS-HM-06B Material: Window Glazing Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	
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

69784

**AFLVA Research, Inc.** 11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

E-mail: apexresearch@chartermi.net Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-24-17

Project: 2917 *bleed off*

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

**Turn Around Times: (Circle One)**

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: *Sdegy* **(TTP)** All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BioSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	WS-HM-01A	<i>Upper Barrie</i>			
2	WS-HM-01B	<i>..</i>			
3	WS-HM-02A	<i>Roofing Materials</i>			
4	WS-HM-02B	<i>..</i>			
5	WS-HM-03A	<i>Jan Linings</i>			
6	WS-HM-03B	<i>..</i>			
7	WS-HM-04A	<i>Red Stainleum</i>			
8	WS-HM-04B	<i>..</i>			
9	WS-HM-05A	<i>Asphalt/Grout Compound</i>			
10	WS-HM-05B	<i>..</i>			
11	WS-HM-06A	<i>Asphalt Grout</i>			

**RECEIVED**

Relinquished by: *[Signature]*

Received by: *UTS*

Relinquished by: \_\_\_\_\_

Received by: \_\_\_\_\_

Date: 4-24-17

Date: 4-25-17

Date: \_\_\_\_\_

Date: APR 26 2017



***Tables***



**Table 1 - Summary of Hazardous Materials, 2917 Wood St., Muskegon Heights, Michigan**

<b>Hazardous Materials Description and Location</b>		
<b>Location</b>	<b>Material Description</b>	<b>Quantity</b>
No Hazardous Materials Identified		

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2917 Wood St., Muskegon Heights, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
WS-HM-01A	Vapor Barrier	Yes	M	Category II	ND	Exterior	NA
WS-HM-01B	Vapor Barrier	Yes	M	Category II	ND	Exterior	NA
WS-HM-02A	Roofing Material	No	M	Category I	ND/ND/ND/5%CH	Exterior	1,296 sq. ft.
WS-HM-02B	Roofing Material	No	M	Category I	ND/ND/ND/NA	Exterior	NA
WS-HM-03A	Tan Vinyl	No	M	Category I	ND/ND	Bathroom	NA
WS-HM-03B	Tan Vinyl	No	M	Category I	ND/ND	Bathroom	NA
WS-HM-04A	Red Linoleum	No	M	Category I	ND	NW Bedroom	NA
WS-HM-04B	Red Linoleum	No	M	Category I	ND	NW Bedroom	NA
WS-HM-05A	Drywall & Joint Compound	No	M	Category II	ND/ND	Living Room Ceiling	NA
WS-HM-05B	Drywall & Joint Compound	No	M	Category II	ND/ND	Living Room Wall	NA
WS-HM-06A	Window Glazing	No	M	Category II	ND	Living Room	NA
WS-HM-06B	Window Glazing	No	M	Category II	ND	Kitchen	NA

**Notes:**

Material Types

M = Miscellaneous building material  
 TSI = Thermal System Insulation  
 S = Surfacing Material  
 PC = Point Count Analysis  
 CH = Chrysotile Asbestos

Abbreviations

NQ = Not quantified  
 NA = Not applicable  
 ND = Not detected. Laboratory result is less than 1 % asbestos  
 lin. ft. = linear feet  
 sq. ft. = square feet

Asbestos Containing Material (ACM) is defined as any material containing more than 1 percent asbestos as determined utilizing Polarized Light Microscopy.

**Table 3 - Summary of Presumed Asbestos Containing Materials, 2917 Wood St., Muskegon Heights, Michigan**

<b>Asbestos Containing Material Description and Location</b>					
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Condition</b>	<b>Material Type</b>	<b>Approx. Quantity</b>
Building Exterior	Transite Siding/Debris across Property	No	Fair	M	1,152 sq. ft.

**Notes:**

Material Types

- M = Miscellaneous building material
- TSI = Thermal System Insulation
- S = Surfacing Material

Abbreviations

- lin. ft. = linear feet
- sq. ft. = square feet

**Table 4 - Summary of All Asbestos Containing Materials, 2917 Wood St., Muskegon Heights, Michigan**

<b>Exterior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Building Roof	Asphalt Shingles	No	1,296 sq. ft.
<b>Total</b>			<b>1,296 sq. ft.</b>
<b>Exterior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Building Exterior	Transite Siding/Debris across Property	No	1,152 sq. ft.
<b>Total</b>			<b>1,152 sq. ft.</b>

**Notes:**

Abbreviations

lin. ft. = linear feet

sq. ft. = square feet

**Shaded/Bolded** = Friable ACM and any Category I and Category II non-friable ACM that has a high probability of becoming crumbled, pulverized, or reduced to powder by the demolition or renovation activities that must be properly abated prior to commencement of any demolition/renovation activities.

Demolition/renovation activities completed with intact Category I non-friable ACM are regulated by OSHA and must be completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note that a Negative Pressure Enclosure must be utilized during abatement when Site Conditions Warrant. Examples of these conditions include the abatement of Plaster and Vermiculite insulation, HVAC Duct Wrap in Poor Condition, and Air-O-Cell/Mag Pipe Wrap. Conditions outside of these should be assessed on a case by case basis during the Asbestos Abatement Contractors site walk and Work Plan Preparation.



P.O. Box 13216  
Lansing, MI 48901  
Phone: 888.449.4566  
Fax: 888.448.8739  
www.redcedarconsulting.net

May 8, 2017

Mr. Tim Burgess  
Muskegon County Land Bank  
Land Bank Coordinator  
173 E. Apple Avenue, Suite 104  
Muskegon, MI 49442

***RE: Asbestos Containing Material and Hazardous Materials Inspection  
3025 Highland St., Muskegon Heights, MI 49444  
Parcel ID: 61-26-770-036-0012-00***

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 3025 Highland St., Muskegon Heights, Michigan (Subject Property). This inspection was completed at the request of the Muskegon County Land Bank to comply with the United States Environmental Protection Agency (USEPA) requirements for demolition and renovation set forth under the National Emissions Standards for Hazardous Air Pollutants (NESHAP, 40 CFR Part 61). This inspection was also completed to comply with the Occupational Safety and Health Administration (OSHA) Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

### **SUBJECT PROPERTY**

The Subject Property is comprised of a .12 acre residential parcel which contains a 216 sq. ft. detached garage and approximate 864 square foot residential building (the Building) constructed in 1927. The Building was constructed on a concrete block basement with one aboveground floor. The exterior walls of the Building were finished with wood lap while the roof was sealed with asphalt shingles. The Building can be further divided into a living room, dining room, kitchen, bath, and two bedrooms.

### **VISUAL INSPECTION AND SAMPLING**

#### **Asbestos Containing Materials Inspection**

Aaron Paquet and Darrell DeMasters of Red Cedar Consulting (Red Cedar), accredited State Of Michigan/EPA Asbestos Building Inspectors (Accreditation Numbers A30955 and A31159, respectively) who completed training per the Michigan Asbestos Workers Accreditation Act 440, completed an inspection of the Subject Property on April 19, 2017 for suspected asbestos containing building materials.

This inspection, and subsequent sample collection was completed in accordance with the USEPA Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763) assessment and sampling protocol.

During the completion of the inspection, each area of the Subject Property was visually inspected for asbestos containing building materials (ACBM). Following the completion of the visual inspection, Red Cedar staff identified each suspect area of friable and non-friable ACBM and sorted them into one of three homogenous categories for sampling purposes. AHERA defines friable as a material that when dry, may be crumbled, pulverized, or reduced to powder by hand pressure. A homogenous area is defined by OSHA as an area of surfacing, thermal system insulation (TSI) or miscellaneous material that is uniform in color and texture. Surfacing materials are most commonly found in sprayed-on, troweled-on or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members. TSI refers to materials applied to pipes, fittings, boilers, ductwork, or other components to prevent heat loss or gain, or condensation. Any material that does not fall under the surfacing or TSI category, such as floor tile, drywall, and acoustical ceiling tile are placed into the miscellaneous materials category.

Following the completion of the visual inspection, Red Cedar staff identified the following materials as suspect ACBM:

- Vapor Barrier
- Asphalt Shingle
- Linoleum
- 12"x12" Vinyl Tile
- Drywall and Joint Compound
- Glazing
- Plaster

Red Cedar staff collected seventeen samples of suspect ACBM separated into seven distinct homogenous groups for laboratory analysis. Samples were collected and submitted to APEX Research Inc. Laboratories (APEX) (Accreditation Number 102118-0) for laboratory analysis. Analysis was completed utilizing polarized light microscopy (PLM) which is the Environmental Protection Agency (EPA) approved method for analysis of bulk materials for asbestos. PLM analysis completed pursuant to method (EPA 600/M4-82-020) identifies asbestos fiber bundles by the visual properties displayed when the sample is treated with various dispersion staining liquids. The laboratory report completed following the sample analysis indicates if asbestos is present, and at what percentage along with a description and percentage of other fibrous and non-fibrous materials and sample color. Chain-of-custody documentation was followed from sample collection through shipping and receiving of the samples at the designated laboratory. The documentation assures that samples will meet the quality assurance/quality control measures defined by AHERA. The laboratory analytical report prepared by APEX for the seventeen samples is included as Attachment A.

## **Hazardous Materials Inspection**

On April 19, 2017 the Subject Property was also inspected for the presence of hazardous materials which include but are not limited to polychlorinated biphenyls (PCBs) and potential mercury containing equipment and any items or containers that may contain or be classified as a hazardous or regulated material. Each material, if identified, was documented along with the approximate location. Any materials identified as hazardous are included in Table 1.

## **INSPECTION RESULTS AND RECOMMENDATIONS**

During the completion of the asbestos inspection, seventeen samples of suspect ACM were collected and are documented in Table 2 along with the Red Cedar sample number, description, friability, material type, ACM classification, sample location, material quantity and laboratory analytical results.

ACM, as defined by the USEPA NESHAP is “any material containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763 Section 1, Polarized Light Microscopy”.

Friable ACM is defined by NESHAP as any material containing more than 1 percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Friable ACM is a concern due the ease of unintentionally disturbing the ACM which may result in “visible emissions” which is known as a Fiber Release Episode.

Non-friable asbestos-containing material is defined as “material containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACM’s are separated into Category I and Category II ACM. Category I ACM is any asbestos containing packing’s, gaskets, resilient floor coverings (vinyl floor tile and linoleum are examples of these) and asphalt roofing products. Category II ACM is stated by NESHAP as any material excluding Category I non-friable ACM such as drywall, plaster or fiberboard insulation.

### **Presumed Asbestos Containing Material**

Presumed Asbestos Containing Materials (PACM) are suspect surfacing, TSI and miscellaneous materials found in buildings constructed prior to 1980 which are classified as and due to the age of the structure, are assumed to be ACM and do not require sample collection and analysis. OSHA dictates that PACM may be “rebutted” following a complete inspection pursuant to AHERA protocol.

The HVAC Duct Wrap located in the Building was classified as PACM due to the age of the structure and samples were not collected.

Table 3 lists the location, material description, friability, condition, material type (surfacing, thermal or miscellaneous) and approximate quantity of all PACM documented at the Subject Property.

Table 4 provides a summary all ACM documented at the Subject Property which includes the material location, description, and approximate quantity.

### **Friable ACM's**

Duct Wrap identified in the building in conjunction with the forced air heating system is classified as friable ACM. The visual assessment to quantify the extent of this material identified HVAC Duct Wrap at the following locations within the basement and first floor:

- NW Bedroom (1 register, 15 sq. ft.)
- Dining (1 register, 15 sq. ft.)
- Living (1 register, 15 sq. ft.)
- Kitchen (1 register, 15 sq. ft.)

### **Category I ACM**

No Category I ACM was identified during the completion of this inspection.

### **Category II ACM**

No Category II non-friable ACM was identified during the completion of this inspection.

## **RECOMMENDATIONS**

### **Asbestos Containing Materials**

HVAC material identified in the Building system and listed below is classified as friable ACM and should be removed prior to any renovation/demolition activities.

- NW Bedroom (1 register, 15 sq. ft.)
- Dining (1 register, 15 sq. ft.)
- Living (1 register, 15 sq. ft.)
- Kitchen (1 register, 15 sq. ft.)

Please note: The location of samples obtained during this inspection were in a random fashion and areas that were not identified during this inspection may be damaged or have become damaged since the inspection was completed. If Category I or Category II friable materials are discovered prior to or during the demolition/renovation process, these materials must be abated prior to commencement of any demolition/renovation activities at the Subject Property.

### **Hazardous Materials**

Hazardous Materials identified at the Subject Property and documented in Table 1 which require proper removal and disposal consist of the following items:

- Smoke Detector (2)
- Thermostat (1)
- Automobile Tire (3)
- Gallon Container Misc. Paint (3)



Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-26-770-036-0012-00

## **REGULATORY REQUIREMENTS**

A Notification of Intent to Renovate/Demolish form must be filed with the Michigan Department of Environmental Quality- Air Quality Division at least 10 working days prior to any renovation or demolition activities at a site.

The Notification of Intent to Renovate/Demolish form must also be completed and submitted to the MIOSHA-Asbestos Program whenever demolition, encapsulation and/or renovation activities at a site involving greater than ten lineal feet and/or fifteen square feet of ACM will be completed.

Regulated asbestos containing materials per NESHAP (40 CFR Part 61) which falls into any of the following categories are ACM's that must be removed prior to any renovation/demolition activities at the Subject Property.

- Friable asbestos material.
- Category I non-friable ACM that has become friable.
- Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading.
- Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations.

Asbestos abatement should only be performed by a certified asbestos abatement contractor licensed to complete abatement work. The contractor must also follow the standards and requirements set forth per the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61).

Additional information regarding the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61) can be obtained by contacting the associated agency below.

NESHAP Asbestos Program  
Department of Environmental Quality  
Phone: 517-284-6777

MIOSHA-CSHD-Asbestos Program  
State of Michigan  
Phone: 517-284-7680  
Email: [asbestos@michigan.gov](mailto:asbestos@michigan.gov)

Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-26-770-036-0012-00

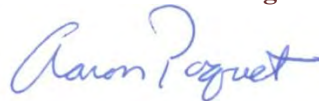
**DISCLAIMER**

Red Cedar Consulting performed destructive testing methods in an attempt to access and inspect all areas of the Building. Unfortunately, due to the age of construction along with multiple additions/renovations that may have been completed on the Building, additional inspections may be required if suspect ACM material not documented within this report is encountered during renovation/demolition activities.

This report was prepared at the request and for exclusive use by the Muskegon County Land Bank and may not be reproduced or sold without written permission from Red Cedar Consulting.

We appreciate the opportunity to provide the requested services. Please contact us at (888) 449-4566 with any questions or concerns.

Sincerely,  
**Red Cedar Consulting**



Aaron Paquet  
Michigan/EPA Certified Asbestos Building Inspector  
(A30955)

Red Cedar Consulting

***Attachment 1***  
***APEX Research Laboratory Analytical Results***



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 3025 Highland St

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69693  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/24/17  
Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69693 - 01 Cust. #: HL-HM-01A Material: Vapor Barrier Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 70% Other - 30%
Lab ID #: 69693 - 02 Cust. #: HL-HM-01B Material: Vapor Barrier Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 70% Other - 30%
Lab ID #: 69693 - 03 Cust. #: HL-HM-02A Material: Shingle Materials Location: Roof Appearance: black, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> 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



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ARI Report # 17-69693  
Date Collected: 04/19/17  
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Date Analyzed: 04/24/17  
Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69693 - 03a Cust. #: HL-HM-02A Material: Shingle Location: Roof Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69693 - 04 Cust. #: HL-HM-02B Material: Shingle Materials Location: Roof Appearance: black, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69693 - 04a Cust. #: HL-HM-02B Material: Shingle Location: Roof Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> 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.



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Lansing, MI 48901

ARI Report # 17-69693  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/24/17  
Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69693 - 05 Cust. #: HL-HM-03A Material: Tan Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Fiberglass - 2% Other - 83%
Lab ID #: 69693 - 06 Cust. #: HL-HM-03B Material: Tan Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Fiberglass - 2% Other - 83%
Lab ID #: 69693 - 07 Cust. #: HL-HM-04A Material: 12x12 Brown VFT Location: Appearance: brown, fibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Synthetic - 2% Other - 98%

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

Robert T. Letarte Jr., Laboratory Director

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ARI Report # 17-69693  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/24/17  
Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69693 - 07a Cust. #: HL-HM-04A Material: Glue Location: Appearance: clear, nonfibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69693 - 07b Cust. #: HL-HM-04A Material: Linoleum/Glue Location: Appearance: beige, fibrous, nonhomogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Fiberglass - 2% Other - 78%
Lab ID #: 69693 - 08 Cust. #: HL-HM-04B Material: 12x12 Brown VFT Location: Appearance: brown, fibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Synthetic - 2% Other - 98%

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

Robert T. Letarte Jr., Laboratory Director

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Date Analyzed: 04/24/17  
Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69693 - 08a Cust. #: HL-HM-04B Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69693 - 08b Cust. #: HL-HM-04B Material: Linoleum/Glue Location: Appearance: beige,fibrous,nonhomogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Fiberglass - 2% Other - 78%
Lab ID #: 69693 - 09 Cust. #: HL-HM-05A Material: Plaster Finish Coat Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> 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.



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ARI Report # 17-69693  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/24/17  
Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69693 - 09a Cust. #: HL-HM-05A Material: Plaster Base Coat Location: Appearance: beige, nonfibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 69693 - 09b Cust. #: HL-HM-05A Material: Drywall Location: Appearance: beige, fibrous, nonhomogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69693 - 10 Cust. #: HL-HM-05B Material: Drywall Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> 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: 3025 Highland St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69693  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/24/17  
Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69693 - 11 Cust. #: HL-HM-06A Material: Window Glazing Location: Appearance: beige,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69693 - 12 Cust. #: HL-HM-06B Material: Window Glazing Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Wollastonite - 1% Other - 99%
Lab ID #: 69693 - 13 Cust. #: HL-HS-01A Material: Plaster Finish Coat Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> 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: 3025 Highland St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69693  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/24/17  
Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69693 - 13a Cust. #: HL-HS-01A Material: Plaster Base Coat Location: Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 1% Other - 99%
Lab ID #: 69693 - 14 Cust. #: HL-HS-01B Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69693 - 14a Cust. #: HL-HS-01B Material: Plaster Base Coat Location: Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 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: 3025 Highland St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69693  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/24/17  
Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69693 - 15 Cust. #: HL-HS-01C Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69693 - 15a Cust. #: HL-HS-01C Material: Plaster Base Coat Location: Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 1% Other - 99%
Lab ID #: 69693 - 16 Cust. #: HL-HS-01D Material: Felt Location: Appearance: black, fibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 70% Other - 30%

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 3025 Highland St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69693  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/24/17  
Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69693 - 16a Cust. #: HL-HS-01D Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69693 - 16b Cust. #: HL-HS-01D Material: Plaster Base Coat Location: Appearance: beige, fibrous, homogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 1% Other - 99%
Lab ID #: 69693 - 17 Cust. #: HL-HS-01E Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> 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: 3025 Highland St

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69693  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/24/17  
Date Reported: 04/27/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69693 - 17a Cust. #: HL-HS-01E Material: Plaster Base Coat Location: Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 1% Other - 99%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	
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

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990  
 E-mail: apexresearch@chartermi.net Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-19-17

Project: 3025 Highland St

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
 Log In \_\_\_\_\_  
 Report \_\_\_\_\_

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour  
 48 hour 72 hour

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
 Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
 Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BioSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
 TEM: AHERA 7400 Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Other: Sdey All Samples

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	HL-HM-01A	Vapor Barrier			
2	HL-HM-01B	..			
3	HL-HM-03A	Sample Materials (Roof)			
4	HL-HM-03B	..			
5	HL-HM-03A	tan Sealant			
6	HL-HM-03B	..			
7	HL-HM-04A	12x12 Brown VET			
8	HL-HM-04B	..			
9	HL-HM-05A	Asphalt or Sealt Compound			
10	HL-HM-05B	..			
11	HL-HM-06A	Handover Slagging			

Relinquished by: APX/ML/STC Received by: UPS  
 Date: 4-19-17 Date: 4-19-17

Relinquished by: \_\_\_\_\_ Received by: APX  
 Date: \_\_\_\_\_ Date: APR 20 2017

**RECEIVED**

69693

2 of 2

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

E-mail: [apexresearch@chartermi.net](mailto:apexresearch@chartermi.net) Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-19-17

Project: 3025 Highland St

Project #: \_\_\_\_\_

Contact Person: Aaron Paquet

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Lab Use Only
Log-In _____
Report _____

## Turn Around Times: (Circle One)

Rush 24 hour

48 hour 72 hour

Other: 5 day

TTP All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_

Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_

Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BIOSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_

TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	<del>158</del> 11106B	Windows - Blazing			
13	44-45-01A	Plaster			
14	45-01B				
15	45-01C				
16	45-01D				
17	45-01E				

Relinquished by: ASB/kl/ct Received by: UPB

Date: 4-19-17 Date: 4-19-17

Relinquished by: \_\_\_\_\_

Date: \_\_\_\_\_

Received by: APR 20 2017

Date: APR 20 2017



***Tables***

**Table 1 - Summary of Hazardous Materials, 3025 Highland St., Muskegon Heights, Michigan**

<b>Hazardous Materials Description and Location</b>		
<b>Location</b>	<b>Material Description</b>	<b>Quantity</b>
Front Entry	Automobile Tire	1
Garage	Automobile Tire	2
Dining	Thermostat	1
Hallway	Smoke Detector	1
Dining	Gallon Container Misc. Paint	1
Basement	Smoke Detector	1
Basement	Gallon Container Misc. Paint	2

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 3025 Highland St., Muskegon Heights, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
HL-HM-01A	Vapor Barrier	Yes	M	Category II	ND	Exterior	NA
HL-HM-01B	Vapor Barrier	Yes	M	Category II	ND	Exterior	NA
HL-HM-02A	Shingle Materials (Roof)	No	M	Category I	ND/ND	Exterior	NA
HL-HM-02B	Shingle Materials (Roof)	No	M	Category I	ND/ND	Exterior	NA
HL-HM-03A	Tan Linoleum	No	M	Category I	ND	Kitchen	NA
HL-HM-03B	Tan Linoleum	No	M	Category I	ND	Kitchen	NA
HL-HM-04A	12"x12" Brown Vinyl Tile	No	M	Category I	ND/ND/ND	Bathroom	NA
HL-HM-04B	12"x12" Brown Vinyl Tile	No	M	Category I	ND/ND/ND	Bathroom	NA
HL-HM-05A	Drywall and Joint Compound	No	M	Category II	ND/ND/ND	Kitchen Ceiling	NA
HL-HM-05B	Drywall and Joint Compound	No	M	Category II	ND	Kitchen Ceiling	NA
HL-HM-06A	Window Glazing	Yes	M	Category II	ND	Living	NA
HL-HM-06B	Window Glazing	Yes	M	Category II	ND	Dining	NA
HL-HS-01A	Plaster	No	S	Category II	ND/ND	NW Bedroom Ceiling	NA
HL-HS-01B	Plaster	No	S	Category II	ND/ND	Living Ceiling	NA
HL-HS-01C	Plaster	No	S	Category II	ND/ND	Kitchen Wall	NA
HL-HS-01D	Plaster	No	S	Category II	ND/ND/ND	Bathroom Wall	NA
HL-HS-01E	Plaster	No	S	Category II	ND/ND	Dining Wall	NA

**Notes:**

Material Types

M = Miscellaneous building material  
 TSI = Thermal System Insulation  
 S = Surfacing Material  
 PC = Point Count Analysis  
 CH = Chrysotile Asbestos

Abbreviations

NQ = Not quantified  
 NA = Not applicable  
 ND = Not detected. Laboratory result is less than 1 % asbestos  
 lin. ft. = linear feet  
 sq. ft. = square feet

Asbestos Containing Material (ACM) is defined as any material containing more than 1 percent asbestos as determined utilizing Polarized Light Microscopy.

**Table 3 - Summary of Presumed Asbestos Containing Materials, 3025 Highland St., Muskegon Heights, Michigan**

<b>Asbestos Containing Material Description and Location</b>					
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Condition</b>	<b>Material Type</b>	<b>Approx. Quantity</b>
NW Bedroom (1 register, 15 sq. ft.) Dining (1 register, 15 sq. ft.) Living (1 register, 15 sq. ft.) Kitchen (1 register, 15 sq. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	60 sq. ft.

**Notes:**

Material Types

- M = Miscellaneous building material
- TSI = Thermal System Insulation
- S = Surfacing Material

Abbreviations

- lin. ft. = linear feet
- sq. ft. = square feet

**Table 4 - Summary of All Asbestos Containing Materials, 3025 Highland St., Muskegon Heights, Michigan**

<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
NW Bedroom (1 register, 15 sq. ft.)	HVAC Duct Wrap	Yes	60 sq. ft.
Dining (1 register, 15 sq. ft.)			
Living (1 register, 15 sq. ft.)			
Kitchen (1 register, 15 sq. ft.)			
<b>Total</b>			<b>60 sq. ft.</b>

**Notes:**

Abbreviations

lin. ft. = linear feet

sq. ft. = square feet

**Shaded/Bolded** = Friable ACM and any Category I and Category II non-friable ACM that has a high probability of becoming crumbled, pulverized, or reduced to powder by the demolition or renovation activities that must be properly abated prior to commencement of any demolition/renovation activities.

Demolition/renovation activities completed with intact Category I non-friable ACM are regulated by OSHA and must be completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note that a Negative Pressure Enclosure must be utilized during abatement when Site Conditions Warrant. Examples of these conditions include the abatement of Plaster and Vermiculite insulation, HVAC Duct Wrap in Poor Condition, and Air-O-Cell/Mag Pipe Wrap. Conditions outside of these should be assessed on a case by case basis during the Asbestos Abatement Contractors site walk and Work Plan Preparation.



P.O. Box 13216  
Lansing, MI 48901  
Phone: 888.449.4566  
Fax: 888.448.8739  
www.redcedarconsulting.net

May 12, 2017

Mr. Tim Burgess  
Muskegon County Land Bank  
Land Bank Coordinator  
173 E. Apple Avenue, Suite 104  
Muskegon, MI 49442

***RE: Asbestos Containing Material and Hazardous Materials Inspection  
3027 Peck St., Muskegon Heights, MI 49444  
Parcel ID: 61-26-770-001-0014-00***

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 3027 Peck St., Muskegon Heights, Michigan (Subject Property). This inspection was completed at the request of the Muskegon County Land Bank to comply with the United States Environmental Protection Agency (USEPA) requirements for demolition and renovation set forth under the National Emissions Standards for Hazardous Air Pollutants (NESHAP, 40 CFR Part 61). This inspection was also completed to comply with the Occupational Safety and Health Administration (OSHA) Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

### **SUBJECT PROPERTY**

The Subject Property is comprised of a .12 acre residential parcel which contains an approximate 2,889 square foot residential building (the Building) constructed in 1925. The Building was constructed on a concrete block basement with two aboveground floors. The exterior walls of the Building were finished with vinyl siding and Transite siding while the roof was sealed with asphalt shingles. The first floor of The Building can be divided into two apartments. The West Apartment of The Building can be divided into a living room, kitchen, bath, and three bedrooms. The East Apartment contains a front entry, living room, kitchen, bath, and two bedrooms. The second floor contains an apartment with a living room, kitchen, bath, two bedrooms and a utility room.

### **VISUAL INSPECTION AND SAMPLING**

#### **Asbestos Containing Materials Inspection**

Aaron Paquet and Darrell DeMasters of Red Cedar Consulting (Red Cedar), accredited State Of Michigan/EPA Asbestos Building Inspectors (Accreditation Numbers A30955 and A31159, respectively)

who completed training per the Michigan Asbestos Workers Accreditation Act 440, completed an inspection of the Subject Property on April 27, 2017 for suspected asbestos containing building materials.

This inspection, and subsequent sample collection was completed in accordance with the USEPA Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763) assessment and sampling protocol.

During the completion of the inspection, each area of the Subject Property was visually inspected for asbestos containing building materials (ACBM). Following the completion of the visual inspection, Red Cedar staff identified each suspect area of friable and non-friable ACBM and sorted them into one of three homogenous categories for sampling purposes. AHERA defines friable as a material that when dry, may be crumbled, pulverized, or reduced to powder by hand pressure. A homogenous area is defined by OSHA as an area of surfacing, thermal system insulation (TSI) or miscellaneous material that is uniform in color and texture. Surfacing materials are most commonly found in sprayed-on, troweled-on or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members. TSI refers to materials applied to pipes, fittings, boilers, ductwork, or other components to prevent heat loss or gain, or condensation. Any material that does not fall under the surfacing or TSI category, such as floor tile, drywall, and acoustical ceiling tile are placed into the miscellaneous materials category.

Following the completion of the visual inspection, Red Cedar staff identified the following materials as suspect ACBM:

- Asphalt Fiberboard
- Roofing Materials
- Vinyl Flooring
- Vapor Barrier
- Linoleum
- Drywall & Joint Compound
- Glazing
- Popcorn Texture
- Plaster

Red Cedar staff collected forty samples of suspect ACBM separated into seventeen distinct homogenous groups for laboratory analysis. Samples were collected and submitted to APEX Research Inc. Laboratories (APEX) (Accreditation Number 102118-0) for laboratory analysis. Analysis was completed utilizing polarized light microscopy (PLM) which is the Environmental Protection Agency (EPA) approved method for analysis of bulk materials for asbestos. PLM analysis completed pursuant to method (EPA 600/M4-82-020) identifies asbestos fiber bundles by the visual properties displayed when the sample is treated with various dispersion staining liquids. The laboratory report completed following the sample analysis indicates if asbestos is present, and at what percentage along with a description and percentage of other fibrous and non-fibrous materials and sample color. Chain-of-custody documentation was followed from sample collection through shipping and receiving of the samples at the designated laboratory. The documentation assures that samples will meet the quality assurance/quality control measures defined by AHERA. The laboratory analytical report prepared by APEX for the forty samples is included as Attachment A.

## **Hazardous Materials Inspection**

On April 27, 2017 the Subject Property was also inspected for the presence of hazardous materials which include but are not limited to polychlorinated biphenyls (PCBs) and potential mercury containing equipment and any items or containers that may contain or be classified as a hazardous or regulated material. Each material, if identified, was documented along with the approximate location. Any materials identified as hazardous are included in Table 1.

## **INSPECTION RESULTS AND RECOMMENDATIONS**

During the completion of the asbestos inspection, forty samples of suspect ACM were collected and are documented in Table 2 along with the Red Cedar sample number, description, friability, material type, ACM classification, sample location, material quantity and laboratory analytical results.

ACM, as defined by the USEPA NESHAP is “any material containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763 Section 1, Polarized Light Microscopy”.

Friable ACM is defined by NESHAP as any material containing more than 1 percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Friable ACM is a concern due the ease of unintentionally disturbing the ACM which may result in “visible emissions” which is known as a Fiber Release Episode.

Non-friable asbestos-containing material is defined as “material containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACM’s are separated into Category I and Category II ACM. Category I ACM is any asbestos containing packing’s, gaskets, resilient floor coverings (vinyl floor tile and linoleum are examples of these) and asphalt roofing products. Category II ACM is stated by NESHAP as any material excluding Category I non-friable ACM such as drywall, plaster or fiberboard insulation.

### **Presumed Asbestos Containing Material**

Presumed Asbestos Containing Materials (PACM) are suspect surfacing, TSI and miscellaneous materials found in buildings constructed prior to 1980 which are classified as and due to the age of the structure, are assumed to be ACM and do not require sample collection and analysis. OSHA dictates that PACM may be “rebutted” following a complete inspection pursuant to AHERA protocol.

The HVAC Duct Wrap located in the Building and the Cementitious “Transite” Siding on the Building was classified as PACM due to the age of the structure and samples were not collected.

Table 3 lists the location, material description, friability, condition, material type (surfacing, thermal or miscellaneous) and approximate quantity of all PACM documented at the Subject Property.

Table 4 provides a summary all ACM documented at the Subject Property which includes the material location, description, and approximate quantity.



### **Friable ACM's**

Duct Wrap identified in the building in conjunction with the forced air heating system is classified as friable ACM. The visual assessment to quantify the extent of this material identified HVAC Duct Wrap at the following locations within the basement, first and second floors:

- Basement (misc. residual HVAC tape in wall protrusion, 1 sq. ft.)

### **Category I ACM**

No Category I ACM was identified during the completion of this inspection.

### **Category II ACM**

The cementitious "Transite" siding located on the exterior of the Building was classified as PACM and no samples were collected. The visual assessment to quantify the extent of this material identified 2,400 sq. ft. of cementitious (Transite) siding on the Building.

Plaster samples, collected from the W Apt. Living Room were found to contain up to 2% asbestos following analysis. The assessment to quantify the extent of this material identified approximately 1,200 sq. ft. of plaster and 408 lineal ft. (must remove 1' of drywall within all 1st fl. rooms). of residual plaster in the base of all the walls within the Building.

## **RECOMMENDATIONS**

### **Asbestos Containing Materials**

HVAC material identified in the Building system and listed below is classified as friable ACM and should be removed prior to any renovation/demolition activities.

- Basement (misc. residual HVAC tape in wall protrusion, 1 sq. ft.)

Transite siding was identified on the exterior of the Building and must be abated prior to completion of any demolition activities at the Subject Property. In demolition, all cementitious ACM must be removed prior to demolition due to the likelihood of becoming regulated due to the demolition process.

Plaster and Residual Plaster identified on the interior of the Building must be abated prior to completion of any renovation/demolition activities at the Subject Property. Any Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations must be properly abated.

Please note: The location of samples obtained during this inspection were in a random fashion and areas that were not identified during this inspection may be damaged or have become damaged since the inspection was completed. If Category I or Category II friable materials are discovered prior to or during the demolition/renovation process, these materials must be abated prior to commencement of any demolition/renovation activities at the Subject Property.

## **Hazardous Materials**

Hazardous Materials identified at the Subject Property and documented in Table 1 which require proper removal and disposal consist of the following items:

- Automobile Tires (6)
- Television (2)
- Smoke Detector (1)
- 5 Gallon Container Misc. Paint (1)

## **REGULATORY REQUIREMENTS**

A Notification of Intent to Renovate/Demolish form must be filed with the Michigan Department of Environmental Quality- Air Quality Division at least 10 working days prior to any renovation or demolition activities at a site.

The Notification of Intent to Renovate/Demolish form must also be completed and submitted to the MIOSHA-Asbestos Program whenever demolition, encapsulation and/or renovation activities at a site involving greater than ten lineal feet and/or fifteen square feet of ACM will be completed.

Regulated asbestos containing materials per NESHAP (40 CFR Part 61) which falls into any of the following categories are ACM's that must be removed prior to any renovation/demolition activities at the Subject Property.

- Friable asbestos material.
- Category I non-friable ACM that has become friable.
- Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading.
- Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations.

Asbestos abatement should only be performed by a certified asbestos abatement contractor licensed to complete abatement work. The contractor must also follow the standards and requirements set forth per the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61).

Additional information regarding the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61) can be obtained by contacting the associated agency below.

NESHAP Asbestos Program  
Department of Environmental Quality  
Phone: 517-284-6777

MIOSHA-CSHD-Asbestos Program  
State of Michigan  
Phone: 517-284-7680  
Email: asbestos@michigan.gov

Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-26-770-001-0014-00

**DISCLAIMER**

Red Cedar Consulting performed destructive testing methods in an attempt to access and inspect all areas of the Building. Unfortunately, due to the age of construction along with multiple additions/renovations that may have been completed on the Building, additional inspections may be required if suspect ACM material not documented within this report is encountered during renovation/demolition activities.

This report was prepared at the request and for exclusive use by the Muskegon County Land Bank and may not be reproduced or sold without written permission from Red Cedar Consulting.

We appreciate the opportunity to provide the requested services. Please contact us at (888) 449-4566 with any questions or concerns.

Sincerely,  
**Red Cedar Consulting**



Aaron Paquet  
Michigan/EPA Certified Asbestos Building Inspector  
(A30955)

Red Cedar Consulting

***Attachment 1***  
***APEX Research Laboratory Analytical Results***



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 3027 Peck St

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69857  
Date Collected: 04/27/17  
Date Received: 04/28/17  
Date Analyzed: 05/04/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69857 - 01 Cust. #: PS-HM-01A Material: Asphalt Fiberboard Location: Appearance: black, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> Chrysotile - Trace  POINT COUNT RESULT	Cellulose - 40% Other - 60%
Lab ID #: 69857 - 01a Cust. #: PS-HM-01A Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 69857 - 02 Cust. #: PS-HM-01B Material: Asphalt Fiberboard Location: Appearance: black, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> Chrysotile - Trace  POINT COUNT RESULT	Cellulose - 40% Other - 60%

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



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Date Analyzed: 05/04/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69857 - 02a Cust. #: PS-HM-01B Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 69857 - 03 Cust. #: PS-HM-02A Material: Roofing Materials Location: Appearance: black, fibrous, homogenous Layer: 1 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 20% Other - 80%
Lab ID #: 69857 - 03a Cust. #: PS-HM-02A Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 20% Other - 80%

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ARI Report # 17-69857  
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Date Analyzed: 05/04/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69857 - 03b Cust. #: PS-HM-02A Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 3 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 69857 - 03c Cust. #: PS-HM-02A Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 4 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 69857 - 03d Cust. #: PS-HM-02A Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 5 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 20% Other - 80%

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Date Analyzed: 05/04/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69857 - 04 Cust. #: PS-HM-02B Material: Roofing Materials Location: Appearance: black, fibrous, homogenous Layer: 1 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 20% Other - 80%
Lab ID #: 69857 - 04a Cust. #: PS-HM-02B Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 20% Other - 80%
Lab ID #: 69857 - 04b Cust. #: PS-HM-02B Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 3 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Other - 70%

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Date Analyzed: 05/04/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69857 - 04c Cust. #: PS-HM-02B Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 4 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 69857 - 04d Cust. #: PS-HM-02B Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 5 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 20% Other - 80%
Lab ID #: 69857 - 05 Cust. #: PS-HM-03A Material: Cream Vinyl Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 15% Other - 85%

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Date Analyzed: 05/04/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69857 - 06 Cust. #: PS-HM-03B Material: Cream Vinyl Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 15% Other - 85%
Lab ID #: 69857 - 07 Cust. #: PS-HM-04A Material: Tan Vinyl Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Fiberglass - 10% Other - 70%
Lab ID #: 69857 - 07a Cust. #: PS-HM-04A Material: Adhesive Location: Appearance: yellow, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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ARI Report # 17-69857  
Date Collected: 04/27/17  
Date Received: 04/28/17  
Date Analyzed: 05/04/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69857 - 08 Cust. #: PS-HM-04B Material: Tan Vinyl Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Fiberglass - 10% Other - 70%
Lab ID #: 69857 - 08a Cust. #: PS-HM-04B Material: Adhesive Location: Appearance: yellow, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69857 - 09 Cust. #: PS-HM-05A Material: Brown Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%

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Date Analyzed: 05/04/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69857 - 10 Cust. #: PS-HM-05B Material: Brown Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 69857 - 11 Cust. #: PS-HM-06A Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Fiberglass - 2% Other - 83%
Lab ID #: 69857 - 11a Cust. #: PS-HM-06A Material: Joint Compound Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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ARI Report # 17-69857  
Date Collected: 04/27/17  
Date Received: 04/28/17  
Date Analyzed: 05/04/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69857 - 12 Cust. #: PS-HM-06B Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Fiberglass - 2% Other - 83%
Lab ID #: 69857 - 12a Cust. #: PS-HM-06B Material: Joint Compound Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69857 - 13 Cust. #: PS-HM-07A Material: Window Glazing (28x54) Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Date Analyzed: 05/04/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69857 - 14 Cust. #: PS-HM-07B Material: Window Glazing (28x54) Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69857 - 15 Cust. #: PS-HM-08A Material: Brown Stone Vinyl Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 10% Other - 90%
Lab ID #: 69857 - 16 Cust. #: PS-HM-08B Material: Brown Stone Vinyl Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 10% Other - 90%

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Date Collected: 04/27/17  
Date Received: 04/28/17  
Date Analyzed: 05/04/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69857 - 17 Cust. #: PS-HM-09A Material: Basement Window Glazing Location: Appearance: beige,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69857 - 18 Cust. #: PS-HM-09B Material: Basement Window Glazing Location: Appearance: beige,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69857 - 19 Cust. #: PS-HM-10A Material: Window Glazing (44x62) Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Date Received: 04/28/17  
Date Analyzed: 05/04/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69857 - 20 Cust. #: PS-HM-10B Material: Window Glazing (44x62) Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69857 - 21 Cust. #: PS-HM-11A Material: Tan Stone Vinyl Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 10% Other - 90%
Lab ID #: 69857 - 22 Cust. #: PS-HM-11B Material: Tan Stone Vinyl Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Fiberglass - 10% Other - 70%

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Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69857 - 22a Cust. #: PS-HM-11B Material: Adhesive Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69857 - 23 Cust. #: PS-HM-12A Material: Grey Vinyl Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Fiberglass - 10% Other - 70%
Lab ID #: 69857 - 23a Cust. #: PS-HM-12A Material: Adhesive Location: Appearance: yellow, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69857 - 24 Cust. #: PS-HM-12B Material: Grey Vinyl Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Fiberglass - 10% Other - 70%
Lab ID #: 69857 - 24a Cust. #: PS-HM-12B Material: Adhesive Location: Appearance: yellow, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69857 - 25 Cust. #: PS-HM-13A Material: Vapor Barrier Under Wood Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%

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: 3027 Peck St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69857  
Date Collected: 04/27/17  
Date Received: 04/28/17  
Date Analyzed: 05/04/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69857 - 26 Cust. #: PS-HM-13B Material: Vapor Barrier Under Wood Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 69857 - 27 Cust. #: PS-HM-14A Material: Vapor Barrier Under Transite Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 69857 - 28 Cust. #: PS-HM-14B Material: Vapor Barrier Under Transite Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%

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.



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# Certificate of Laboratory Analysis

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Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69857  
Date Collected: 04/27/17  
Date Received: 04/28/17  
Date Analyzed: 05/04/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69857 - 29 Cust. #: PS-HM-15A Material: Window Glazing (28x46) Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69857 - 30 Cust. #: PS-HM-15B Material: Window Glazing (28x46) Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69857 - 31 Cust. #: PS-HS-01A Material: Popcorn Texture Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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## Test Method, Polarized Light Microscopy (PLM)

Project: 3027 Peck St

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Mr. Aaron Paquet  
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P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69857  
Date Collected: 04/27/17  
Date Received: 04/28/17  
Date Analyzed: 05/04/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69857 - 32 Cust. #: PS-HS-01B Material: Popcorn Texture Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69857 - 33 Cust. #: PS-HS-01C Material: Popcorn Texture Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69857 - 34 Cust. #: PS-HS-01D Material: Popcorn Texture Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69857  
Date Collected: 04/27/17  
Date Received: 04/28/17  
Date Analyzed: 05/04/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69857 - 35 Cust. #: PS-HS-01E Material: Popcorn Texture Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69857 - 36 Cust. #: PS-HS-02A Material: Plaster Finish Coat Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69857 - 36a Cust. #: PS-HS-02A Material: Plaster Base Coat Location: Appearance: brown,fibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%

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

Robert T. Letarte Jr., Laboratory Director

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# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 3027 Peck St

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Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69857  
Date Collected: 04/27/17  
Date Received: 04/28/17  
Date Analyzed: 05/04/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69857 - 37 Cust. #: PS-HS-02B Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 69857 - 38 Cust. #: PS-HS-02C Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 69857 - 39 Cust. #: PS-HS-02D Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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Project: 3027 Peck St

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P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69857  
Date Collected: 04/27/17  
Date Received: 04/28/17  
Date Analyzed: 05/04/17  
Date Reported: 05/04/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69857 - 39a Cust. #: PS-HS-02D Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>YES</b> Chrysotile - 2.00%  POINT COUNT RESULT	Cellulose - 2% Other - 96.00%
Lab ID #: 69857 - 40 Cust. #: PS-HS-02E Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69857 - 40a Cust. #: PS-HS-02E Material: Plaster Base Coat 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

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NVLAP Lab Code 102118-0



Apex #

69857

1 of 4

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189  
E-mail: apexresearch@chartermi.net  
Phone: 734-449-9990  
Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-27-14

Project: 3027 Back St

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log-In  
Report

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM.  
apaquet@redcedarconsulting.net

Rush 24 hour

48 hour 72 hour

Other: 5 day **TTP** All Samples

Asbestos: Bulk  Wipe  Point Count  PCM   
Lead: Bulk  Wipe  Air  Paint  Soil   
Mold: Bulk  Tape  BioSIS  Other  Viable   
TEM: AHERA 7400 Bulk/NOB EPA Level II

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	PS-HH-01A	Asphalt Sideload			
2	PS-HH-01B	..			
3	PS-HH-02A	Roofing Material			
4	PS-HH-02B	..			
5	PS-HH-03A	Ascom Vinyl			
6	PS-HH-03B	..			
7	PS-HH-04A	Lean Vinyl			
8	PS-HH-04B	..			
9	PS-HH-05A	Brown Sinterium			
10	PS-HH-05B	..			
11	PS-HH-06A	Asphalt Joint Compound			

RECEIVED

Relinquished by: Alexander Received by: UPS

Date: 4-22-17

Date: 4-27-17

Relinquished by: SA Received by: SA

Date: 1030

APR 28 2017

Date: \_\_\_\_\_

69857

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189  
Phone: 734-449-9990  
E-mail: apexresearch@charterni.net  
Fax: 734-449-9991



2 of 4

Client Name: Red Cedar Consulting

Address: PO Box 13216  
Lansing, MI 48901

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-27-17

Project: 3027 Back Lt

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

P1M EPA 600, PC all samples with a detection of <5% ACM.  
apaquet@redcedarconsulting.net

Rush 24 hour

48 hour 72 hour

Other: Slag All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BIOSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
P2	P5-HM-06B	Segment of Joint Compound			
P3	P5-HM-07A	Window Siding (28x54)			
P4	P5-HM-07B	" "			
P5	P5-HM-08A	Brown Stone Vinyl			
P6	P5-HM-08B	" "			
P7	P5-HM-09A	Exterior Siding Siding			
P8	P5-HM-09B	" "			
P9	P5-HM-10A	Window Siding (44x42)			
P10	P5-HM-10B	" "			
P11	P5-HM-11A	Tan Stone Vinyl			
P12	P5-HM-11B	" "			

RECEIVED

Relinquished by: Debbie MacTee Received by: UFS

Date: 4-27-17 Date: 4-27-17

Relinquished by: [Signature]

Date: APR 28 2017

Received by: \_\_\_\_\_

Date: \_\_\_\_\_

69857

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189  
Phone: 734-449-9990  
E-mail: apexresearch@chartermi.net  
Fax: 734-449-9991



3 of 4

Client Name: Red Cedar Consulting

Address: PO Box 13216  
Lansing, MI 48901

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-27-17

Project: 3027 Becke St

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

P1M EPA 600, PC all samples with a detection of <5% ACM.  
apauquet@redcedarconsulting.net

Rush 24 hour

48 hour 72 hour

Other: 5 day All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BioSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
23	F3-HH-12A	Heavy Vinyl			
24	F3-HH-12B	"			
25	F3-HH-13A	Nepor Barrier Under Slood			
26	F3-HH-13B	"			
27	F3-HH-14A	Nepor Barrier Under Transmits			
28	F3-HH-14B	"			
29	F3-HH-15A	Windows Slogging (28 x 46)			
30	F3-HH-15B	"			
31	F3-HS-01A	Paperina Texture			
32	F3-HS-01B	"			
33	F3-HS-01C	"			

Relinquished by: Asheley Masten Received by: VPSS  
Date: 4-27-17 Date: 4-27-17

RECEIVED  
APR 28 2017  
Relinquished by: [Signature] Received by: \_\_\_\_\_  
Date: \_\_\_\_\_ Date: \_\_\_\_\_

# 69857 APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189  
 Phone: 734-449-9990  
 E-mail: apexresearch@chartermi.net  
 Fax: 734-449-9991



4 of 4

Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-27-17

Project: 3027 Peade St

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
 Log-In \_\_\_\_\_  
 Report \_\_\_\_\_

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: Sdey All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
 Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
 Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ Biosis \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
 TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
34	PS-HS-01D	Peade Terrace			
35	PS-HS-01E	..			
36	PS-HS-02A	Peade			
37	PS-HS-02B				
38	PS-HS-02C				
39	PS-HS-02D				
40	PS-HS-02E				

Relinquished by: [Signature] Received by: UPS  
 Date: 4-27-17 Date: 4-27-17

RECEIVED  
 Relinquished by: [Signature] Received by: \_\_\_\_\_  
 Date: APR 28 2017 Date: \_\_\_\_\_

***Tables***

**Table 1 - Summary of Hazardous Materials, 3027 Peck St., Muskegon Heights, Michigan**

<b>Hazardous Materials Description and Location</b>		
<b>Location</b>	<b>Material Description</b>	<b>Quantity</b>
Exterior	Automobile Tire	6
Exterior	Television	1
1 <sup>st</sup> Floor West Apt Living Room	Smoke Detector	1
1 <sup>st</sup> Floor West Apt NE Bedroom	Television	1
1 <sup>st</sup> Floor West Apt SE Bedroom	5 Gallon Container Misc. Paint	1

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 3027 Peck St., Muskegon Heights, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
PS-HM-01A	Asphalt Fiberboard	Yes	M	Category II	Trace CH-PC/ND	Exterior	NA
PS-HM-01B	Asphalt Fiberboard	Yes	M	Category II	Trace CH-PC/ND	Exterior	NA
PS-HM-02A	Roofing Materials	No	M	Category I	ND/ND/ND/ND/ND	Exterior	NA
PS-HM-02B	Roofing Materials	No	M	Category I	ND/ND/ND/ND/ND	Exterior	NA
PS-HM-03A	Cream Vinyl	No	M	Category I	ND	1 <sup>st</sup> Fl. East Apt Kitchen	NA
PS-HM-03B	Cream Vinyl	No	M	Category I	ND	1 <sup>st</sup> Fl. East Apt Kitchen	NA
PS-HM-04A	Tan Vinyl	No	M	Category I	ND/ND	1 <sup>st</sup> Fl. East Apt Bathroom	NA
PS-HM-04B	Tan Vinyl	No	M	Category I	ND/ND	1 <sup>st</sup> Fl. East Apt Bathroom	NA
PS-HM-05A	Brown Linoleum	No	M	Category I	ND	1 <sup>st</sup> Fl. East Apt NW Bedroom	NA
PS-HM-05B	Brown Linoleum	No	M	Category I	ND	1 <sup>st</sup> Fl. East Apt NW Bedroom	NA
PS-HM-06A	Drywall & Joint Compound	No	M	Category II	ND/ND	1 <sup>st</sup> Fl. East Apt Living Wall	NA
PS-HM-06B	Drywall & Joint Compound	No	M	Category II	ND/ND	1 <sup>st</sup> Fl. East Apt SE Bedroom Wall	NA
PS-HM-07A	Window Glazing (28x54)	Yes	M	Category II	ND	1 <sup>st</sup> Fl. East Apt Living	NA
PS-HM-07B	Window Glazing (28x54)	Yes	M	Category II	ND	1 <sup>st</sup> Fl. East Apt Living	NA
PS-HM-08A	Brown Stone Vinyl	No	M	Category I	ND	1st Fl. West Apt Kitchen	NA
PS-HM-08B	Brown Stone Vinyl	No	M	Category I	ND	1st Fl. West Apt Kitchen	NA
PS-HM-09A	Basement Window Glazing	Yes	M	Category II	ND	Basement	NA
PS-HM-09B	Basement Window Glazing	Yes	M	Category II	ND	Basement	NA
PS-HM-10A	Window Glazing (44x62)	Yes	M	Category II	ND	1 <sup>st</sup> Fl. East Apt Living	NA
PS-HM-10B	Window Glazing (44x62)	Yes	M	Category II	ND	1 <sup>st</sup> Fl. East Apt Living	NA
PS-HM-11A	Tan Stone Vinyl	No	M	Category I	ND	2 <sup>nd</sup> Fl. Kitchen	NA
PS-HM-11B	Tan Stone Vinyl	No	M	Category I	ND/ND	2 <sup>nd</sup> Fl. Kitchen	NA
PS-HM-12A	Gray Vinyl	No	M	Category I	ND/ND	2 <sup>nd</sup> Fl. Utility Room	NA
PS-HM-12B	Gray Vinyl	No	M	Category I	ND/ND	2 <sup>nd</sup> Fl. Utility Room	NA
PS-HM-13A	Vapor Barrier Under Wood	Yes	M	Category II	ND	Exterior	NA
PS-HM-13B	Vapor Barrier Under Wood	Yes	M	Category II	ND	Exterior	NA

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 3027 Peck St., Muskegon Heights, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
PS-HM-14A	Vapor Barrier Under Transite	Yes	M	Category II	ND	Exterior	NA
PS-HM-14B	Vapor Barrier Under Transite	Yes	M	Category II	ND	Exterior	NA
PS-HM-15A	Window Glazing (28x46)	Yes	M	Category II	ND	2 <sup>nd</sup> Fl. Living	NA
PS-HM-15B	Window Glazing (28x46)	Yes	M	Category II	ND	2 <sup>nd</sup> Fl. Living	NA
PS-HS-01A	Popcorn Texture	No	S	Category II	ND	1 <sup>st</sup> Fl. East Apt Living Ceiling	NA
PS-HS-01B	Popcorn Texture	No	S	Category II	ND	1 <sup>st</sup> Fl. East Apt SE Bedroom Ceiling	NA
PS-HS-01C	Popcorn Texture	No	S	Category II	ND	1 <sup>st</sup> Fl. East Apt NW Bedroom Ceiling	NA
PS-HS-01D	Popcorn Texture	No	S	Category II	ND	1st Fl. West Apt Living Ceiling	NA
PS-HS-01E	Popcorn Texture	No	S	Category II	ND	1st Fl. West Apt NE Bedroom Ceiling	NA
PS-HS-02A	Plaster	No	S	Category II	ND/ND	1 <sup>st</sup> Fl. East Apt NW Bedroom Wall (N Wall)	NA
PS-HS-02B	Plaster	No	S	Category II	ND	1st Fl. West Apt Living Ceiling	NA
PS-HS-02C	Plaster	No	S	Category II	ND	Basement Ceiling	NA
PS-HS-02D	Plaster	No	S	Category II	ND/2%CH-PC	1st Fl. West Apt Living Wall	1,200 sq. ft.
PS-HS-02E	Plaster	No	S	Category II	ND/NA	1 <sup>st</sup> Fl. East Apt NW Bedroom Wall (S Wall)	NA

**Notes:**

Material Types

M = Miscellaneous building material  
 TSI = Thermal System Insulation  
 S = Surfacing Material  
 PC = Point Count Analysis  
 CH = Chrysotile Asbestos

Abbreviations

NQ = Not quantified  
 NA = Not applicable  
 ND = Not detected. Laboratory result is less than 1 % asbestos  
 lin. ft. = linear feet  
 sq. ft. = square feet

Asbestos Containing Material (ACM) is defined as any material containing more than 1 percent asbestos as determined utilizing Polarized Light Microscopy.



**Table 3 - Summary of Presumed Asbestos Containing Materials, 3027 Peck St., Muskegon Heights, Michigan**

<b>Asbestos Containing Material Description and Location</b>					
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Condition</b>	<b>Material Type</b>	<b>Approx. Quantity</b>
Building Exterior	Transite Siding	No	Fair	M	2.400 sq. ft.
Basement (misc. residual HVAC tape in wall protrusion, 1 sq. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	1 sq. ft.

**Notes:**

Material Types

- M = Miscellaneous building material
- TSI = Thermal System Insulation
- S = Surfacing Material

Abbreviations

- lin. ft. = linear feet
- sq. ft. = square feet

**Table 4 - Summary of All Asbestos Containing Materials, 3027 Peck St., Muskegon Heights, Michigan**

<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Basement (misc. residual HVAC tape in wall protrusion, 1 sq. ft.)	HVAC Duct Wrap	Yes	1 sq. ft.
<b>Total</b>			<b>1 sq. ft.</b>
<b>Exterior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Building Exterior	Transite Siding	No	2,400 sq. ft.
<b>Total</b>			<b>2,400 sq. ft.</b>
<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
1 <sup>st</sup> Fl. E Apt. NW Bedroom	Wall Plaster	No	420 sq. ft.
1 <sup>st</sup> Fl. W Apt. Living	Wall Plaster	No	368 sq. ft.
Basement	Ceiling Plaster	No	30 sq. ft.
2 <sup>nd</sup> Fl. Apt. (Residual Plaster between lathe in Living, E Bedroom, W Bedroom, Kitchen and Bathroom)	Wall Plaster (Residual)	No	382 sq. ft.
<b>Total</b>			<b>1,200 sq. ft.</b>
<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
1 <sup>st</sup> Fl. E Apt. (173 lin. wall feet)	Residual Plaster in Wall Base (must remove 1' of drywall)	No	192 lin. ft.
1 <sup>st</sup> Fl. W Apt. (236 lin. wall feet)	Residual Plaster in Wall Base (must remove 1' of drywall)	No	320 lin. ft.
<b>Total</b>			<b>408 lin. ft.</b>

**Notes:**

Abbreviations

lin. ft. = linear feet

sq. ft. = square feet

**Shaded/Bolded** = Friable ACM and any Category I and Category II non-friable ACM that has a high probability of becoming crumbled, pulverized, or reduced to powder by the demolition or renovation activities that must be properly abated prior to commencement of any demolition/renovation activities.

**Table 4 - Summary of All Asbestos Containing Materials, 3027 Peck St., Muskegon Heights, Michigan**

Demolition/renovation activities completed with intact Category I non-friable ACM are regulated by OSHA and must be completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note that a Negative Pressure Enclosure must be utilized during abatement when Site Conditions Warrant. Examples of these conditions include the abatement of Plaster and Vermiculite insulation, HVAC Duct Wrap in Poor Condition, and Air-O-Cell/Mag Pipe Wrap. Conditions outside of these should be assessed on a case by case basis during the Asbestos Abatement Contractors site walk and Work Plan Preparation.



P.O. Box 13216  
Lansing, MI 48901  
Phone: 888.449.4566  
Fax: 888.448.8739  
www.redcedarconsulting.net

May 12, 2017

Mr. Tim Burgess  
Muskegon County Land Bank  
Land Bank Coordinator  
173 E. Apple Avenue, Suite 104  
Muskegon, MI 49442

***RE: Asbestos Containing Material and Hazardous Materials Inspection  
3128 Glendale St., Muskegon Heights, MI 49444  
Parcel ID: 26-770-012-0026-00***

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 3128 Glendale St., Muskegon Heights, Michigan (Subject Property). This inspection was completed at the request of the Muskegon County Land Bank to comply with the United States Environmental Protection Agency (USEPA) requirements for demolition and renovation set forth under the National Emissions Standards for Hazardous Air Pollutants (NESHAP, 40 CFR Part 61). This inspection was also completed to comply with the Occupational Safety and Health Administration (OSHA) Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

### **SUBJECT PROPERTY**

The Subject Property is comprised of a .12 acre residential parcel which contains an approximate 1,348 square foot residential building (the Building) constructed in 1930. The Building was constructed on a concrete block basement with two aboveground floors. The exterior walls of the Building were finished with vinyl siding over wood clapboard while the roof was sealed with asphalt shingles. The Building can be further divided into a front entry, living room, dining room, and kitchen on the first floor while the second floor contains three bedrooms and a bathroom.

### **VISUAL INSPECTION AND SAMPLING**

#### **Asbestos Containing Materials Inspection**

Aaron Paquet and Darrell DeMasters of Red Cedar Consulting (Red Cedar), accredited State Of Michigan/EPA Asbestos Building Inspectors (Accreditation Numbers A30955 and A31159, respectively)

who completed training per the Michigan Asbestos Workers Accreditation Act 440, completed an inspection of the Subject Property on April 24, 2017 for suspected asbestos containing building materials.

This inspection, and subsequent sample collection was completed in accordance with the USEPA Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763) assessment and sampling protocol.

During the completion of the inspection, each area of the Subject Property was visually inspected for asbestos containing building materials (ACBM). Following the completion of the visual inspection, Red Cedar staff identified each suspect area of friable and non-friable ACBM and sorted them into one of three homogenous categories for sampling purposes. AHERA defines friable as a material that when dry, may be crumbled, pulverized, or reduced to powder by hand pressure. A homogenous area is defined by OSHA as an area of surfacing, thermal system insulation (TSI) or miscellaneous material that is uniform in color and texture. Surfacing materials are most commonly found in sprayed-on, troweled-on or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members. TSI refers to materials applied to pipes, fittings, boilers, ductwork, or other components to prevent heat loss or gain, or condensation. Any material that does not fall under the surfacing or TSI category, such as floor tile, drywall, and acoustical ceiling tile are placed into the miscellaneous materials category.

Following the completion of the visual inspection, Red Cedar staff identified the following materials as suspect ACBM:

- Asphalt Shingle
- Linoleum
- Vinyl Flooring
- 12"x12" Vinyl Tile
- Drywall & Joint Compound
- Glazing
- Popcorn Texture
- Plaster

Red Cedar staff collected twenty eight samples of suspect ACBM separated into eleven distinct homogenous groups for laboratory analysis. Samples were collected and submitted to APEX Research Inc. Laboratories (APEX) (Accreditation Number 102118-0) for laboratory analysis. Analysis was completed utilizing polarized light microscopy (PLM) which is the Environmental Protection Agency (EPA) approved method for analysis of bulk materials for asbestos. PLM analysis completed pursuant to method (EPA 600/M4-82-020) identifies asbestos fiber bundles by the visual properties displayed when the sample is treated with various dispersion staining liquids. The laboratory report completed following the sample analysis indicates if asbestos is present, and at what percentage along with a description and percentage of other fibrous and non-fibrous materials and sample color. Chain-of-custody documentation was followed from sample collection through shipping and receiving of the samples at the designated laboratory. The documentation assures that samples will meet the quality assurance/quality control measures defined by AHERA. The laboratory analytical report prepared by APEX for the twenty eight samples is included as Attachment A.

## **Hazardous Materials Inspection**

On April 24, 2017 the Subject Property was also inspected for the presence of hazardous materials which include but are not limited to polychlorinated biphenyls (PCBs) and potential mercury containing equipment and any items or containers that may contain or be classified as a hazardous or regulated material. Each material, if identified, was documented along with the approximate location. Any materials identified as hazardous are included in Table 1.

## **INSPECTION RESULTS AND RECOMMENDATIONS**

During the completion of the asbestos inspection, twenty eight samples of suspect ACM were collected and are documented in Table 2 along with the Red Cedar sample number, description, friability, material type, ACM classification, sample location, material quantity and laboratory analytical results.

ACM, as defined by the USEPA NESHAP is “any material containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763 Section 1, Polarized Light Microscopy”.

Friable ACM is defined by NESHAP as any material containing more than 1 percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Friable ACM is a concern due the ease of unintentionally disturbing the ACM which may result in “visible emissions” which is known as a Fiber Release Episode.

Non-friable asbestos-containing material is defined as “material containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACM’s are separated into Category I and Category II ACM. Category I ACM is any asbestos containing packing’s, gaskets, resilient floor coverings (vinyl floor tile and linoleum are examples of these) and asphalt roofing products. Category II ACM is stated by NESHAP as any material excluding Category I non-friable ACM such as drywall, plaster or fiberboard insulation.

### **Presumed Asbestos Containing Material**

Presumed Asbestos Containing Materials (PACM) are suspect surfacing, TSI and miscellaneous materials found in buildings constructed prior to 1980 which are classified as and due to the age of the structure, are assumed to be ACM and do not require sample collection and analysis. OSHA dictates that PACM may be “rebutted” following a complete inspection pursuant to AHERA protocol.

The HVAC Duct Wrap located in the Building was classified as PACM due to the age of the structure and samples were not collected.

Table 3 lists the location, material description, friability, condition, material type (surfacing, thermal or miscellaneous) and approximate quantity of all PACM documented at the Subject Property.

Table 4 provides a summary all ACM documented at the Subject Property which includes the material location, description, and approximate quantity.

### **Friable ACM's**

A window glazing sample collected from a window in the Living Room was found to contain up to 5% asbestos following analysis. The assessment to quantify the extent of this material identified sixteen windows at the following locations that would fall into the same homogenous group. The locations of the windows are listed below:

- Living (2 windows 23" wide x 54" tall)
- Front Entry (6 windows 23" wide x 54" tall)
- Kitchen (2 windows 23" wide x 32" tall)
- 2nd fl. NW Bedroom (2 windows 32" wide x 54" tall)
- 2nd fl. NE Bedroom (2 windows 32" wide x 54" tall)
- 2nd fl. Hallway (1 window 32" wide x 54" tall)
- 2nd fl. E Bedroom (1 window 32" wide x 54" tall)

Duct Wrap identified in the building in conjunction with the forced air heating system is classified as friable ACM. The visual assessment to quantify the extent of this material identified HVAC Duct Wrap at the following locations within the basement, first and second floors:

- Living (10 sq. ft. duct wrap on boot)
- Dining (10 sq. ft. duct wrap on boot)
- Kitchen (10 sq. ft. duct wrap on boot)
- 2nd Fl. NE Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- 2nd Fl. NW Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- 2nd Fl. E Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)

### **Category I ACM**

No Category I ACM was identified during the completion of this inspection.

### **Category II ACM**

Plaster samples, collected from the Living Room, NW Bedroom, and Kitchen were each found to contain up to 2% asbestos following analysis. The assessment to quantify the extent of this material identified approximately 3,443 sq. ft. of plaster within the Building.

## **RECOMMENDATIONS**

### **Asbestos Containing Materials**

HVAC material identified in the Building system and listed below is classified as friable ACM and should be removed prior to any renovation/demolition activities.

- Living (10 sq. ft. duct wrap on boot)
- Dining (10 sq. ft. duct wrap on boot)
- Kitchen (10 sq. ft. duct wrap on boot)
- 2nd Fl. NE Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- 2nd Fl. NW Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- 2nd Fl. E Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)

Friable asbestos containing window glazing was identified on sixteen windows throughout the Building. The locations of these windows that should be abated prior to demolition/renovation activities are listed below:

- Living (2 windows 23" wide x 54" tall)
- Front Entry (6 windows 23" wide x 54" tall)
- Kitchen (2 windows 23" wide x 32" tall)
- 2nd fl. NW Bedroom (2 windows 32" wide x 54" tall)
- 2nd fl. NE Bedroom (2 windows 32" wide x 54" tall)
- 2nd fl. Hallway (1 window 32" wide x 54" tall)
- 2nd fl. E Bedroom (1 window 32" wide x 54" tall)

Please note: Other different sized windows are located throughout the Building but these windows were assessed and found to be constructed either without window glazing or were sampled and found to not contain asbestos and therefore are not required to be removed.

Plaster identified on the interior of the Building must be abated prior to completion of any renovation/demolition activities at the Subject Property. Any Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations must be properly abated.

Please note: The location of samples obtained during this inspection were in a random fashion and areas that were not identified during this inspection may be damaged or have become damaged since the inspection was completed. If Category I or Category II friable materials are discovered prior to or during the demolition/renovation process, these materials must be abated prior to commencement of any demolition/renovation activities at the Subject Property.

### **Hazardous Materials**

Hazardous Materials identified at the Subject Property and documented in Table 1 which require proper removal and disposal consist of the following items:

- Automobile Tires (2)



## **REGULATORY REQUIREMENTS**

A Notification of Intent to Renovate/Demolish form must be filed with the Michigan Department of Environmental Quality- Air Quality Division at least 10 working days prior to any renovation or demolition activities at a site.

The Notification of Intent to Renovate/Demolish form must also be completed and submitted to the MIOSHA-Asbestos Program whenever demolition, encapsulation and/or renovation activities at a site involving greater than ten lineal feet and/or fifteen square feet of ACM will be completed.

Regulated asbestos containing materials per NESHAP (40 CFR Part 61) which falls into any of the following categories are ACM's that must be removed prior to any renovation/demolition activities at the Subject Property.

- Friable asbestos material.
- Category I non-friable ACM that has become friable.
- Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading.
- Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations.

Asbestos abatement should only be performed by a certified asbestos abatement contractor licensed to complete abatement work. The contractor must also follow the standards and requirements set forth per the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61).

Additional information regarding the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61) can be obtained by contacting the associated agency below.

NESHAP Asbestos Program  
Department of Environmental Quality  
Phone: 517-284-6777

MIOSHA-CSHD-Asbestos Program  
State of Michigan  
Phone: 517-284-7680  
Email: [asbestos@michigan.gov](mailto:asbestos@michigan.gov)

Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 26-770-012-0026-00

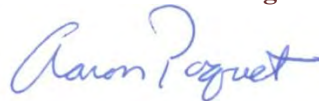
**DISCLAIMER**

Red Cedar Consulting performed destructive testing methods in an attempt to access and inspect all areas of the Building. Unfortunately, due to the age of construction along with multiple additions/renovations that may have been completed on the Building, additional inspections may be required if suspect ACM material not documented within this report is encountered during renovation/demolition activities.

This report was prepared at the request and for exclusive use by the Muskegon County Land Bank and may not be reproduced or sold without written permission from Red Cedar Consulting.

We appreciate the opportunity to provide the requested services. Please contact us at (888) 449-4566 with any questions or concerns.

Sincerely,  
**Red Cedar Consulting**



Aaron Paquet  
Michigan/EPA Certified Asbestos Building Inspector  
(A30955)

Red Cedar Consulting

***Attachment 1***  
***APEX Research Laboratory Analytical Results***



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 3128 Glendale Street

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69785  
Date Collected: 04/24/17  
Date Received: 04/26/17  
Date Analyzed: 05/02/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69785 - 01 Cust. #: GA-HM-01A Material: Roofing Material Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 15% Other - 85%
Lab ID #: 69785 - 02 Cust. #: GA-HM-01B Material: Roofing Material Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 15% Other - 85%
Lab ID #: 69785 - 03 Cust. #: GA-HM-02A Material: 12x12 Grey Diamond VFT Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> 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: 3128 Glendale Street

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69785  
Date Collected: 04/24/17  
Date Received: 04/26/17  
Date Analyzed: 05/02/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69785 - 03a Cust. #: GA-HM-02A Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69785 - 04 Cust. #: GA-HM-02B Material: 12x12 Grey Diamond VFT Location: Appearance: beige,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69785 - 04a Cust. #: GA-HM-02B Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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P.O. Box 13216  
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ARI Report # 17-69785  
Date Collected: 04/24/17  
Date Received: 04/26/17  
Date Analyzed: 05/02/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69785 - 05 Cust. #: GA-HM-03A Material: 12x12 Yellow VFT Location: Appearance: beige, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Synthetic - 5% Other - 95%
Lab ID #: 69785 - 05a Cust. #: GA-HM-03A Material: Glue Location: Appearance: clear, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69785 - 06 Cust. #: GA-HM-03B Material: 12x12 Yellow VFT Location: Appearance: beige, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Synthetic - 5% Other - 95%

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

Robert T. Letarte Jr., Laboratory Director

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ARI Report # 17-69785  
Date Collected: 04/24/17  
Date Received: 04/26/17  
Date Analyzed: 05/02/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69785 - 06a Cust. #: GA-HM-03B Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69785 - 07 Cust. #: GA-HM-04A Material: Tan Vinyl Location: Appearance: beige,fibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 10% Other - 90%
Lab ID #: 69785 - 08 Cust. #: GA-HM-04B Material: Tan Vinyl Location: Appearance: beige,fibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 10% Other - 90%

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.



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## Test Method, Polarized Light Microscopy (PLM)

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ARI Report # 17-69785  
Date Collected: 04/24/17  
Date Received: 04/26/17  
Date Analyzed: 05/02/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69785 - 09 Cust. #: GA-HM-05A Material: Drywall Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69785 - 09a Cust. #: GA-HM-05A Material: Joint Compound Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69785 - 10 Cust. #: GA-HM-05B Material: Drywall Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> 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)

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Date Analyzed: 05/02/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69785 - 10a Cust. #: GA-HM-05B Material: Joint Compound Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69785 - 11 Cust. #: GA-HM-06A Material: Window Glazing Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 5%	Other - 95%
Lab ID #: 69785 - 12 Cust. #: GA-HM-06B Material: Window Glazing Location: Appearance: Layer: of	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



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## Test Method, Polarized Light Microscopy (PLM)

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Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69785 - 13 Cust. #: GA-HM-07A Material: Grey Linoleum Location: Appearance: grey, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 5% Other - 85%
Lab ID #: 69785 - 14 Cust. #: GA-HM-07B Material: Grey Linoleum Location: Appearance: grey, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 5% Other - 85%
Lab ID #: 69785 - 15 Cust. #: GA-HM-08A Material: 12x12 Grey Diamond VFT Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> 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: 3128 Glendale Street

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69785  
Date Collected: 04/24/17  
Date Received: 04/26/17  
Date Analyzed: 05/02/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69785 - 15a Cust. #: GA-HM-08A Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69785 - 16 Cust. #: GA-HM-08B Material: 12x12 Grey Diamond VFT Location: Appearance: beige,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69785 - 16a Cust. #: GA-HM-08B Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> 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: 3128 Glendale Street

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69785  
Date Collected: 04/24/17  
Date Received: 04/26/17  
Date Analyzed: 05/02/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69785 - 17 Cust. #: GA-HM-09A Material: Yellow Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Fiberglass - 5% Other - 80%
Lab ID #: 69785 - 18 Cust. #: GA-HM-09B Material: Yellow Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Fiberglass - 5% Other - 80%
Lab ID #: 69785 - 19 Cust. #: GA-HS-01A Material: Popcorn Texture Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> 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: 3128 Glendale Street

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69785  
Date Collected: 04/24/17  
Date Received: 04/26/17  
Date Analyzed: 05/02/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69785 - 20 Cust. #: GA-HS-01B Material: Popcorn Texture Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69785 - 21 Cust. #: GA-HS-01C Material: Popcorn Texture Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69785 - 22 Cust. #: GA-HS-02A Material: Plaster Location: Appearance: beige,fibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 5%	Cellulose - 2% Other - 93%

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



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## Test Method, Polarized Light Microscopy (PLM)

Project: 3128 Glendale Street

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69785  
Date Collected: 04/24/17  
Date Received: 04/26/17  
Date Analyzed: 05/02/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69785 - 23 Cust. #: GA-HS-02B Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69785 - 23a Cust. #: GA-HS-02B Material: Plaster Base Coat Location: Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: 69785 - 24 Cust. #: GA-HS-02C Material: Plaster Texture Location: Appearance: white, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Wollastonite - 5% Other - 95%

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.



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# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 3128 Glendale Street

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69785  
Date Collected: 04/24/17  
Date Received: 04/26/17  
Date Analyzed: 05/02/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69785 - 24a Cust. #: GA-HS-02C Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69785 - 24b Cust. #: GA-HS-02C Material: Plaster Base Coat Location: Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: 69785 - 25 Cust. #: GA-HS-02D Material: Plaster Texture Location: Appearance: white, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Wollastonite - 5% Other - 95%

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

Robert T. Letarte Jr., Laboratory Director

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# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 3128 Glendale Street

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69785  
Date Collected: 04/24/17  
Date Received: 04/26/17  
Date Analyzed: 05/02/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69785 - 25a Cust. #: GA-HS-02D Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69785 - 25b Cust. #: GA-HS-02D Material: Plaster Base Coat Location: Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: 69785 - 26 Cust. #: GA-HS-02E Material: Plaster Texture Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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## Test Method, Polarized Light Microscopy (PLM)

Project: 3128 Glendale Street

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69785  
Date Collected: 04/24/17  
Date Received: 04/26/17  
Date Analyzed: 05/02/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69785 - 26a Cust. #: GA-HS-02E Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69785 - 26b Cust. #: GA-HS-02E Material: Plaster Base Coat Location: Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: 69785 - 27 Cust. #: GA-HS-02F Material: Plaster Texture Location: Appearance: white, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Wollastonite - 5% Other - 95%

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 3128 Glendale Street

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69785  
Date Collected: 04/24/17  
Date Received: 04/26/17  
Date Analyzed: 05/02/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69785 - 27a Cust. #: GA-HS-02F Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69785 - 27b Cust. #: GA-HS-02F Material: Plaster Base Coat Location: Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: 69785 - 28 Cust. #: GA-HS-02G Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 3128 Glendale Street

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69785  
Date Collected: 04/24/17  
Date Received: 04/26/17  
Date Analyzed: 05/02/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69785 - 28a Cust. #: GA-HS-02G Material: Plaster Base Coat Location: Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	
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

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NVLAP Lab Code 102118-0

Apex # **69785**

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189

Phone: 734-449-9990  
E-mail: apexresearch@chartermi.net  
Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216  
Lansing, MI 48901

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-24-17

Project: 3128 *Standaale Street*

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: 5 day **(TTP)** All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BioSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	GA-HM-01A	Roofing Material			
2	GA-HM-01B	"			
3	GA-HM-02A	12x12 Gray Diamond VFT			
4	GA-HM-02B	"			
5	GA-HM-03A	12x12 Yellow VFT			
6	GA-HM-03B	"			
7	GA-HM-04A	Tom Vinyl			
8	GA-HM-04B	"			
9	GA-HM-05A	Acqueduct & Spout Compound			
10	GA-HM-05B	"			
11	GA-HM-06A	Window Siding			

Relinquished by: *Apex Materials*

Received by: *UPS*

Relinquished by:

Received by:

**RECEIVED**

Date: 4-24-17

Date: 4-25-17

Date:

Date: *APR 26 2017*

69785

243

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990  
E-mail: apexresearch@chartermi.net Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-24-17

Project: 3128 *Blendale*

Project #:

Contact Person: Aaron Paquet

Turn Around Times: (Circle One) PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: *Sdey* All Samples

Asbestos: Bulk  Wipe  Point Count  PCM

Lead: Bulk  Wipe  Air  Paint  Soil

Mold: Bulk  Tape  BioSIS  Other  Viable

TEM: AHERA 7400  Bulk/NOB  EPA Level II

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	GA-HM-06B	Window Sillings			
13	GA-HM-07A	Sty Styrofoam			
14	GA-HM-07B	" "			
15	GA-HM-08A	12 x 12 Styrofoam Insulated JST			
16	GA-HM-08B	" "			
17	GA-HM-09A	Yellow Styrofoam			
18	GA-HM-09B	" "			
19	GA-HS-01A	Spun texture			
20	GA-HS-01B	" "			
21	GA-HS-01C	Plaster Spun texture			
22	GA-HS-02A	Plaster			

RECEIVED

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

Relinquished by: *[Signature]* Date: 4-24-17

Received by: *[Signature]* Date: 4-25-17

Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

69785

343

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189

Phone: 734-449-9990



E-mail: [apexresearch@chartermi.net](mailto:apexresearch@chartermi.net)

Fax: 734-449-9991

Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-24-17

Project: 3128 *Blended Street*

Project #:

Contact Person: Aaron Paquet

Lab Use Only
Log-In _____
Report _____

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: 5day **(TTP)** All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_

Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_

Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BioSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_

TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
23	GA-45-02B	<i>Roof</i>			
24	GA-45-02C				
25	GA-45-02D				
26	GA-45-02E				
27	GA-45-02F				
28	GA-45-02G				

RECEIVED

Relinquished by: *[Signature]* Received by: *[Signature]*

Date: 4-24-17 Date: 4-25-17

Relinquished by: \_\_\_\_\_ Received by: \_\_\_\_\_

Date: \_\_\_\_\_ Date: \_\_\_\_\_

***Tables***

**Table 1 - Summary of Hazardous Materials, 3128 Glendale St., Muskegon Heights, Michigan**

<b>Hazardous Materials Description and Location</b>		
<b>Location</b>	<b>Material Description</b>	<b>Quantity</b>
Basement	Automobile Tires	2



**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 3128 Glendale St., Muskegon Heights, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
GA-HM-01A	Roofing Material	No	M	Category I	ND	Exterior	NA
GA-HM-01B	Roofing Material	No	M	Category I	ND	Exterior	NA
GA-HM-02A	12x12 Gray Diamond Vinyl Floor Tile	No	M	Category I	ND/ND	Living Room	NA
GA-HM-02B	12x12 Gray Diamond Vinyl Floor Tile	No	M	Category I	ND/ND	Living Room	NA
GA-HM-03A	Yellow 12x12 Vinyl Floor Tile	No	M	Category I	ND/ND	Dining Room	NA
GA-HM-03B	Yellow 12x12 Vinyl Floor Tile	No	M	Category I	ND/ND	Dining Room	NA
GA-HM-04A	Tan Vinyl	No	M	Category I	ND	Kitchen	NA
GA-HM-04B	Tan Vinyl	No	M	Category I	ND	Kitchen	NA
GA-HM-05A	Drywall & Joint Compound	No	M	Category II	ND/ND	Living Room Wall	NA
GA-HM-05B	Drywall & Joint Compound	No	M	Category II	ND/ND	Kitchen Wall	NA
GA-HM-06A	Window Glazing	Yes	M	Category II	5%CH/ND	Living Room	16 Windows
GA-HM-06B	Window Glazing	Yes	M	Category II	NA	Front Entry	NA
GA-HM-07A	Gray Linoleum	No	M	Category I	ND	Bathroom	NA
GA-HM-07B	Gray Linoleum	No	M	Category I	ND	Bathroom	NA
GA-HM-08A	12x12 Gray Diamond Vinyl Floor Tile	No	M	Category I	ND/ND	NW Bedroom	NA
GA-HM-08B	12x12 Gray Diamond Vinyl Floor Tile	No	M	Category I	ND/ND	NW Bedroom	NA
GA-HM-09A	Yellow Linoleum	No	M	Category I	ND	Basement NW Bedroom	NA
GA-HM-09B	Yellow Linoleum	No	M	Category I	ND	Basement NW Bedroom	NA
GA-HS-01A	Popcorn Texture	No	S	Category II	ND	Living Room Ceiling	NA
GA-HS-01B	Popcorn Texture	No	S	Category II	ND	Dining Room Ceiling	NA
GA-HS-01C	Plaster	No	S	Category II	ND	Kitchen Ceiling	NA
GA-HS-02A	Plaster	No	S	Category II	5%CH	Living Ceiling	3,443 sq. ft.
GA-HS-02B	Plaster	No	S	Category II	ND/ND	Kitchen Ceiling	NA
GA-HS-02C	Plaster	No	S	Category II	ND/ND	Living Wall	NA
GA-HS-02D	Plaster	No	S	Category II	ND/ND	Dining Wall	NA
GA-HS-02E	Plaster	No	S	Category II	ND/ND	2 <sup>nd</sup> Fl. NE Bedroom Wall	NA

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 3128 Glendale St., Muskegon Heights, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
GA-HS-02F	Plaster	No	S	Category II	ND/ND	2 <sup>nd</sup> Fl. NW Bedroom Wall	NA
GA-HS-02G	Plaster	No	S	Category II	ND/ND	2 <sup>nd</sup> Fl. E Bedroom Wall	NA

**Notes:**

Material Types

- M = Miscellaneous building material
- TSI = Thermal System Insulation
- S = Surfacing Material
- PC = Point Count Analysis
- CH = Chrysotile Asbestos

Abbreviations

- NQ = Not quantified
- NA = Not applicable
- ND = Not detected. Laboratory result is less than 1 % asbestos
- lin. ft. = linear feet
- sq. ft. = square feet

Asbestos Containing Material (ACM) is defined as any material containing more than 1 percent asbestos as determined utilizing Polarized Light Microscopy.

**Table 3 - Summary of Presumed Asbestos Containing Materials, 3128 Glendale St., Muskegon Heights, Michigan**

<b>Asbestos Containing Material Description and Location</b>					
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Condition</b>	<b>Material Type</b>	<b>Approx. Quantity</b>
Living (10 sq. ft. duct wrap on boot) Dining (10 sq. ft. duct wrap on boot) Kitchen (10 sq. ft. duct wrap on boot) 2 <sup>nd</sup> Fl. NE Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) 2 <sup>nd</sup> Fl. NW Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) 2 <sup>nd</sup> Fl. E Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	135 sq. ft.

**Notes:**

Material Types

- M = Miscellaneous building material
- TSI = Thermal System Insulation
- S = Surfacing Material

Abbreviations

- lin. ft. = linear feet
- sq. ft. = square feet

**Table 4 - Summary of All Asbestos Containing Materials, 3128 Glendale St., Muskegon Heights, Michigan**

<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Living (10 sq. ft. duct wrap on boot)			
Dining (10 sq. ft. duct wrap on boot)			
Kitchen (10 sq. ft. duct wrap on boot)			
2 <sup>nd</sup> Fl. NE Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)	HVAC Duct Wrap	Yes	135 sq. ft.
2 <sup>nd</sup> Fl. NW Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)			
2 <sup>nd</sup> Fl. E Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)			
<b>Total</b>			<b>135 sq. ft.</b>
<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Living (2 windows 23" wide x 54" tall)	Glazing	Yes	2 Windows
Front Entry (6 windows 23" wide x 54" tall)	Glazing	Yes	6 Windows
Kitchen (2 windows 23" wide x 32" tall)	Glazing	Yes	2 Windows
2 <sup>nd</sup> fl. NW Bedroom (2 windows 32" wide x 54" tall)	Glazing	Yes	2 Windows
2 <sup>nd</sup> fl. NE Bedroom (2 windows 32" wide x 54" tall)	Glazing	Yes	2 Windows
2 <sup>nd</sup> fl. Hallway (1 window 32" wide x 54" tall)	Glazing	Yes	1 Window
2 <sup>nd</sup> fl. E Bedroom (1 window 32" wide x 54" tall)	Glazing	Yes	1 Window
<b>Total</b>			<b>16 Windows</b>

**Table 4 - Summary of All Asbestos Containing Materials, 3128 Glendale St., Muskegon Heights, Michigan**

<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
1rst Fl. Walls	Wall Plaster	No	1,184 sq. ft.
1rst Fl. Ceiling	Ceiling Plaster	No	483 sq. ft.
2 <sup>nd</sup> Fl. Walls	Wall Plaster	No	1,334 sq. ft.
2 <sup>nd</sup> Fl. Ceiling	Ceiling Plaster	No	432 sq. ft.
<b>Total</b>			<b>3,443 sq. ft.</b>

**Notes:**

Abbreviations

lin. ft. = linear feet  
 sq. ft. = square feet

**Shaded/Bolded** = Friable ACM and any Category I and Category II non-friable ACM that has a high probability of becoming crumbled, pulverized, or reduced to powder by the demolition or renovation activities that must be properly abated prior to commencement of any demolition/renovation activities.

Demolition/renovation activities completed with intact Category I non-friable ACM are regulated by OSHA and must be completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note that a Negative Pressure Enclosure must be utilized during abatement when Site Conditions Warrant. Examples of these conditions include the abatement of Plaster and Vermiculite insulation, HVAC Duct Wrap in Poor Condition, and Air-O-Cell/Mag Pipe Wrap. Conditions outside of these should be assessed on a case by case basis during the Asbestos Abatement Contractors site walk and Work Plan Preparation.



P.O. Box 13216  
Lansing, MI 48901  
Phone: 888.449.4566  
Fax: 888.448.8739  
www.redcedarconsulting.net

May 8, 2017

Mr. Tim Burgess  
Muskegon County Land Bank  
Land Bank Coordinator  
173 E. Apple Avenue, Suite 104  
Muskegon, MI 49442

**RE: *Asbestos Containing Material and Hazardous Materials Inspection***  
***3136 7th St., Muskegon Heights, MI 49444***  
***Parcel ID: 61-26-770-029-0021-00***

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 3136 7th St., Muskegon Heights, Michigan (Subject Property). This inspection was completed at the request of the Muskegon County Land Bank to comply with the United States Environmental Protection Agency (USEPA) requirements for demolition and renovation set forth under the National Emissions Standards for Hazardous Air Pollutants (NESHAP, 40 CFR Part 61). This inspection was also completed to comply with the Occupational Safety and Health Administration (OSHA) Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

### **SUBJECT PROPERTY**

The Subject Property is comprised of a .22 acre residential parcel which contains an approximate 1,145 square foot residential building (the Building) constructed in 1940. The Building was constructed on a concrete block basement with two aboveground floors. The exterior walls of the Building were finished with vinyl siding over wood lap while the roof was sealed with asphalt shingles. The Building can be further divided into a front entry, living room, basement entry, kitchen, bath, two bedrooms and a rear entry on the first floor while the second floor contains a front entry, kitchen, bath and two bedrooms.

### **VISUAL INSPECTION AND SAMPLING**

#### **Asbestos Containing Materials Inspection**

Aaron Paquet and Darrell DeMasters of Red Cedar Consulting (Red Cedar), accredited State Of Michigan/EPA Asbestos Building Inspectors (Accreditation Numbers A30955 and A31159, respectively) who completed training per the Michigan Asbestos Workers Accreditation Act 440, completed an inspection of the Subject Property on April 11, 2017 for suspected asbestos containing building materials.

This inspection, and subsequent sample collection was completed in accordance with the USEPA Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763) assessment and sampling protocol.

During the completion of the inspection, each area of the Subject Property was visually inspected for asbestos containing building materials (ACBM). Following the completion of the visual inspection, Red Cedar staff identified each suspect area of friable and non-friable ACBM and sorted them into one of three homogenous categories for sampling purposes. AHERA defines friable as a material that when dry, may be crumbled, pulverized, or reduced to powder by hand pressure. A homogenous area is defined by OSHA as an area of surfacing, thermal system insulation (TSI) or miscellaneous material that is uniform in color and texture. Surfacing materials are most commonly found in sprayed-on, troweled-on or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members. TSI refers to materials applied to pipes, fittings, boilers, ductwork, or other components to prevent heat loss or gain, or condensation. Any material that does not fall under the surfacing or TSI category, such as floor tile, drywall, and acoustical ceiling tile are placed into the miscellaneous materials category.

Following the completion of the visual inspection, Red Cedar staff identified the following materials as suspect ACBM:

- Asphalt Shingle
- Vapor Barrier
- Linoleum
- 1'x1' Ceiling Tile
- 2'x2' Ceiling Tile
- Drywall & Joint Compound
- Fiberboard
- 12"x12" Vinyl Flooring Tile
- Glazing
- Plaster
- Ceiling Texture

Red Cedar staff collected thirty six samples of suspect ACBM separated into sixteen distinct homogenous groups for laboratory analysis. Samples were collected and submitted to APEX Research Inc. Laboratories (APEX) (Accreditation Number 102118-0) for laboratory analysis. Analysis was completed utilizing polarized light microscopy (PLM) which is the Environmental Protection Agency (EPA) approved method for analysis of bulk materials for asbestos. PLM analysis completed pursuant to method (EPA 600/M4-82-020) identifies asbestos fiber bundles by the visual properties displayed when the sample is treated with various dispersion staining liquids. The laboratory report completed following the sample analysis indicates if asbestos is present, and at what percentage along with a description and percentage of other fibrous and non-fibrous materials and sample color. Chain-of-custody documentation was followed from sample collection through shipping and receiving of the samples at the designated laboratory. The documentation assures that samples will meet the quality assurance/quality control measures defined by AHERA. The laboratory analytical report prepared by APEX for the thirty six samples is included as Attachment A.

## **Hazardous Materials Inspection**

On April 11, 2017 the Subject Property was also inspected for the presence of hazardous materials which include but are not limited to polychlorinated biphenyls (PCBs) and potential mercury containing equipment and any items or containers that may contain or be classified as a hazardous or regulated material. Each material, if identified, was documented along with the approximate location. Any materials identified as hazardous are included in Table 1.

## **INSPECTION RESULTS AND RECOMMENDATIONS**

During the completion of the asbestos inspection, thirty six samples of suspect ACM were collected and are documented in Table 2 along with the Red Cedar sample number, description, friability, material type, ACM classification, sample location, material quantity and laboratory analytical results.

ACM, as defined by the USEPA NESHAP is “any material containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763 Section 1, Polarized Light Microscopy”.

Friable ACM is defined by NESHAP as any material containing more than 1 percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Friable ACM is a concern due the ease of unintentionally disturbing the ACM which may result in “visible emissions” which is known as a Fiber Release Episode.

Non-friable asbestos-containing material is defined as “material containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACM’s are separated into Category I and Category II ACM. Category I ACM is any asbestos containing packing’s, gaskets, resilient floor coverings (vinyl floor tile and linoleum are examples of these) and asphalt roofing products. Category II ACM is stated by NESHAP as any material excluding Category I non-friable ACM such as drywall, plaster or fiberboard insulation.

## **Presumed Asbestos Containing Material**

Presumed Asbestos Containing Materials (PACM) are suspect surfacing, TSI and miscellaneous materials found in buildings constructed prior to 1980 which are classified as and due to the age of the structure, are assumed to be ACM and do not require sample collection and analysis. OSHA dictates that PACM may be “rebutted” following a complete inspection pursuant to AHERA protocol.

The HVAC Duct Wrap located in the Building was classified as PACM due to the age of the structure and samples were not collected.

Table 3 lists the location, material description, friability, condition, material type (surfacing, thermal or miscellaneous) and approximate quantity of all PACM documented at the Subject Property.

Table 4 provides a summary all ACM documented at the Subject Property which includes the material location, description, and approximate quantity.



### **Friable ACM's**

Duct Wrap identified in the building in conjunction with the forced air heating system is classified as friable ACM. The visual assessment to quantify the extent of this material identified HVAC Duct Wrap at the following locations within the basement, first and second floors:

- Living Room (1 register, 15 sq. ft.)
- E. Bedroom (1 register, 15 sq. ft.)
- Kitchen (1 register, 15 sq. ft.)
- 2<sup>nd</sup> Fl. W. Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- E Bedroom (6 in.x12 in. HVAC Wrapped Ductwork, 2 lin. ft.)
- E Bedroom (6 in.x12 in. HVAC Wrapped Ductwork, 6 lin. ft.)

### **RECOMMENDATIONS**

#### **Asbestos Containing Materials**

HVAC material identified in the Building system and listed below is classified as friable ACM and should be removed prior to any renovation/demolition activities.

- Living Room (1 register, 15 sq. ft.)
- E. Bedroom (1 register, 15 sq. ft.)
- Kitchen (1 register, 15 sq. ft.)
- 2<sup>nd</sup> Fl. W. Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- E Bedroom/Basement (6 in.x12 in. HVAC Wrapped Ductwork, 2 lin. ft.)
- E Bedroom/Basement (6 in.x12 in. HVAC Wrapped Ductwork, 6 lin. ft.)

Please note: The location of samples obtained during this inspection were in a random fashion and areas that were not identified during this inspection may be damaged or have become damaged since the inspection was completed. If Category I or Category II friable materials are discovered prior to or during the demolition/renovation process, these materials must be abated prior to commencement of any demolition/renovation activities at the Subject Property.

#### **Hazardous Materials**

Hazardous Materials identified at the Subject Property and documented in Table 1 which require proper removal and disposal consist of the following items:

- Smoke Detector (2)
- 2' Fluorescent Light (Fixture and Ballast Only) (1)
- 2' Fluorescent Bulb (1)

## **REGULATORY REQUIREMENTS**

A Notification of Intent to Renovate/Demolish form must be filed with the Michigan Department of Environmental Quality- Air Quality Division at least 10 working days prior to any renovation or demolition activities at a site.

The Notification of Intent to Renovate/Demolish form must also be completed and submitted to the MIOSHA-Asbestos Program whenever demolition, encapsulation and/or renovation activities at a site involving greater than ten lineal feet and/or fifteen square feet of ACM will be completed.

Regulated asbestos containing materials per NESHAP (40 CFR Part 61) which falls into any of the following categories are ACM's that must be removed prior to any renovation/demolition activities at the Subject Property.

- Friable asbestos material.
- Category I non-friable ACM that has become friable.
- Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading.
- Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations.

Asbestos abatement should only be performed by a certified asbestos abatement contractor licensed to complete abatement work. The contractor must also follow the standards and requirements set forth per the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61).

Additional information regarding the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61) can be obtained by contacting the associated agency below.

NESHAP Asbestos Program  
Department of Environmental Quality  
Phone: 517-284-6777

MIOSHA-CSHD-Asbestos Program  
State of Michigan  
Phone: 517-284-7680  
Email: [asbestos@michigan.gov](mailto:asbestos@michigan.gov)

Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-26-770-029-0021-00

**DISCLAIMER**

Red Cedar Consulting performed destructive testing methods in an attempt to access and inspect all areas of the Building. Unfortunately, due to the age of construction along with multiple additions/renovations that may have been completed on the Building, additional inspections may be required if suspect ACM material not documented within this report is encountered during renovation/demolition activities.

This report was prepared at the request and for exclusive use by the Muskegon County Land Bank and may not be reproduced or sold without written permission from Red Cedar Consulting.

We appreciate the opportunity to provide the requested services. Please contact us at (888) 449-4566 with any questions or concerns.

Sincerely,  
**Red Cedar Consulting**



Aaron Paquet  
Michigan/EPA Certified Asbestos Building Inspector  
(A30955)

Red Cedar Consulting

***Attachment 1***  
***APEX Research Laboratory Analytical Results***



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 3136 7th St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69582  
Date Collected: 04/11/17  
Date Received: 04/12/17  
Date Analyzed: 04/13/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69582 - 01 Cust. #: SE-HM-01A Material: Brown/Red Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69582 - 01a Cust. #: SE-HM-01A Material: Brown Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69582 - 02 Cust. #: SE-HM-01B Material: Brown/Red Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%

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: 3136 7th St

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Lansing, MI 48901

ARI Report # 17-69582  
Date Collected: 04/11/17  
Date Received: 04/12/17  
Date Analyzed: 04/13/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69582 - 02a Cust. #: SE-HM-01B Material: Brown Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69582 - 03 Cust. #: SE-HM-02A Material: Black Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69582 - 03a Cust. #: SE-HM-02A Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 50% Other - 50%

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

Robert T. Letarte Jr., Laboratory Director

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# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 3136 7th St

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ARI Report # 17-69582  
Date Collected: 04/11/17  
Date Received: 04/12/17  
Date Analyzed: 04/13/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69582 - 04 Cust. #: SE-HM-02B Material: Black Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69582 - 04a Cust. #: SE-HM-02B Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 69582 - 05 Cust. #: SE-HM-03A Material: Vapor Barrier Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 70% Other - 30%

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

Robert T. Letarte Jr., Laboratory Director

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## Test Method, Polarized Light Microscopy (PLM)

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ARI Report # 17-69582  
Date Collected: 04/11/17  
Date Received: 04/12/17  
Date Analyzed: 04/13/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69582 - 06 Cust. #: SE-HM-03B Material: Vapor Barrier Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 70% Other - 30%
Lab ID #: 69582 - 07 Cust. #: SE-HM-04A Material: Grey Linoleum Location: Appearance: grey, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 69582 - 08 Cust. #: SE-HM-04B Material: Grey Linoleum Location: Appearance: grey, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% 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.



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## Test Method, Polarized Light Microscopy (PLM)

Project: 3136 7th St

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ARI Report # 17-69582  
Date Collected: 04/11/17  
Date Received: 04/12/17  
Date Analyzed: 04/13/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69582 - 09 Cust. #: SE-HM-05A Material: White Linoleum Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 69582 - 10 Cust. #: SE-HM-05B Material: White Linoleum Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 69582 - 11 Cust. #: SE-HM-06A Material: Grey 12" Square Linoleum Location: Appearance: grey, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% 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.



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# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 3136 7th St

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Lansing, MI 48901

ARI Report # 17-69582  
Date Collected: 04/11/17  
Date Received: 04/12/17  
Date Analyzed: 04/13/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69582 - 12 Cust. #: SE-HM-06B Material: Grey 12" Square Linoleum Location: Appearance: grey, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 69582 - 13 Cust. #: SE-HM-07A Material: 2x2 White Ceiling Tile, Pinholes, Fissures Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Mineral Wool - 30% Other - 30%
Lab ID #: 69582 - 14 Cust. #: SE-HM-07B Material: 2x2 White Ceiling Tile, Pinholes, Fissures Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Mineral Wool - 30% Other - 30%

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.



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ARI Report # 17-69582  
Date Collected: 04/11/17  
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Date Analyzed: 04/13/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69582 - 15 Cust. #: SE-HM-08A Material: 2x2 White Textured Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 69582 - 16 Cust. #: SE-HM-08B Material: 2x2 White Textured Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 69582 - 17 Cust. #: SE-HM-09A Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Fiberglass - 5% Other - 75%

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 3136 7th St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69582  
Date Collected: 04/11/17  
Date Received: 04/12/17  
Date Analyzed: 04/13/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69582 - 18 Cust. #: SE-HM-09B Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Fiberglass - 5% Other - 75%
Lab ID #: 69582 - 18a Cust. #: SE-HM-09B Material: Joint Compound Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69582 - 19 Cust. #: SE-HM-10A Material: Fiberboard Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%

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Robert T. Letarte Jr., Laboratory Director

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ARI Report # 17-69582  
Date Collected: 04/11/17  
Date Received: 04/12/17  
Date Analyzed: 04/13/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69582 - 20 Cust. #: SE-HM-10B Material: Fiberboard Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 69582 - 21 Cust. #: SE-HM-11A Material: Window Glazing Location: Appearance: white, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Wollastonite - 2% Other - 98%
Lab ID #: 69582 - 22 Cust. #: SE-HM-11B Material: Window Glazing Location: Appearance: white, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Wollastonite - 2% Other - 98%

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Robert T. Letarte Jr., Laboratory Director

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Project: 3136 7th St

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P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69582  
Date Collected: 04/11/17  
Date Received: 04/12/17  
Date Analyzed: 04/13/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69582 - 23 Cust. #: SE-HM-12A Material: Green Layered Flooring/Floor Tile Location: Appearance: beige,nonfibrous,homogenous Layer: 1 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69582 - 23a Cust. #: SE-HM-12A Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69582 - 23b Cust. #: SE-HM-12A Material: White Floor Tile Location: Appearance: white,nonfibrous,homogenous Layer: 3 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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Project: 3136 7th St

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P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69582  
Date Collected: 04/11/17  
Date Received: 04/12/17  
Date Analyzed: 04/13/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69582 - 23c Cust. #: SE-HM-12A Material: Glue, Location: Appearance: clear,nonfibrous,homogenous Layer: 4 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69582 - 23d Cust. #: SE-HM-12A Material: Sheet Flooring Location: Appearance: green,fibrous,nonhomogenous Layer: 5 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69582 - 24 Cust. #: SE-HM-12B Material: Green Layered Flooring/Floor Tile Location: Appearance: beige,nonfibrous,homogenous Layer: 1 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Other - 99%

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Robert T. Letarte Jr., Laboratory Director

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Lansing, MI 48901

ARI Report # 17-69582  
Date Collected: 04/11/17  
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Date Analyzed: 04/13/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69582 - 24a Cust. #: SE-HM-12B Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69582 - 24b Cust. #: SE-HM-12B Material: White Floor Tile Location: Appearance: white,nonfibrous,homogenous Layer: 3 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69582 - 24c Cust. #: SE-HM-12B Material: Glue, Location: Appearance: clear,nonfibrous,homogenous Layer: 4 of 5	Asbestos Present: <b>NO</b> 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.



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Project: 3136 7th St

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ARI Report # 17-69582  
Date Collected: 04/11/17  
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Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69582 - 24d Cust. #: SE-HM-12B Material: Sheet Flooring Location: Appearance: green, fibrous, nonhomogenous Layer: 5 of 5	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69582 - 25 Cust. #: SE-HM-13A Material: 1x1 White Ceiling Tile Pitted Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 69582 - 26 Cust. #: SE-HM-13B Material: 1x1 White Ceiling Tile Pitted Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%

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Robert T. Letarte Jr., Laboratory Director

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ARI Report # 17-69582  
Date Collected: 04/11/17  
Date Received: 04/12/17  
Date Analyzed: 04/13/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69582 - 27 Cust. #: SE-HM-14A Material: Layered Black Marble 12x12 VFT Location: Appearance: black,nonfibrous,homogenous Layer: 1 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69582 - 27a Cust. #: SE-HM-14A Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69582 - 27b Cust. #: SE-HM-14A Material: White Floor Tile Location: Appearance: white,nonfibrous,homogenous Layer: 3 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Robert T. Letarte Jr., Laboratory Director

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Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69582 - 27c Cust. #: SE-HM-14A Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 4 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69582 - 28 Cust. #: SE-HM-14B Material: Layered Black Marble 12x12 VFT Location: Appearance: black,nonfibrous,homogenous Layer: 1 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69582 - 28a Cust. #: SE-HM-14B Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Lansing, MI 48901

ARI Report # 17-69582  
Date Collected: 04/11/17  
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Date Analyzed: 04/13/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69582 - 28b Cust. #: SE-HM-14B Material: White Floor Tile Location: Appearance: white,nonfibrous,homogenous Layer: 3 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69582 - 28c Cust. #: SE-HM-14B Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 4 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69582 - 29 Cust. #: SE-HS-01A Material: Plaster Finish Coat Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Robert T. Letarte Jr., Laboratory Director

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Lansing, MI 48901

ARI Report # 17-69582  
Date Collected: 04/11/17  
Date Received: 04/12/17  
Date Analyzed: 04/13/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69582 - 29a Cust. #: SE-HS-01A Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Hair - 2% Other - 96%
Lab ID #: 69582 - 30 Cust. #: SE-HS-01B Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69582 - 30a Cust. #: SE-HS-01B Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Hair - 1% Other - 97%

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

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ARI Report # 17-69582  
Date Collected: 04/11/17  
Date Received: 04/12/17  
Date Analyzed: 04/13/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69582 - 31 Cust. #: SE-HS-01C Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69582 - 31a Cust. #: SE-HS-01C Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Hair - 2% Other - 96%
Lab ID #: 69582 - 32 Cust. #: SE-HS-01D Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Robert T. Letarte Jr., Laboratory Director

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ARI Report # 17-69582  
Date Collected: 04/11/17  
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Date Analyzed: 04/13/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69582 - 32a Cust. #: SE-HS-01D Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Hair - 1% Other - 98%
Lab ID #: 69582 - 33 Cust. #: SE-HS-01E Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69582 - 33a Cust. #: SE-HS-01E Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Hair - 2% Other - 96%

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

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Date Collected: 04/11/17  
Date Received: 04/12/17  
Date Analyzed: 04/13/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69582 - 34 Cust. #: SE-HS-02A Material: Ceiling Texture Location: Appearance: white, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 69582 - 35 Cust. #: SE-HS-02B Material: Ceiling Texture Location: Appearance: white, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 69582 - 36 Cust. #: SE-HS-02C Material: Ceiling Texture Location: Appearance: white, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%

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NVLAP Lab Code 102118-0



1 of 4

## APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189

Phone: 734-449-9990



Client Name: Red Cedar Consulting

Date of Survey: 4-11-17

Address: PO Box 13216

Project: 3136 7th St

City, St., Zip: Lansing, MI 48901

Project #:

Phone: (888) 449-4566 Fax: (888) 448-8739

Contact Person: Aaron Paquet

### Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: 5 day

**TTP** All Samples except asbestos TEM: AHERA 7400

Mold: Bulk

Tape

Bulk/NOB

EPA Level II

Other

Other

Asbestos: Bulk x

Wipe

Point Count

PCM

Lead: Bulk

Wipe

Air

Paint

Soil

Other: Bulk

Wipe

BioSIS

Other

Other

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	SE-HH-01A	Brown Shingle			
2	SE-HH-01B	"			
3	SE-HH-02A	Black Shingle			
4	SE-HH-02B	"			
5	SE-HH-03A	Vapor Barrier			
6	SE-HH-03B	"			
7	SE-HH-04A	Gray Sinterstone			
8	SE-HH-04B	"			
9	SE-HH-05A	White Sinterstone			
10	SE-HH-05B	"			
11	SE-HH-06A	Gray 12" square Sinterstone			

Relinquished by: *[Signature]* Received by: *[Signature]*

Relinquished by: *[Signature]*

Received by: *[Signature]*

Date: 4-11-17

Date: 4-11-17

Date: \_\_\_\_\_

Date: APR 12 2017

RECEIVED

69582

244

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

E-mail: apexresearch@charterni.net Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-11-17

Project: 3136 7th St.

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: 5 day  Mold  Bulk  Tape  Bulk/NOB  EPA Level II  Asbestos: Bulk  Wipe  Point Count  PCM  Lead: Bulk  Wipe  Air  Paint  Soil  Other  Viable  TEM: AHERA 7400

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	SE-HH-04B	Very 12" square stainlume			
13	SE-HH-07K	2x2 white CT 2x2 white stainlume			
14	SE-HH-07B	" " " "			
15	SE-HH-08A	2x2 white stained CT			
16	SE-HH-08B	" " " "			
17	SE-HH-09A	Wegmell V Suit Compound			
18	SE-HH-09B	" " " "			
19	SE-HH-10A	Stainlume			
20	SE-HH-10B	" " " "			
21	SE-HH-11A	Wegmell Staining			
22	SE-HH-11B	" " " "			

Relinquished by: [Signature] Received by: UPS

Date: 4-11-17 Date: 4-11-17

Relinquished by: \_\_\_\_\_

Date: \_\_\_\_\_

Received by: [Signature]

Date: APR 12 2017

RECEIVED

69582

3 of 4

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990



E-mail: [apexresearch@chartermi.net](mailto:apexresearch@chartermi.net) Fax: 734-449-9991

Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: \_\_\_\_\_

Project: \_\_\_\_\_

Project #: \_\_\_\_\_

Contact Person: Aaron Paquet

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: 5 days

TTP All Samples Except Plates

Mold: \_\_\_\_\_  
Asbestos: Bulk  Wipe \_\_\_\_\_  
Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_  
Point Count \_\_\_\_\_ PCM \_\_\_\_\_

AHERA 7400 Bulk/NOB \_\_\_\_\_

EPA Level II \_\_\_\_\_

Other: \_\_\_\_\_ Viable \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
23	SE-HM-12A	Green Staged flooring			
24	SE-HM-12B	"			
25	SE-HM-13A	1x1 white CT pitted			
26	SE-HM-13B	"			
27	SE-HM-14A	Staged Black Malle 12x12 VET			
28	SE-HM-14B	"			
29	SE-HS-01A	Plaster			
30	SE-HS-01B	"			
31	SE-HS-01C	"			
32	SE-HS-01D	"			
33	SE-HS-01E	"			

Relinquished by: [Signature]

Date: 4-11-17

Received by: [Signature]

Date: 4-11-17

Relinquished by: \_\_\_\_\_

Date: \_\_\_\_\_

Received by: **RECEIVED**

Date: **APR 12 2017**



***Tables***

**Table 1 - Summary of Hazardous Materials, 3136 7th St., Muskegon Heights, Michigan**

<b>Hazardous Materials Description and Location</b>		
<b>Location</b>	<b>Material Description</b>	<b>Quantity</b>
2 <sup>nd</sup> Fl. N. Bedroom	Smoke Detector	1
E. Bedroom	Smoke Detector	1
2 <sup>nd</sup> Fl. Kitchen	2' Fluorescent Light (Fixture and Ballast Only)	1
2 <sup>nd</sup> Fl. Kitchen	2' Fluorescent Bulb	1

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 3136 7th St., Muskegon Heights, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
SE-HM-01A	Brown Shingle	No	M	Category I	ND/ND	Exterior	NA
SE-HM-01B	Brown Shingle	No	M	Category I	ND/ND	Exterior	NA
SE-HM-02A	Black Shingle	No	M	Category I	ND/ND	Exterior	NA
SE-HM-02B	Black Shingle	No	M	Category I	ND/ND	Exterior	NA
SE-HM-03A	Vapor Barrier	Yes	M	Category II	ND	Exterior	NA
SE-HM-03B	Vapor Barrier	Yes	M	Category II	ND	Exterior	NA
SE-HM-04A	Gray Linoleum	No	M	Category I	ND	Front Entry	NA
SE-HM-04B	Gray Linoleum	No	M	Category I	ND	Front Entry	NA
SE-HM-05A	White Linoleum	No	M	Category I	ND	Kitchen	NA
SE-HM-05B	White Linoleum	No	M	Category I	ND	Kitchen	NA
SE-HM-06A	Gray 12"x12" Square Linoleum	No	M	Category I	ND	Bathroom	NA
SE-HM-06B	Gray 12"x12" Square Linoleum	No	M	Category I	ND	Bathroom	NA
SE-HM-07A	White 2'x2' Ceiling Tile w/ pinholes & fissures	Yes	M	Category II	ND	Kitchen	NA
SE-HM-07B	White 2'x2' Ceiling Tile w/ pinholes & fissures	Yes	M	Category II	ND	Living Room	NA
SE-HM-08A	White 2'x2' Textured Ceiling Tile	Yes	M	Category II	ND	Rear Entry	NA
SE-HM-08B	White 2'x2' Textured Ceiling Tile	Yes	M	Category II	ND	Rear Entry	NA
SE-HM-09A	Drywall & Joint Compound	No	M	Category II	ND	Kitchen	NA
SE-HM-09B	Drywall & Joint Compound	No	M	Category II	ND/ND	Bathroom	NA
SE-HM-10A	Fiberboard	Yes	M	Category II	ND	Kitchen	NA
SE-HM-10B	Fiberboard	Yes	M	Category II	ND	Kitchen	NA
SE-HM-11A	Glazing	Yes	M	Category II	ND	Kitchen	NA
SE-HM-11B	Glazing	Yes	M	Category II	ND	Kitchen	NA
SE-HM-12A	Green Layered Flooring	No	M	Category I	ND/ND/ND/ ND/ND	2 <sup>nd</sup> Fl. Kitchen	NA
SE-HM-12B	Green Layered Flooring	No	M	Category I	ND/ND/ND/ ND/ND	2 <sup>nd</sup> Fl. Kitchen	NA
SE-HM-13A	1'x1' White Ceiling Tile Pitted	Yes	M	Category II	ND	2 <sup>nd</sup> Fl. W. Bedroom	NA
SE-HM-13B	1'x1' White Ceiling Tile Pitted	Yes	M	Category II	ND	2 <sup>nd</sup> Fl. W. Bedroom	NA

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 3136 7th St., Muskegon Heights, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
SE-HM-14A	Layered Black Marble 12x12 Vinyl Tile	No	M	Category I	ND/ND/ND/ND	2 <sup>nd</sup> Fl. Bathroom	NA
SE-HM-14B	Layered Black Marble 12x12 Vinyl Tile	No	M	Category I	ND/ND/ND/ND	2 <sup>nd</sup> Fl. Bathroom	NA
SE-HS-01A	Plaster	No	S	Category II	ND/ND	Living Room Ceiling	NA
SE-HS-01B	Plaster	No	S	Category II	ND/ND	E. Bedroom Ceiling	NA
SE-HS-01C	Plaster	No	S	Category II	ND/ND	W. Bedroom Wall	NA
SE-HS-01D	Plaster	No	S	Category II	ND/ND	E. Bedroom Wall	NA
SE-HS-01E	Plaster	No	S	Category II	ND/ND	2 <sup>nd</sup> Fl. W. Bedroom Wall	NA
SE-HS-02A	Ceiling Texture	No	S	Category II	ND	Bathroom	NA
SE-HS-02B	Ceiling Texture	No	S	Category II	ND	Bathroom	NA
SE-HS-02C	Ceiling Texture	No	S	Category II	ND	Basement Entry	NA

**Notes:**

Material Types

M = Miscellaneous building material  
 TSI = Thermal System Insulation  
 S = Surfacing Material  
 PC = Point Count Analysis  
 CH = Chrysotile Asbestos

Abbreviations

NQ = Not quantified  
 NA = Not applicable  
 ND = Not detected. Laboratory result is less than 1 % asbestos  
 lin. ft. = linear feet  
 sq. ft. = square feet

Asbestos Containing Material (ACM) is defined as any material containing more than 1 percent asbestos as determined utilizing Polarized Light Microscopy.



**Table 3 - Summary of Presumed Asbestos Containing Materials, 3136 7th St., Muskegon Heights, Michigan**

<b>Asbestos Containing Material Description and Location</b>					
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Condition</b>	<b>Material Type</b>	<b>Approx. Quantity</b>
Living Room (1 register, 15 sq. ft.) E. Bedroom (1 register, 15 sq. ft.) Kitchen (1 register, 15 sq. ft.) 2 <sup>nd</sup> Fl. W. Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	80 sq. ft.
E Bedroom (6 in.x12 in. HVAC Wrapped Ductwork, 2 lin. ft.) E Bedroom (6 in.x12 in. HVAC Wrapped Ductwork, 6 lin. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	8 lin. ft.

**Notes:**

Material Types

- M = Miscellaneous building material
- TSI = Thermal System Insulation
- S = Surfacing Material

Abbreviations

- lin. ft. = linear feet
- sq. ft. = square feet

**Table 4 - Summary of All Asbestos Containing Materials, 3136 7th St., Muskegon Heights, Michigan**

<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Living Room (1 register, 15 sq. ft.) E. Bedroom (1 register, 15 sq. ft.) Kitchen (1 register, 15 sq. ft.) 2 <sup>nd</sup> Fl. W. Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)	HVAC Duct Wrap	Yes	80 sq. ft.
<b>Total</b>			<b>80 sq. ft.</b>
<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
E Bedroom/Basement (6 in.x12 in. HVAC Wrapped Ductwork, 2 lin. ft.) E Bedroom/Basement (6 in.x12 in. HVAC Wrapped Ductwork, 6 lin. ft.)	HVAC Duct Wrap	Yes	8 lin. ft.
<b>Total</b>			<b>8 lin. ft.</b>

**Notes:**

Abbreviations

lin. ft. = linear feet

sq. ft. = square feet

**Shaded/Bolded** = Friable ACM and any Category I and Category II non-friable ACM that has a high probability of becoming crumbled, pulverized, or reduced to powder by the demolition or renovation activities that must be properly abated prior to commencement of any demolition/renovation activities.

Demolition/renovation activities completed with intact Category I non-friable ACM are regulated by OSHA and must be completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note that a Negative Pressure Enclosure must be utilized during abatement when Site Conditions Warrant. Examples of these conditions include the abatement of Plaster and Vermiculite insulation, HVAC Duct Wrap in Poor Condition, and Air-O-Cell/Mag Pipe Wrap. Conditions outside of these should be assessed on a case by case basis during the Asbestos Abatement Contractors site walk and Work Plan Preparation.



P.O. Box 13216  
Lansing, MI 48901  
Phone: 888.449.4566  
Fax: 888.448.8739  
www.redcedarconsulting.net

May 8, 2017

Mr. Tim Burgess  
Muskegon County Land Bank  
Land Bank Coordinator  
173 E. Apple Avenue, Suite 104  
Muskegon, MI 49442

**RE: *Asbestos Containing Material and Hazardous Materials Inspection***  
***3200 7th St., Muskegon Heights, MI 49444***  
***Parcel ID: 61-26-770-028-0028-00***

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 3200 7th St., Muskegon Heights, Michigan (Subject Property). This inspection was completed at the request of the Muskegon County Land Bank to comply with the United States Environmental Protection Agency (USEPA) requirements for demolition and renovation set forth under the National Emissions Standards for Hazardous Air Pollutants (NESHAP, 40 CFR Part 61). This inspection was also completed to comply with the Occupational Safety and Health Administration (OSHA) Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

### **SUBJECT PROPERTY**

The Subject Property is comprised of a .12 acre residential parcel which contains an approximate 600 square foot residential building (the Building) constructed in 1945. The Building was constructed on a concrete slab foundation with one aboveground floor. The exterior walls of the Building were finished with wood lap while the roof was sealed with asphalt shingles. The Building can be further divided into a living room, dining room, kitchen, bathroom and two bedrooms.

### **VISUAL INSPECTION AND SAMPLING**

#### **Asbestos Containing Materials Inspection**

Aaron Paquet and Darrell DeMasters of Red Cedar Consulting (Red Cedar), accredited State Of Michigan/EPA Asbestos Building Inspectors (Accreditation Numbers A30955 and A31159, respectively) who completed training per the Michigan Asbestos Workers Accreditation Act 440, completed an inspection of the Subject Property on April 11, 2017 for suspected asbestos containing building materials.

This inspection, and subsequent sample collection was completed in accordance with the USEPA Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763) assessment and sampling protocol.

During the completion of the inspection, each area of the Subject Property was visually inspected for asbestos containing building materials (ACBM). Following the completion of the visual inspection, Red Cedar staff identified each suspect area of friable and non-friable ACBM and sorted them into one of three homogenous categories for sampling purposes. AHERA defines friable as a material that when dry, may be crumbled, pulverized, or reduced to powder by hand pressure. A homogenous area is defined by OSHA as an area of surfacing, thermal system insulation (TSI) or miscellaneous material that is uniform in color and texture. Surfacing materials are most commonly found in sprayed-on, troweled-on or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members. TSI refers to materials applied to pipes, fittings, boilers, ductwork, or other components to prevent heat loss or gain, or condensation. Any material that does not fall under the surfacing or TSI category, such as floor tile, drywall, and acoustical ceiling tile are placed into the miscellaneous materials category.

Following the completion of the visual inspection, Red Cedar staff identified the following materials as suspect ACBM:

- Asphalt Shingle
- Linoleum
- 1'x1' Ceiling Tile
- Fiberboard
- 2'x4' Ceiling Tile
- Drywall & Joint Compound
- Glazing

Red Cedar staff collected twenty samples of suspect ACBM separated into ten distinct homogenous groups for laboratory analysis. Samples were collected and submitted to APEX Research Inc. Laboratories (APEX) (Accreditation Number 102118-0) for laboratory analysis. Analysis was completed utilizing polarized light microscopy (PLM) which is the Environmental Protection Agency (EPA) approved method for analysis of bulk materials for asbestos. PLM analysis completed pursuant to method (EPA 600/M4-82-020) identifies asbestos fiber bundles by the visual properties displayed when the sample is treated with various dispersion staining liquids. The laboratory report completed following the sample analysis indicates if asbestos is present, and at what percentage along with a description and percentage of other fibrous and non-fibrous materials and sample color. Chain-of-custody documentation was followed from sample collection through shipping and receiving of the samples at the designated laboratory. The documentation assures that samples will meet the quality assurance/quality control measures defined by AHERA. The laboratory analytical report prepared by APEX for the twenty samples is included as Attachment A.

## **Hazardous Materials Inspection**

On April 11, 2017 the Subject Property was also inspected for the presence of hazardous materials which include but are not limited to polychlorinated biphenyls (PCBs) and potential mercury containing equipment and any items or containers that may contain or be classified as a hazardous or regulated material. Each material, if identified, was documented along with the approximate location. Any materials identified as hazardous are included in Table 1.

## **INSPECTION RESULTS AND RECOMMENDATIONS**

During the completion of the asbestos inspection, twenty samples of suspect ACM were collected and are documented in Table 2 along with the Red Cedar sample number, description, friability, material type, ACM classification, sample location, material quantity and laboratory analytical results.

ACM, as defined by the USEPA NESHAP is “any material containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763 Section 1, Polarized Light Microscopy”.

Friable ACM is defined by NESHAP as any material containing more than 1 percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Friable ACM is a concern due the ease of unintentionally disturbing the ACM which may result in “visible emissions” which is known as a Fiber Release Episode.

Non-friable asbestos-containing material is defined as “material containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACM’s are separated into Category I and Category II ACM. Category I ACM is any asbestos containing packing’s, gaskets, resilient floor coverings (vinyl floor tile and linoleum are examples of these) and asphalt roofing products. Category II ACM is stated by NESHAP as any material excluding Category I non-friable ACM such as drywall, plaster or fiberboard insulation.

### **Presumed Asbestos Containing Material**

Presumed Asbestos Containing Materials (PACM) are suspect surfacing, TSI and miscellaneous materials found in buildings constructed prior to 1980 which are classified as and due to the age of the structure, are assumed to be ACM and do not require sample collection and analysis. OSHA dictates that PACM may be “rebutted” following a complete inspection pursuant to AHERA protocol.

No PACM was identified during the completion of this inspection. All suspect materials identified were sampled and analyzed for ACM.

Table 3 lists the location, material description, friability, condition, material type (surfacing, thermal or miscellaneous) and approximate quantity of all PACM documented at the Subject Property.

Table 4 provides a summary all ACM documented at the Subject Property which includes the material location, description, and approximate quantity.

### **Friable ACM's**

No friable ACM's were identified during the completion of this inspection.

### **Category I ACM**

One type of resilient floor covering (Brown Linoleum) located within the closet was found to contain up to 20% Chrysotile asbestos. The assessment to quantify the extent of this material identified approximately 8 sq. ft. of this material within the Building.

### **Category II ACM**

No Category II non-friable ACM was identified during the completion of this inspection.

## **RECOMMENDATIONS**

### **Asbestos Containing Materials**

The Category I resilient floor covering (Brown Linoleum) is a non-friable ACM that may be left in place as long as the demolition/renovation activities are completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note: The location of samples obtained during this inspection were in a random fashion and areas that were not identified during this inspection may be damaged or have become damaged since the inspection was completed. If Category I or Category II friable materials are discovered prior to or during the demolition/renovation process, these materials must be abated prior to commencement of any demolition/renovation activities at the Subject Property.

### **Hazardous Materials**

Hazardous Materials identified at the Subject Property and documented in Table 1 which require proper removal and disposal consist of the following items:

- Smoke Detector (1)
- Automobile Tire (1)

## **REGULATORY REQUIREMENTS**

A Notification of Intent to Renovate/Demolish form must be filed with the Michigan Department of Environmental Quality- Air Quality Division at least 10 working days prior to any renovation or demolition activities at a site.

The Notification of Intent to Renovate/Demolish form must also be completed and submitted to the MIOSHA-Asbestos Program whenever demolition, encapsulation and/or renovation activities at a site involving greater than ten lineal feet and/or fifteen square feet of ACM will be completed.

Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-26-770-028-0028-00

Regulated asbestos containing materials per NESHAP (40 CFR Part 61) which falls into any of the following categories are ACM's that must be removed prior to any renovation/demolition activities at the Subject Property.

- Friable asbestos material.
- Category I non-friable ACM that has become friable.
- Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading.
- Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations.

Asbestos abatement should only be performed by a certified asbestos abatement contractor licensed to complete abatement work. The contractor must also follow the standards and requirements set forth per the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61).

Additional information regarding the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61) can be obtained by contacting the associated agency below.

NESHAP Asbestos Program  
Department of Environmental Quality  
Phone: 517-284-6777

MIOSHA-CSHD-Asbestos Program  
State of Michigan  
Phone: 517-284-7680  
Email: asbestos@michigan.gov

## **DISCLAIMER**

Red Cedar Consulting performed destructive testing methods in an attempt to access and inspect all areas of the Building. Unfortunately, due to the age of construction along with multiple additions/renovations that may have been completed on the Building, additional inspections may be required if suspect ACM material not documented within this report is encountered during renovation/demolition activities.

This report was prepared at the request and for exclusive use by the Muskegon County Land Bank and may not be reproduced or sold without written permission from Red Cedar Consulting.

We appreciate the opportunity to provide the requested services. Please contact us at (888) 449-4566 with any questions or concerns.

Sincerely,  
**Red Cedar Consulting**



Aaron Paquet  
Michigan/EPA Certified Asbestos Building Inspector  
(A30955)

Red Cedar Consulting

***Attachment 1***  
***APEX Research Laboratory Analytical Results***





# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 3200 7th Street

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69585  
Date Collected: 04/11/17  
Date Received: 04/12/17  
Date Analyzed: 04/14/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69585 - 01 Cust. #: SS-HM-01A Material: Roofing Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 15% Other - 85%
Lab ID #: 69585 - 01a Cust. #: SS-HM-01A Material: Roofing Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69585 - 02 Cust. #: SS-HM-01B Material: Roofing Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 15% Other - 85%

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: 3200 7th Street

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69585  
Date Collected: 04/11/17  
Date Received: 04/12/17  
Date Analyzed: 04/14/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69585 - 02a Cust. #: SS-HM-01B Material: Roofing Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69585 - 03 Cust. #: SS-HM-02A Material: White Linoleum/Glue Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Fiberglass - 2% Other - 83%
Lab ID #: 69585 - 04 Cust. #: SS-HM-02B Material: White Linoleum/Glue Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Fiberglass - 2% Other - 83%

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: 3200 7th Street

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69585  
Date Collected: 04/11/17  
Date Received: 04/12/17  
Date Analyzed: 04/14/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69585 - 05 Cust. #: SS-HM-03A Material: 1x1 White Smooth Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 69585 - 06 Cust. #: SS-HM-03B Material: 1x1 White Smooth Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 69585 - 07 Cust. #: SS-HM-04A Material: Fiberboard Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%

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: 3200 7th Street

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69585  
Date Collected: 04/11/17  
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Date Analyzed: 04/14/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69585 - 08 Cust. #: SS-HM-04B Material: Fiberboard Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 69585 - 09 Cust. #: SS-HM-05A Material: White 8" Square Linoleum/Glue Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69585 - 10 Cust. #: SS-HM-05B Material: White 8" Square Linoleum/Glue Location: Appearance: white, nonfibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> 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: 3200 7th Street

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69585  
Date Collected: 04/11/17  
Date Received: 04/12/17  
Date Analyzed: 04/14/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69585 - 10a Cust. #: SS-HM-05B Material: Leveling Location: Appearance: grey, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69585 - 11 Cust. #: SS-HM-06A Material: 2x4 White Textured Ceiling Tile Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Mineral Wool - 30% Perlite - 10% Other - 20%
Lab ID #: 69585 - 12 Cust. #: SS-HM-06B Material: 2x4 White Textured Ceiling Tile Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Mineral Wool - 30% Perlite - 10% Other - 20%

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: 3200 7th Street

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69585  
Date Collected: 04/11/17  
Date Received: 04/12/17  
Date Analyzed: 04/14/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69585 - 13 Cust. #: SS-HM-07A Material: Brown Linoleum Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 20%	Other - 80%
Lab ID #: 69585 - 14 Cust. #: SS-HM-07B Material: Brown Linoleum Location: Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69585 - 15 Cust. #: SS-HM-08A Material: Drywall Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> 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: 3200 7th Street

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69585  
Date Collected: 04/11/17  
Date Received: 04/12/17  
Date Analyzed: 04/14/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69585 - 15a Cust. #: SS-HM-08A Material: Joint Compound Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69585 - 16 Cust. #: SS-HM-08B Material: Drywall Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69585 - 16a Cust. #: SS-HM-08B Material: Joint Compound Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> 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: 3200 7th Street

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69585  
Date Collected: 04/11/17  
Date Received: 04/12/17  
Date Analyzed: 04/14/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69585 - 17 Cust. #: SS-HM-09A Material: Window Glazing Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69585 - 18 Cust. #: SS-HM-09B Material: Window Glazing Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69585 - 19 Cust. #: SS-HM-10A Material: Pitted 1x1 White Ceiling Tile Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Mineral Wool - 30% Perlite - 10% Other - 30%

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: 3200 7th Street

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69585  
Date Collected: 04/11/17  
Date Received: 04/12/17  
Date Analyzed: 04/14/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69585 - 20 Cust. #: SS-HM-10B Material: Pitted 1x1 White Ceiling Tile Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Mineral Wool - 30% Perlite - 10% Other - 30%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	
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

**69585**

1 of 2

**APEX Research, Inc.**

11054 Hi Tech Drive, Whitmore Lake, MI 48189



E-mail: apexresearch@charternet.net Phone: 734-449-9990 Fax: 734-449-9991

Client Name: Red Cedar Consulting

Date of Survey: 4-11-17

Address: PO Box 13216

Project: 3200 7th Street

City, St., Zip: Lansing, MI 48901

Project #: \_\_\_\_\_

Phone: (888) 449-4566 Fax: (888) 448-8739

Contact Person: Aaron Paquet

**Turn Around Times: (Circle One)**

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour  
48 hour 72 hour

Other: 5 day



All Samples Except Plaster

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
 Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
 Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BIOSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
 TEM: AHERA 7400 Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	55-HH-01A	Roofing Shingle			
2	55-HH-01B	.. ..			
3	55-HH-02A	White Siding			
4	55-HH-02B	.. ..			
5	55-HH-03A	1 x 1 white wood CT			
6	55-HH-03B	.. ..			
7	55-HH-04A	Siding board			
8	55-HH-04B	.. ..			
9	55-HH-05A	White 8" square Siding			
10	55-HH-05B	.. ..			
11	55-HH-06A	2 x 4 white texture CT			

Relinquished by: [Signature] Date: 4-11-17

Received by: [Signature] Date: 4-11-17

Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_

Received by: [Signature] Date: APR 12 2017

**RECEIVED**

69585

2 of 3

# APEX Research, Inc.



11054 HI Tech Drive, Whitmore Lake, MI 48189  
Phone: 734-449-9990  
E-mail: apexresearch@chartermi.net  
Fax: 734-449-9991

Client Name: Red Cedar Consulting

Date of Survey: 4-11-17

Address: PO Box 13216

Project: 3200 7th Street

City, St., Zip: Lansing, MI 48901

Project #:

Phone: (888) 449-4566 Fax: (888) 448-8739

Contact Person: Aaron Paquet

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM.  
apaquet@redcedarconsulting.net

Rush 24 hour

Asbestos: Bulk  x Wipe  Point Count  PCM

48 hour 72 hour

Lead: Bulk  Wipe  Air  Paint  Soil

Other: 5 day

TTP All Samples Except Plaster

Mold: Bulk  Tape  Biosis  Other  Viable

TEM: AHERA 7400 Bulk/NOB EPA Level II

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	55-HH-06B	2 x 4 white texture CT			
13	55-HH-07A	Brown Granular			
14	55-HH-07B	..			
15	55-HH-08A	Asphalt + Spout Compound			
16	55-HH-08B	..			
17	55-HH-09A	Window Siding			
18	55-HH-09B	..			
19	55-HH-10A	Pitted 1 x 1 white CT			
20	55-HH-10B	..			

Relinquished by: *[Signature]* Received by: \_\_\_\_\_

Relinquished by: \_\_\_\_\_ Received by: *[Signature]*

Date: 4-11-17

Date: \_\_\_\_\_

Date: \_\_\_\_\_

Date: APR 12 2017

RECEIVED

***Tables***

**Table 1 - Summary of Hazardous Materials, 3200 7th St., Muskegon Heights, Michigan**

<b>Hazardous Materials Description and Location</b>		
<b>Location</b>	<b>Material Description</b>	<b>Quantity</b>
SE Bedroom	Smoke Detector	1
Exterior	Automobile Tire	1

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 3200 7th St., Muskegon Heights, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
SS-HM-01A	Asphalt Shingle	No	M	Category I	ND/ND	Shed Exterior	NA
SS-HM-01B	Asphalt Shingle	No	M	Category I	ND/ND	Building Exterior	NA
SS-HM-02A	White Linoleum	No	M	Category I	ND	Kitchen	NA
SS-HM-02B	White Linoleum	No	M	Category I	ND	Kitchen	NA
SS-HM-03A	1'x1' White Smooth Ceiling Tile	Yes	M	Category II	ND	Kitchen	NA
SS-HM-03B	1'x1' White Smooth Ceiling Tile	Yes	M	Category II	ND	E. Bedroom	NA
SS-HM-04A	Fiberboard	Yes	M	Category II	ND	Kitchen Wall	NA
SS-HM-04B	Fiberboard	Yes	M	Category II	ND	Living Room Wall	NA
SS-HM-05A	White 8" x 8" Square Linoleum	No	M	Category I	ND	Bathroom	NA
SS-HM-05B	White 8" x 8" Square Linoleum	No	M	Category I	ND/ND	Bathroom	NA
SS-HM-06A	2'x4' White Texture Ceiling Tile	Yes	M	Category II	ND	Dining	NA
SS-HM-06B	2'x4' White Texture Ceiling Tile	Yes	M	Category II	ND	Dining	NA
SS-HM-07A	Brown Linoleum	No	M	Category I	20% CH	Closet	8 sq. ft.
SS-HM-07B	Brown Linoleum	No	M	Category I	NA	Closet	NA
SS-HM-08A	Drywall & Joint Compound	Yes	M	Category II	ND/ND	Dining	NA
SS-HM-08B	Drywall & Joint Compound	Yes	M	Category II	ND/ND	SE Bedroom	NA
SS-HM-09A	Glazing	Yes	M	Category II	ND	SE Bedroom	NA
SS-HM-09B	Glazing	Yes	M	Category II	ND	E Bedroom	NA
SS-HM-10A	Pitted 1'x1' White Ceiling Tile	Yes	M	Category II	ND	Living Room	NA
SS-HM-10B	Pitted 1'x1' White Ceiling Tile	Yes	M	Category II	ND	Living Room	NA

**Notes:**

Material Types

M = Miscellaneous building material  
 TSI = Thermal System Insulation  
 S = Surfacing Material  
 PC = Point Count Analysis  
 CH = Chrysotile Asbestos

Abbreviations

NQ = Not quantified  
 NA = Not applicable  
 ND = Not detected. Laboratory result is less than 1 % asbestos  
 lin. ft. = linear feet  
 sq. ft. = square feet

Asbestos Containing Material (ACM) is defined as any material containing more than 1 percent asbestos as determined utilizing Polarized Light Microscopy.

**Table 3 - Summary of Presumed Asbestos Containing Materials, 3200 7th St., Muskegon Heights, Michigan**

<b>Asbestos Containing Material Description and Location</b>					
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Condition</b>	<b>Material Type</b>	<b>Approx. Quantity</b>
No Presumed Asbestos Containing Materials Identified					

**Notes:**

Material Types

- M = Miscellaneous building material
- TSI = Thermal System Insulation
- S = Surfacing Material

Abbreviations

- lin. ft. = linear feet
- sq. ft. = square feet

**Table 4 - Summary of All Asbestos Containing Materials, 3200 7th St., Muskegon Heights, Michigan**

<b>Interior - Asbestos Containing Materials</b>				
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>	
Closet	Brown Linoleum	No	8 sq. ft.	
			<b>Total</b>	<b>8 sq. ft.</b>

**Notes:**

Abbreviations

lin. ft. = linear feet  
 sq. ft. = square feet

**Shaded/Bolded** = Friable ACM and any Category I and Category II non-friable ACM that has a high probability of becoming crumbled, pulverized, or reduced to powder by the demolition or renovation activities that must be properly abated prior to commencement of any demolition/renovation activities.

Demolition/renovation activities completed with intact Category I non-friable ACM are regulated by OSHA and must be completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note that a Negative Pressure Enclosure must be utilized during abatement when Site Conditions Warrant. Examples of these conditions include the abatement of Plaster and Vermiculite insulation, HVAC Duct Wrap in Poor Condition, and Air-O-Cell/Mag Pipe Wrap. Conditions outside of these should be assessed on a case by case basis during the Asbestos Abatement Contractors site walk and Work Plan Preparation.





P.O. Box 13216  
Lansing, MI 48901  
Phone: 888.449.4566  
Fax: 888.448.8739  
www.redcedarconsulting.net

May 12, 2017

Mr. Tim Burgess  
Muskegon County Land Bank  
Land Bank Coordinator  
173 E. Apple Avenue, Suite 104  
Muskegon, MI 49442

**RE: *Asbestos Containing Material and Hazardous Materials Inspection***  
***3213 5th St., Muskegon Heights, MI 49444***  
***Parcel ID: 61-26-770-023-0007-00***

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 3213 5th St., Muskegon Heights, Michigan (Subject Property). This inspection was completed at the request of the Muskegon County Land Bank to comply with the United States Environmental Protection Agency (USEPA) requirements for demolition and renovation set forth under the National Emissions Standards for Hazardous Air Pollutants (NESHAP, 40 CFR Part 61). This inspection was also completed to comply with the Occupational Safety and Health Administration (OSHA) Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

### **SUBJECT PROPERTY**

The Subject Property is comprised of a .18 acre residential parcel which contains an approximate 1,048 square foot residential building (the Building) constructed in 1930. The Building was constructed on a concrete block basement with two aboveground floors. The exterior walls of the Building were finished with wood lap while the roof was sealed with asphalt shingles. The Building can be further divided into a front entry, living room, dining room, kitchen, bath, one bedroom and rear entry on the first floor while the second floor contains two bedrooms.

### **VISUAL INSPECTION AND SAMPLING**

#### **Asbestos Containing Materials Inspection**

Aaron Paquet and Darrell DeMasters of Red Cedar Consulting (Red Cedar), accredited State Of Michigan/EPA Asbestos Building Inspectors (Accreditation Numbers A30955 and A31159, respectively) who completed training per the Michigan Asbestos Workers Accreditation Act 440, completed an inspection of the Subject Property on April 25, 2017 for suspected asbestos containing building materials.

This inspection, and subsequent sample collection was completed in accordance with the USEPA Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763) assessment and sampling protocol.

During the completion of the inspection, each area of the Subject Property was visually inspected for asbestos containing building materials (ACBM). Following the completion of the visual inspection, Red Cedar staff identified each suspect area of friable and non-friable ACBM and sorted them into one of three homogenous categories for sampling purposes. AHERA defines friable as a material that when dry, may be crumbled, pulverized, or reduced to powder by hand pressure. A homogenous area is defined by OSHA as an area of surfacing, thermal system insulation (TSI) or miscellaneous material that is uniform in color and texture. Surfacing materials are most commonly found in sprayed-on, troweled-on or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members. TSI refers to materials applied to pipes, fittings, boilers, ductwork, or other components to prevent heat loss or gain, or condensation. Any material that does not fall under the surfacing or TSI category, such as floor tile, drywall, and acoustical ceiling tile are placed into the miscellaneous materials category.

Following the completion of the visual inspection, Red Cedar staff identified the following materials as suspect ACBM:

- Asphalt Shingle
- Vapor Barrier
- Vinyl Flooring
- 1'x1' Ceiling Tile
- 2'x2' Ceiling Tile
- Glazing
- Plaster

Red Cedar staff collected seventeen samples of suspect ACBM separated into seven distinct homogenous groups for laboratory analysis. Samples were collected and submitted to APEX Research Inc. Laboratories (APEX) (Accreditation Number 102118-0) for laboratory analysis. Analysis was completed utilizing polarized light microscopy (PLM) which is the Environmental Protection Agency (EPA) approved method for analysis of bulk materials for asbestos. PLM analysis completed pursuant to method (EPA 600/M4-82-020) identifies asbestos fiber bundles by the visual properties displayed when the sample is treated with various dispersion staining liquids. The laboratory report completed following the sample analysis indicates if asbestos is present, and at what percentage along with a description and percentage of other fibrous and non-fibrous materials and sample color. Chain-of-custody documentation was followed from sample collection through shipping and receiving of the samples at the designated laboratory. The documentation assures that samples will meet the quality assurance/quality control measures defined by AHERA. The laboratory analytical report prepared by APEX for the seventeen samples is included as Attachment A.

## **Hazardous Materials Inspection**

On April 25, 2017 the Subject Property was also inspected for the presence of hazardous materials which include but are not limited to polychlorinated biphenyls (PCBs) and potential mercury containing equipment and any items or containers that may contain or be classified as a hazardous or regulated material. Each material, if identified, was documented along with the approximate location. Any materials identified as hazardous are included in Table 1.

## **INSPECTION RESULTS AND RECOMMENDATIONS**

During the completion of the asbestos inspection, seventeen samples of suspect ACM were collected and are documented in Table 2 along with the Red Cedar sample number, description, friability, material type, ACM classification, sample location, material quantity and laboratory analytical results.

ACM, as defined by the USEPA NESHAP is “any material containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763 Section 1, Polarized Light Microscopy”.

Friable ACM is defined by NESHAP as any material containing more than 1 percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Friable ACM is a concern due the ease of unintentionally disturbing the ACM which may result in “visible emissions” which is known as a Fiber Release Episode.

Non-friable asbestos-containing material is defined as “material containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACM’s are separated into Category I and Category II ACM. Category I ACM is any asbestos containing packing’s, gaskets, resilient floor coverings (vinyl floor tile and linoleum are examples of these) and asphalt roofing products. Category II ACM is stated by NESHAP as any material excluding Category I non-friable ACM such as drywall, plaster or fiberboard insulation.

### **Presumed Asbestos Containing Material**

Presumed Asbestos Containing Materials (PACM) are suspect surfacing, TSI and miscellaneous materials found in buildings constructed prior to 1980 which are classified as and due to the age of the structure, are assumed to be ACM and do not require sample collection and analysis. OSHA dictates that PACM may be “rebutted” following a complete inspection pursuant to AHERA protocol.

No PACM was identified during the completion of this inspection. All suspect materials identified were sampled and analyzed for ACM.

Table 3 lists the location, material description, friability, condition, material type (surfacing, thermal or miscellaneous) and approximate quantity of all PACM documented at the Subject Property.

Table 4 provides a summary all ACM documented at the Subject Property which includes the material location, description, and approximate quantity.

**Friable ACM's**

No friable ACM's were identified during the completion of this inspection.

**Category I ACM**

No Category I ACM was identified during the completion of this inspection.

**Category II ACM**

No Category II non-friable ACM was identified during the completion of this inspection.

**RECOMMENDATIONS**

**Asbestos Containing Materials**

No ACM was identified within the Building that would require abatement prior to demolition/renovation of the structure.

Please note: The location of samples obtained during this inspection were in a random fashion and areas that were not identified during this inspection may be damaged or have become damaged since the inspection was completed. If Category I or Category II friable materials are discovered prior to or during the demolition/renovation process, these materials must be abated prior to commencement of any demolition/renovation activities at the Subject Property.

**Hazardous Materials**

Hazardous Materials identified at the Subject Property and documented in Table 1 which require proper removal and disposal consist of the following items:

- Smoke Detector (2)
- 5-Gallon Container Misc. Paint (1)

**REGULATORY REQUIREMENTS**

A Notification of Intent to Renovate/Demolish form must be filed with the Michigan Department of Environmental Quality- Air Quality Division at least 10 working days prior to any renovation or demolition activities at a site.

The Notification of Intent to Renovate/Demolish form must also be completed and submitted to the MIOSHA-Asbestos Program whenever demolition, encapsulation and/or renovation activities at a site involving greater than ten lineal feet and/or fifteen square feet of ACM will be completed.

Regulated asbestos containing materials per NESHAP (40 CFR Part 61) which falls into any of the following categories are ACM's that must be removed prior to any renovation/demolition activities at the Subject Property.

Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-26-770-023-0007-00

- Friable asbestos material.
- Category I non-friable ACM that has become friable.
- Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading.
- Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations.

Asbestos abatement should only be performed by a certified asbestos abatement contractor licensed to complete abatement work. The contractor must also follow the standards and requirements set forth per the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61).

Additional information regarding the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61) can be obtained by contacting the associated agency below.

NESHAP Asbestos Program  
Department of Environmental Quality  
Phone: 517-284-6777

MIOSHA-CSHD-Asbestos Program  
State of Michigan  
Phone: 517-284-7680  
Email: [asbestos@michigan.gov](mailto:asbestos@michigan.gov)


### **DISCLAIMER**

Red Cedar Consulting performed destructive testing methods in an attempt to access and inspect all areas of the Building. Unfortunately, due to the age of construction along with multiple additions/renovations that may have been completed on the Building, additional inspections may be required if suspect ACM material not documented within this report is encountered during renovation/demolition activities.

This report was prepared at the request and for exclusive use by the Muskegon County Land Bank and may not be reproduced or sold without written permission from Red Cedar Consulting.

We appreciate the opportunity to provide the requested services. Please contact us at (888) 449-4566 with any questions or concerns.

Sincerely,  
**Red Cedar Consulting**



Aaron Paquet  
Michigan/EPA Certified Asbestos Building Inspector  
(A30955)

Red Cedar Consulting

***Attachment 1***  
***APEX Research Laboratory Analytical Results***



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 3213 Fifth St.

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69788  
Date Collected: 04/25/17  
Date Received: 04/26/17  
Date Analyzed: 05/02/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69788 - 01 Cust. #: FS-HM-01A Material: Vapor Barrier Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 95% Other - 5%
Lab ID #: 69788 - 02 Cust. #: FS-HM-01B Material: Vapor Barrier Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 95% Other - 5%
Lab ID #: 69788 - 03 Cust. #: FS-HM-02A Material: Shingle Roof Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 25% Other - 75%

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: 3213 Fifth St.

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69788  
Date Collected: 04/25/17  
Date Received: 04/26/17  
Date Analyzed: 05/02/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69788 - 04 Cust. #: FS-HM-02B Material: Shingle Roof Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 25% Other - 75%
Lab ID #: 69788 - 05 Cust. #: FS-HM-03A Material: Tan Vinyl Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Fiberglass - 10% Other - 60%
Lab ID #: 69788 - 06 Cust. #: FS-HM-03B Material: Tan Vinyl Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Fiberglass - 10% Other - 60%

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: 3213 Fifth St.

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69788  
Date Collected: 04/25/17  
Date Received: 04/26/17  
Date Analyzed: 05/02/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69788 - 07 Cust. #: FS-HM-04A Material: 1x1 White Ceiling Tile/Smooth Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 95% Other - 5%
Lab ID #: 69788 - 08 Cust. #: FS-HM-04B Material: 1x1 White Ceiling Tile/Smooth Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 95% Other - 5%
Lab ID #: 69788 - 09 Cust. #: FS-HM-05A Material: 2x2 White Ceiling Tile-Pinholes/Fissures Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 58% Mineral Wool - 2% Fiberglass - 10% Other - 30%

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: 3213 Fifth St.

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Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69788  
Date Collected: 04/25/17  
Date Received: 04/26/17  
Date Analyzed: 05/02/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69788 - 10 Cust. #: FS-HM-05B Material: 2x2 White Ceiling Tile-Pinholes/Fissures Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 55% Mineral Wool - 2% Fiberglass - 10% Other - 33%
Lab ID #: 69788 - 11 Cust. #: FS-HM-06A Material: Window Glazing Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Wollastonite - 2% Other - 98%
Lab ID #: 69788 - 12 Cust. #: FS-HM-06B Material: Window Glazing Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Wollastonite - 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: 3213 Fifth St.

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69788  
Date Collected: 04/25/17  
Date Received: 04/26/17  
Date Analyzed: 05/02/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69788 - 13 Cust. #: FS-HS-01A Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69788 - 13a Cust. #: FS-HS-01A Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: 69788 - 14 Cust. #: FS-HS-01B Material: Plaster Texture Location: Appearance: green, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Wollastonite - 5% Other - 95%

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.



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# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 3213 Fifth St.

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69788  
Date Collected: 04/25/17  
Date Received: 04/26/17  
Date Analyzed: 05/02/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69788 - 14a Cust. #: FS-HS-01B Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: 69788 - 15 Cust. #: FS-HS-01C Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69788 - 15a Cust. #: FS-HS-01C Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 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: 3213 Fifth St.

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P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69788  
Date Collected: 04/25/17  
Date Received: 04/26/17  
Date Analyzed: 05/02/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69788 - 16 Cust. #: FS-HS-01D Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69788 - 16a Cust. #: FS-HS-01D Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: 69788 - 17 Cust. #: FS-HS-01E Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> 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: 3213 Fifth St.

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69788  
Date Collected: 04/25/17  
Date Received: 04/26/17  
Date Analyzed: 05/02/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69788 - 17a Cust. #: FS-HS-01E Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	
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

**69788**

**Apex Research, Inc.**

E-mail: [apexresearch@chartermi.net](mailto:apexresearch@chartermi.net)

Phone: 734-449-9990



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-25-17

Project: 3213 Fifth St.

Project #:

Contact Person: Aaron Paquet

**Turn Around Times: (Circle One)**

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: 5 day **(TTP)** All Samples

Asbestos: Bulk  Wipe  Point Count  PCM   
 Lead: Bulk  Wipe  Air  Paint  Soil   
 Mold: Bulk  Tape  BioSIS  Other  Viable   
 TEM: AHERA 7400 Bulk/NOB EPA Level II

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	FS-HM-01A	Paper Barrier			
2	FS-HM-01B	"			
3	FS-HM-02A	Single Roof			
4	FS-HM-02B	"			
5	FS-HM-03A	Iron Nails			
6	FS-HM-03B	"			
7	FS-HM-04A	1 x 1 White CT Smooth			
8	FS-HM-04B	"			
9	FS-HM-05A	2 x 2 White CT Smooth			
10	FS-HM-05B	"			
11	FS-HM-06A	Aluminum Siding			

**RECEIVED**

Relinquished by: Alex White Received by: UPB

Date: 4-25-17

Date: 4-25-17

Relinquished by:

Date:

Received by: APR 26 2017

Date: 4/26/17 1020

69788

2 of 2

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

E-mail: apexresearch@chartermi.net Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-25-17

Project: 3213 *Willa St*

Project #: \_\_\_\_\_

Contact Person: Aaron Paquet

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: *5 day*  All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BioSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	FS-HM-06B	<i>Under Bleeding</i>			
13	FS-HS-01A	<i>Plaster</i>			
14	FS-HS-01B				
15	FS-HS-01C				
16	FS-HS-01D				
17	FS-HS-01E				

Relinquished by: *[Signature]* Received by: *[Signature]*

Date: 4-25-17 Date: 4-25-17

Relinquished by: \_\_\_\_\_ Received by: \_\_\_\_\_

Date: \_\_\_\_\_ Date: \_\_\_\_\_

RECEIVED



***Tables***

**Table 1 - Summary of Hazardous Materials, 3213 5th St., Muskegon Heights, Michigan**

<b>Hazardous Materials Description and Location</b>		
<b>Location</b>	<b>Material Description</b>	<b>Quantity</b>
Kitchen	Smoke Detector	1
Kitchen	5 Gallon Container Misc. Paint	1
Basement	Smoke Detector	1

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 3213 5th St., Muskegon Heights, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
FS-HM-01A	Vapor Barrier	Yes	M	Category II	ND	Exterior	NA
FS-HM-01B	Vapor Barrier	Yes	M	Category II	ND	Exterior	NA
FS-HM-02A	Shingle Roof	No	M	Category I	ND	Exterior	NA
FS-HM-02B	Shingle Roof	No	M	Category I	ND	Exterior	NA
FS-HM-03A	Tan Vinyl	No	M	Category I	ND	Bathroom	NA
FS-HM-03B	Tan Vinyl	No	M	Category I	ND	Bathroom	NA
FS-HM-04A	White Smooth 1'x1' Ceiling Tile	Yes	M	Category II	ND	Living Room	NA
FS-HM-04B	White Smooth 1'x1' Ceiling Tile	Yes	M	Category II	ND	Rear Entry	NA
FS-HM-05A	White 2'x2' Ceiling Tile with Pinholes & Fissures	Yes	M	Category II	ND	Bathroom	NA
FS-HM-05B	White 2'x2' Ceiling Tile with Pinholes & Fissures	Yes	M	Category II	ND	Dining Room	NA
FS-HM-06A	Window Glazing	Yes	M	Category II	ND	Kitchen	NA
FS-HM-06B	Window Glazing	Yes	M	Category II	ND	Kitchen	NA
FS-HS-01A	Plaster	No	S	Category II	ND/ND	Bathroom Ceiling	NA
FS-HS-01B	Plaster	No	S	Category II	ND/ND	NW Bedroom Ceiling	NA
FS-HS-01C	Plaster	No	S	Category II	ND/ND	Kitchen Wall	NA
FS-HS-01D	Plaster	No	S	Category II	ND/ND	Dining Room Wall	NA
FS-HS-01E	Plaster	No	S	Category II	ND/ND	NW Bedroom Wall	NA

**Notes:**

Material Types

M = Miscellaneous building material  
 TSI = Thermal System Insulation  
 S = Surfacing Material  
 PC = Point Count Analysis  
 CH = Chrysotile Asbestos

Abbreviations

NQ = Not quantified  
 NA = Not applicable  
 ND = Not detected. Laboratory result is less than 1 % asbestos  
 lin. ft. = linear feet  
 sq. ft. = square feet

Asbestos Containing Material (ACM) is defined as any material containing more than 1 percent asbestos as determined utilizing Polarized Light Microscopy.

**Table 3 - Summary of Presumed Asbestos Containing Materials, 3213 5th St., Muskegon Heights, Michigan**

<b>Asbestos Containing Material Description and Location</b>					
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Condition</b>	<b>Material Type</b>	<b>Approx. Quantity</b>
No Presumed Asbestos Containing Materials Identified					

**Notes:**

Material Types

- M = Miscellaneous building material
- TSI = Thermal System Insulation
- S = Surfacing Material

Abbreviations

- lin. ft. = linear feet
- sq. ft. = square feet

**Table 4 - Summary of All Asbestos Containing Materials, 3213 5th St., Muskegon Heights, Michigan**

<b>Exterior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
No Asbestos Containing Materials Identified			

**Notes:**

Abbreviations

lin. ft. = linear feet

sq. ft. = square feet

**Shaded/Bolded** = Friable ACM and any Category I and Category II non-friable ACM that has a high probability of becoming crumbled, pulverized, or reduced to powder by the demolition or renovation activities that must be properly abated prior to commencement of any demolition/renovation activities.

Demolition/renovation activities completed with intact Category I non-friable ACM are regulated by OSHA and must be completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note that a Negative Pressure Enclosure must be utilized during abatement when Site Conditions Warrant. Examples of these conditions include the abatement of Plaster and Vermiculite insulation, HVAC Duct Wrap in Poor Condition, and Air-O-Cell/Mag Pipe Wrap. Conditions outside of these should be assessed on a case by case basis during the Asbestos Abatement Contractors site walk and Work Plan Preparation.



P.O. Box 13216  
Lansing, MI 48901  
Phone: 888.449.4566  
Fax: 888.448.8739  
www.redcedarconsulting.net

May 12, 2017

Mr. Tim Burgess  
Muskegon County Land Bank  
Land Bank Coordinator  
173 E. Apple Avenue, Suite 104  
Muskegon, MI 49442

**RE: *Asbestos Containing Material and Hazardous Materials Inspection***  
***3225 Glendale St., Muskegon Heights, MI 49444***  
***Parcel ID: 61-26-770-018-0011-00***

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 3225 Glendale St., Muskegon Heights, Michigan (Subject Property). This inspection was completed at the request of the Muskegon County Land Bank to comply with the United States Environmental Protection Agency (USEPA) requirements for demolition and renovation set forth under the National Emissions Standards for Hazardous Air Pollutants (NESHAP, 40 CFR Part 61). This inspection was also completed to comply with the Occupational Safety and Health Administration (OSHA) Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

### **SUBJECT PROPERTY**

The Subject Property is comprised of a .18 acre residential parcel which contains an approximate 1,507 square foot residential building (the Building) constructed in 1940. The Building was constructed on a concrete block basement with two aboveground floors. The exterior walls of the Building were finished with vinyl siding over Styrofoam board and a vapor barrier while the roof was sealed with asphalt shingles. The Building can be further divided into a front entry, living room, kitchen, bath, and rear entry on the first floor while the second floor contains four bedrooms.

### **VISUAL INSPECTION AND SAMPLING**

#### **Asbestos Containing Materials Inspection**

Aaron Paquet and Darrell DeMasters of Red Cedar Consulting (Red Cedar), accredited State Of Michigan/EPA Asbestos Building Inspectors (Accreditation Numbers A30955 and A31159, respectively) who completed training per the Michigan Asbestos Workers Accreditation Act 440, completed an inspection of the Subject Property on April 24, 2017 for suspected asbestos containing building materials.

This inspection, and subsequent sample collection was completed in accordance with the USEPA Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763) assessment and sampling protocol.

During the completion of the inspection, each area of the Subject Property was visually inspected for asbestos containing building materials (ACBM). Following the completion of the visual inspection, Red Cedar staff identified each suspect area of friable and non-friable ACBM and sorted them into one of three homogenous categories for sampling purposes. AHERA defines friable as a material that when dry, may be crumbled, pulverized, or reduced to powder by hand pressure. A homogenous area is defined by OSHA as an area of surfacing, thermal system insulation (TSI) or miscellaneous material that is uniform in color and texture. Surfacing materials are most commonly found in sprayed-on, troweled-on or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members. TSI refers to materials applied to pipes, fittings, boilers, ductwork, or other components to prevent heat loss or gain, or condensation. Any material that does not fall under the surfacing or TSI category, such as floor tile, drywall, and acoustical ceiling tile are placed into the miscellaneous materials category.

Following the completion of the visual inspection, Red Cedar staff identified the following materials as suspect ACBM:

- Asphalt Shingle
- Vapor Barrier
- Vinyl Flooring
- Linoleum
- 1'x1' Ceiling Tile
- 12"x12" Vinyl Tile
- Drywall & Joint Compound
- Plaster
- Textured Surfacing

Red Cedar staff collected thirty two samples of suspect ACBM separated into fourteen distinct homogenous groups for laboratory analysis. Samples were collected and submitted to APEX Research Inc. Laboratories (APEX) (Accreditation Number 102118-0) for laboratory analysis. Analysis was completed utilizing polarized light microscopy (PLM) which is the Environmental Protection Agency (EPA) approved method for analysis of bulk materials for asbestos. PLM analysis completed pursuant to method (EPA 600/M4-82-020) identifies asbestos fiber bundles by the visual properties displayed when the sample is treated with various dispersion staining liquids. The laboratory report completed following the sample analysis indicates if asbestos is present, and at what percentage along with a description and percentage of other fibrous and non-fibrous materials and sample color. Chain-of-custody documentation was followed from sample collection through shipping and receiving of the samples at the designated laboratory. The documentation assures that samples will meet the quality assurance/quality control measures defined by AHERA. The laboratory analytical report prepared by APEX for the thirty two samples is included as Attachment A.

## **Hazardous Materials Inspection**

On April 24, 2017 the Subject Property was also inspected for the presence of hazardous materials which include but are not limited to polychlorinated biphenyls (PCBs) and potential mercury containing equipment and any items or containers that may contain or be classified as a hazardous or regulated material. Each material, if identified, was documented along with the approximate location. Any materials identified as hazardous are included in Table 1.

## **INSPECTION RESULTS AND RECOMMENDATIONS**

During the completion of the asbestos inspection, thirty two samples of suspect ACM were collected and are documented in Table 2 along with the Red Cedar sample number, description, friability, material type, ACM classification, sample location, material quantity and laboratory analytical results.

ACM, as defined by the USEPA NESHAP is “any material containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763 Section 1, Polarized Light Microscopy”.

Friable ACM is defined by NESHAP as any material containing more than 1 percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Friable ACM is a concern due the ease of unintentionally disturbing the ACM which may result in “visible emissions” which is known as a Fiber Release Episode.

Non-friable asbestos-containing material is defined as “material containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACM’s are separated into Category I and Category II ACM. Category I ACM is any asbestos containing packing’s, gaskets, resilient floor coverings (vinyl floor tile and linoleum are examples of these) and asphalt roofing products. Category II ACM is stated by NESHAP as any material excluding Category I non-friable ACM such as drywall, plaster or fiberboard insulation.

### **Presumed Asbestos Containing Material**

Presumed Asbestos Containing Materials (PACM) are suspect surfacing, TSI and miscellaneous materials found in buildings constructed prior to 1980 which are classified as and due to the age of the structure, are assumed to be ACM and do not require sample collection and analysis. OSHA dictates that PACM may be “rebutted” following a complete inspection pursuant to AHERA protocol.

No PACM was identified during the completion of this inspection. All suspect materials identified were sampled and analyzed for ACM.

Table 3 lists the location, material description, friability, condition, material type (surfacing, thermal or miscellaneous) and approximate quantity of all PACM documented at the Subject Property.

Table 4 provides a summary all ACM documented at the Subject Property which includes the material location, description, and approximate quantity.



**Friable ACM's**

No friable ACM's were identified during the completion of this inspection.

**Category I ACM**

No Category I ACM was identified during the completion of this inspection.

**Category II ACM**

No Category II non-friable ACM was identified during the completion of this inspection.

**RECOMMENDATIONS**

**Asbestos Containing Materials**

No ACM was identified within the Building that would require abatement prior to demolition/renovation of the structure.

Please note: The location of samples obtained during this inspection were in a random fashion and areas that were not identified during this inspection may be damaged or have become damaged since the inspection was completed. If Category I or Category II friable materials are discovered prior to or during the demolition/renovation process, these materials must be abated prior to commencement of any demolition/renovation activities at the Subject Property.

**Hazardous Materials**

Hazardous Materials identified at the Subject Property and documented in Table 1 which require proper removal and disposal consist of the following items:

- No Hazardous Materials Identified

**REGULATORY REQUIREMENTS**

A Notification of Intent to Renovate/Demolish form must be filed with the Michigan Department of Environmental Quality- Air Quality Division at least 10 working days prior to any renovation or demolition activities at a site.

The Notification of Intent to Renovate/Demolish form must also be completed and submitted to the MIOSHA-Asbestos Program whenever demolition, encapsulation and/or renovation activities at a site involving greater than ten lineal feet and/or fifteen square feet of ACM will be completed.

Regulated asbestos containing materials per NESHAP (40 CFR Part 61) which falls into any of the following categories are ACM's that must be removed prior to any renovation/demolition activities at the Subject Property.

- Friable asbestos material.

Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-26-770-018-0011-00

- Category I non-friable ACM that has become friable.
- Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading.
- Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations.

Asbestos abatement should only be performed by a certified asbestos abatement contractor licensed to complete abatement work. The contractor must also follow the standards and requirements set forth per the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61).

Additional information regarding the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61) can be obtained by contacting the associated agency below.

NESHAP Asbestos Program  
Department of Environmental Quality  
Phone: 517-284-6777

MIOSHA-CSHD-Asbestos Program  
State of Michigan  
Phone: 517-284-7680  
Email: asbestos@michigan.gov

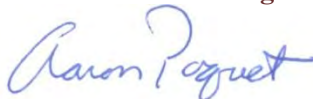
### **DISCLAIMER**

Red Cedar Consulting performed destructive testing methods in an attempt to access and inspect all areas of the Building. Unfortunately, due to the age of construction along with multiple additions/renovations that may have been completed on the Building, additional inspections may be required if suspect ACM material not documented within this report is encountered during renovation/demolition activities.

This report was prepared at the request and for exclusive use by the Muskegon County Land Bank and may not be reproduced or sold without written permission from Red Cedar Consulting.

We appreciate the opportunity to provide the requested services. Please contact us at (888) 449-4566 with any questions or concerns.

Sincerely,  
**Red Cedar Consulting**



Aaron Paquet  
Michigan/EPA Certified Asbestos Building Inspector  
(A30955)

Red Cedar Consulting

***Attachment 1***  
***APEX Research Laboratory Analytical Results***



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 3225 Glendale St

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69786  
Date Collected: 04/24/17  
Date Received: 04/26/17  
Date Analyzed: 05/02/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69786 - 01 Cust. #: LA-HM-01A Material: Vapor Barrier Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 60% Other - 40%
Lab ID #: 69786 - 02 Cust. #: LA-HM-01B Material: Vapor Barrier Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 60% Other - 40%
Lab ID #: 69786 - 03 Cust. #: LA-HM-02A Material: Shingle Roof Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 30% Other - 70%

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: 3225 Glendale St

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ARI Report # 17-69786  
Date Collected: 04/24/17  
Date Received: 04/26/17  
Date Analyzed: 05/02/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69786 - 04 Cust. #: LA-HM-02B Material: Shingle Roof Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 30% Other - 70%
Lab ID #: 69786 - 05 Cust. #: LA-HM-03A Material: 12x12 Woodgrain VFT Location: Appearance: brown, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69786 - 05a Cust. #: LA-HM-03A Material: Glue Location: Appearance: clear, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Robert T. Letarte Jr., Laboratory Director

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ARI Report # 17-69786  
Date Collected: 04/24/17  
Date Received: 04/26/17  
Date Analyzed: 05/02/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69786 - 06 Cust. #: LA-HM-03B Material: 12x12 Woodgrain VFT Location: Appearance: brown,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69786 - 06a Cust. #: LA-HM-03B Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69786 - 07 Cust. #: LA-HM-04A Material: Tan 6" Squared Vinyl Location: Appearance: beige,fibrous,nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%

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

Robert T. Letarte Jr., Laboratory Director

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ARI Report # 17-69786  
Date Collected: 04/24/17  
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Date Analyzed: 05/02/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69786 - 08 Cust. #: LA-HM-04B Material: Tan 6" Squared Vinyl Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 69786 - 09 Cust. #: LA-HM-05A Material: Cream 6" Squared Vinyl Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 69786 - 10 Cust. #: LA-HM-05B Material: Cream 6" Squared Vinyl Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%

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

Robert T. Letarte Jr., Laboratory Director

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ARI Report # 17-69786  
Date Collected: 04/24/17  
Date Received: 04/26/17  
Date Analyzed: 05/02/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69786 - 11 Cust. #: LA-HM-06A Material: 12x12 Parquet VFT Location: Appearance: brown,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69786 - 11a Cust. #: LA-HM-06A Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69786 - 12 Cust. #: LA-HM-06B Material: 12x12 Parquet VFT Location: Appearance: brown,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Robert T. Letarte Jr., Laboratory Director

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Date Collected: 04/24/17  
Date Received: 04/26/17  
Date Analyzed: 05/02/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69786 - 12a Cust. #: LA-HM-06B Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69786 - 13 Cust. #: LA-HM-07A Material: Drywall Location: Appearance: white,fibrous,nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69786 - 13a Cust. #: LA-HM-07A Material: Joint Compound Location: Appearance: white,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Date Received: 04/26/17  
Date Analyzed: 05/02/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69786 - 14 Cust. #: LA-HM-07B Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69786 - 14a Cust. #: LA-HM-07B Material: Joint Compound Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69786 - 15 Cust. #: LA-HM-08A Material: 12x12 Gold VFT Location: Appearance: yellow, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Other - 99%

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

Robert T. Letarte Jr., Laboratory Director

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ARI Report # 17-69786  
Date Collected: 04/24/17  
Date Received: 04/26/17  
Date Analyzed: 05/02/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69786 - 15a Cust. #: LA-HM-08A Material: Glue Location: Appearance: yellow,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69786 - 16 Cust. #: LA-HM-08B Material: 12x12 Gold VFT Location: Appearance: yellow,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 69786 - 16a Cust. #: LA-HM-08B Material: Glue Location: Appearance: yellow,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> 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.



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ARI Report # 17-69786  
Date Collected: 04/24/17  
Date Received: 04/26/17  
Date Analyzed: 05/02/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69786 - 17 Cust. #: LA-HM-09A Material: Tan/Brown Layered Linoleum Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 69786 - 17a Cust. #: LA-HM-09A Material: Brown Sheet Flooring Location: Appearance: brown, fibrous, nonhomogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 69786 - 18 Cust. #: LA-HM-09B Material: Tan/Brown Layered Linoleum Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> 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.



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Date Analyzed: 05/02/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69786 - 18a Cust. #: LA-HM-09B Material: Brown Sheet Flooring Location: Appearance: brown, fibrous, nonhomogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 69786 - 19 Cust. #: LA-HM-10A Material: Layered Brown Linoleum Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 69786 - 19a Cust. #: LA-HM-10A Material: Grey Sheet Flooring Location: Appearance: grey, fibrous, nonhomogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 50% Other - 50%

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

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Date Analyzed: 05/02/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69786 - 20 Cust. #: LA-HM-10B Material: Layered Brown Linoleum Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 69786 - 20a Cust. #: LA-HM-10B Material: Grey Sheet Flooring Location: Appearance: grey, fibrous, nonhomogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 69786 - 21 Cust. #: LA-HM-11A Material: 1x1 White Textured Ceiling Tile Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%

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

Robert T. Letarte Jr., Laboratory Director

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Date Analyzed: 05/02/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69786 - 22 Cust. #: LA-HM-11B Material: 1x1 White Textured Ceiling Tile Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 69786 - 23 Cust. #: LA-HM-12A Material: Brown/White 12x12 VFT Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69786 - 23a Cust. #: LA-HM-12A Material: Glue Location: Appearance: clear, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> 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: 3225 Glendale St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69786  
Date Collected: 04/24/17  
Date Received: 04/26/17  
Date Analyzed: 05/02/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69786 - 24 Cust. #: LA-HM-12B Material: Brown/White 12x12 VFT Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69786 - 24a Cust. #: LA-HM-12B Material: Glue Location: Appearance: clear, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69786 - 25 Cust. #: LA-HS-01A Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 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: 3225 Glendale St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69786  
Date Collected: 04/24/17  
Date Received: 04/26/17  
Date Analyzed: 05/02/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69786 - 26 Cust. #: LA-HS-01B Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> Chrysotile - 0.25%  POINT COUNT RESULT	Other - 99.75%
Lab ID #: 69786 - 26a Cust. #: LA-HS-01B Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: 69786 - 27 Cust. #: LA-HS-01C Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> 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: 3225 Glendale St

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69786  
Date Collected: 04/24/17  
Date Received: 04/26/17  
Date Analyzed: 05/02/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69786 - 27a Cust. #: LA-HS-01C Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: 69786 - 28 Cust. #: LA-HS-01D Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> Chrysotile - 0.50%  <b>POINT COUNT RESULT</b>	Other - 99.50%
Lab ID #: 69786 - 28a Cust. #: LA-HS-01D Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 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: 3225 Glendale St

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69786  
Date Collected: 04/24/17  
Date Received: 04/26/17  
Date Analyzed: 05/02/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69786 - 29 Cust. #: LA-HS-01E Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> Chrysotile - Trace  POINT COUNT RESULT	Other - 100%
Lab ID #: 69786 - 29a Cust. #: LA-HS-01E Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: 69786 - 30 Cust. #: LA-HS-02A Material: Textured Surfacing Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Vermiculite - 15% Other - 84%

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: 3225 Glendale St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69786  
Date Collected: 04/24/17  
Date Received: 04/26/17  
Date Analyzed: 05/02/17  
Date Reported: 05/03/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69786 - 31 Cust. #: LA-HS-02B Material: Textured Surfacing Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Vermiculite - 10% Other - 89%
Lab ID #: 69786 - 32 Cust. #: LA-HS-02C Material: Textured Surfacing Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Vermiculite - 10% Other - 89%
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

**69786**

143

**APEX Research, Inc.** 11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990



E-mail: apexresearch@chartermi.net Fax: 734-449-9991

Client Name: Red Cedar Consulting

Date of Survey: 4-24-17

Address: PO Box 13216

Project: 3225 Wendlele St

City, St., Zip: Lansing, MI 48901

Project #:

Phone: (888) 449-4566 Fax: (888) 448-8739

Contact Person: Aaron Paquet

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

**Turn Around Times: (Circle One)**

PLM EPA 600, PC all samples with a detection of <5% ACM. apaquet@redcedarconsulting.net

Rush 24 hour

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_

48 hour 72 hour

Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_

Other: 5 days

Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BioSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_

Other: 5 days **TTP** All Samples

TEM: AHERA 7400 Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	LA-HM-01A	Vapor Barriers			
2	LA-HM-01B	" "			
3	LA-HM-02A	Shingle Roof			
4	LA-HM-02B	" "			
5	LA-HM-03A	12x12 loadgrain VFT			
6	LA-HM-03B	" "			
7	LA-HM-04A	Ten 6" spaced Vinyl			
8	LA-HM-04B	" "			
9	LA-HM-05A	Perim 5" spaced Vinyl			
10	LA-HM-05B	" "			
11	LA-HM-06A	12x12 Railway VFT			

**RECEIVED**

Relinquished by: Steve Watson Received by: UPS

Relinquished by: \_\_\_\_\_ Received by: APR 26 2017

Date: 4-24-17

Date: 4-25-17

69786

2 of 3

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

E-mail: apexresearch@chartermi.net Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216 Lansing, MI 48901

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-24-17

Project: 3225 Wendale Dr

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log-in \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

PJM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: 5 day All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BioSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	LA-HM-06B	12x12 Parking VET			
13	LA-HM-07A	Asphalt of first compound			
14	LA-HM-07B	" " "			
15	LA-HM-08A	12x12 Blvd VET			
16	LA-HM-08B	" " "			
17	LA-HM-09A	Tree & Brown Signage			
18	LA-HM-09B	" " "			
19	LA-HM-10A	Sealed Brown Signage			
20	LA-HM-10B	" " "			
21	LA-HM-11A	1x1 white sign compound			
22	LA-HM-11B	Sealed white sign compound			

Relinquished by: Alexis Metcalf Received by: UTS

Date: 4-24-17 Date: 4-25-17

Relinquished by: \_\_\_\_\_

Date: \_\_\_\_\_

Received by: R. B. B. APR 26 2017

Date: \_\_\_\_\_

RECEIVED

69786

3 of 3

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990



E-mail: apexresearch@chartermi.net Fax: 734-449-9991

Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St, Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-24-17

Project: 3225 Wendale St.

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: Sday  All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_

Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_

Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ Biosis \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_

TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
23	LA-HM-12A	Brown + White, 12x12 VET			
24	LA-HM-12B	.. .. ..			
25	LA-HS-01A	Plaster			
26	LA-HS-01B				
27	LA-HS-01C				
28	LA-HS-01D				
29	LA-HS-01E				
30	LA-HS-02A	Tattered Surfacing			
31	LA-HS-02B	.. ..			
32	LA-HS-02C	.. ..			

RECEIVED

Relinquished by: Alexis Metter Received by: DPB

Date: 4-24-17 Date: 4-25-17

Relinquished by: \_\_\_\_\_ Received by: \_\_\_\_\_

Date: \_\_\_\_\_ Date: \_\_\_\_\_

***Tables***



**Table 1 - Summary of Hazardous Materials, 3225 Glendale St., Muskegon Heights, Michigan**

<b>Hazardous Materials Description and Location</b>		
<b>Location</b>	<b>Material Description</b>	<b>Quantity</b>
No Hazardous Materials Identified		

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 3225 Glendale St., Muskegon Heights, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
LA-HM-01A	Vapor Barrier	Yes	M	Category II	ND	Exterior	NA
LA-HM-01B	Vapor Barrier	Yes	M	Category II	ND	Exterior	NA
LA-HM-02A	Shingle Roof	No	M	Category I	ND	Exterior	NA
LA-HM-02B	Shingle Roof	No	M	Category I	ND	Exterior	NA
LA-HM-03A	Woodgrain 12x12 Vinyl Floor Tile	No	M	Category I	ND/ND	Living Room	NA
LA-HM-03B	Woodgrain 12x12 Vinyl Floor Tile	No	M	Category I	ND/ND	Living Room	NA
LA-HM-04A	Tan 6" Squared Vinyl	No	M	Category I	ND	Kitchen	NA
LA-HM-04B	Tan 6" Squared Vinyl	No	M	Category I	ND	Kitchen	NA
LA-HM-05A	Cream 5" Squared Vinyl	No	M	Category I	ND	Bathroom	NA
LA-HM-05B	Cream 5" Squared Vinyl	No	M	Category I	ND	Bathroom	NA
LA-HM-06A	12x12 Parquet Vinyl Floor Tile	No	M	Category I	ND/ND	Rear Entry	NA
LA-HM-06B	12x12 Parquet Vinyl Floor Tile	No	M	Category I	ND/ND	Rear Entry	NA
LA-HM-07A	Drywall & Joint Compound	No	M	Category II	ND/ND	Living Room Wall	NA
LA-HM-07B	Drywall & Joint Compound	No	M	Category II	ND/ND	Kitchen Wall	NA
LA-HM-08A	Gold 12x12 Vinyl Floor Tile	No	M	Category I	ND/ND	Front Entry	NA
LA-HM-08B	Gold 12x12 Vinyl Floor Tile	No	M	Category I	ND/ND	Front Entry	NA
LA-HM-09A	Tan & Brown Layered Linoleum	No	M	Category I	ND/ND	NE Bedroom	NA
LA-HM-09B	Tan & Brown Layered Linoleum	No	M	Category I	ND/ND	NE Bedroom	NA
LA-HM-10A	Layered Brown Linoleum	No	M	Category I	ND/ND	SE Bedroom	NA
LA-HM-10B	Layered Brown Linoleum	No	M	Category I	ND/ND	SE Bedroom	NA
LA-HM-11A	White Textured 1'x1' Ceiling Tile	Yes	M	Category II	ND	Living Room	NA
LA-HM-11B	White Textured 1'x1' Ceiling Tile	Yes	M	Category II	ND	Living Room	NA
LA-HM-12A	Brown & White 12x12 Vinyl Floor Tile	No	M	Category I	ND/ND	Basement Entry	NA
LA-HM-12B	Brown & White 12x12 Vinyl Floor Tile	No	M	Category I	ND/ND	Basement Entry	NA
LA-HS-01A	Plaster	No	S	Category II	ND	Living Room Ceiling	NA
LA-HS-01B	Plaster	No	S	Category II	0.25%CH-PC/ND	Kitchen Ceiling	NA
LA-HS-01C	Plaster	No	S	Category II	ND/ND	Living Room Wall	NA

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 3225 Glendale St., Muskegon Heights, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
LA-HS-01D	Plaster	No	S	Category II	0.50%CH-PC/ND	SW Bedroom Ceiling	NA
LA-HS-01E	Plaster	No	S	Category II	Trace CH-PC/ND	NE Bedroom Wall	NA
LA-HS-02A	Textured Surfacing	No	S	Category II	ND/ND	Bathroom Ceiling	NA
LA-HS-02B	Textured Surfacing	No	S	Category II	ND/ND	SW Bedroom Ceiling	NA
LA-HS-02C	Textured Surfacing	No	S	Category II	ND/ND	SW Bedroom Wall	NA

**Notes:**

Material Types

M = Miscellaneous building material  
 TSI = Thermal System Insulation  
 S = Surfacing Material  
 PC = Point Count Analysis  
 CH = Chrysotile Asbestos

Abbreviations

NQ = Not quantified  
 NA = Not applicable  
 ND = Not detected. Laboratory result is less than 1 % asbestos  
 lin. ft. = linear feet  
 sq. ft. = square feet

Asbestos Containing Material (ACM) is defined as any material containing more than 1 percent asbestos as determined utilizing Polarized Light Microscopy.

**Table 3 - Summary of Presumed Asbestos Containing Materials, 3225 Glendale St., Muskegon Heights, Michigan**

<b>Asbestos Containing Material Description and Location</b>					
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Condition</b>	<b>Material Type</b>	<b>Approx. Quantity</b>
No Presumed Asbestos Containing Materials Identified					

**Notes:**

Material Types

- M = Miscellaneous building material
- TSI = Thermal System Insulation
- S = Surfacing Material

Abbreviations

- lin. ft. = linear feet
- sq. ft. = square feet

**Table 4 - Summary of All Asbestos Containing Materials, 3225 Glendale St., Muskegon Heights, Michigan**

<b>Exterior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
No Asbestos Containing Materials Identified			

**Notes:**

Abbreviations

lin. ft. = linear feet

sq. ft. = square feet

**Shaded/Bolded** = Friable ACM and any Category I and Category II non-friable ACM that has a high probability of becoming crumbled, pulverized, or reduced to powder by the demolition or renovation activities that must be properly abated prior to commencement of any demolition/renovation activities.

Demolition/renovation activities completed with intact Category I non-friable ACM are regulated by OSHA and must be completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note that a Negative Pressure Enclosure must be utilized during abatement when Site Conditions Warrant. Examples of these conditions include the abatement of Plaster and Vermiculite insulation, HVAC Duct Wrap in Poor Condition, and Air-O-Cell/Mag Pipe Wrap. Conditions outside of these should be assessed on a case by case basis during the Asbestos Abatement Contractors site walk and Work Plan Preparation.



P.O. Box 13216  
Lansing, MI 48901  
Phone: 888.449.4566  
Fax: 888.448.8739  
www.redcedarconsulting.net

May 8, 2017

Mr. Tim Burgess  
Muskegon County Land Bank  
Land Bank Coordinator  
173 E. Apple Avenue, Suite 104  
Muskegon, MI 49442

***RE: Asbestos Containing Material and Hazardous Materials Inspection  
3320 Sanford St., Muskegon Heights, MI 49444  
Parcel ID: 61-26-770-004-0030-00***

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 3320 Sanford St., Muskegon Heights, Michigan (Subject Property). This inspection was completed at the request of the Muskegon County Land Bank to comply with the United States Environmental Protection Agency (USEPA) requirements for demolition and renovation set forth under the National Emissions Standards for Hazardous Air Pollutants (NESHAP, 40 CFR Part 61). This inspection was also completed to comply with the Occupational Safety and Health Administration (OSHA) Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

### **SUBJECT PROPERTY**

The Subject Property is comprised of a .14 acre residential parcel which contains a 288 sq. ft. detached garage and approximate 688 square foot residential building (the Building) constructed in 1925. The Building was constructed on a concrete foundation with one aboveground floor. The exterior walls of the Building were finished with asphalt siding while the roof was sealed with asphalt shingles. The Building can be further divided into a living room, dining room, kitchen, bath, and two bedrooms.

### **VISUAL INSPECTION AND SAMPLING**

#### **Asbestos Containing Materials Inspection**

Aaron Paquet and Darrell DeMasters of Red Cedar Consulting (Red Cedar), accredited State Of Michigan/EPA Asbestos Building Inspectors (Accreditation Numbers A30955 and A31159, respectively) who completed training per the Michigan Asbestos Workers Accreditation Act 440, completed an inspection of the Subject Property on April 14, 2017 for suspected asbestos containing building materials.

This inspection, and subsequent sample collection was completed in accordance with the USEPA Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763) assessment and sampling protocol.

During the completion of the inspection, each area of the Subject Property was visually inspected for asbestos containing building materials (ACBM). Following the completion of the visual inspection, Red Cedar staff identified each suspect area of friable and non-friable ACBM and sorted them into one of three homogenous categories for sampling purposes. AHERA defines friable as a material that when dry, may be crumbled, pulverized, or reduced to powder by hand pressure. A homogenous area is defined by OSHA as an area of surfacing, thermal system insulation (TSI) or miscellaneous material that is uniform in color and texture. Surfacing materials are most commonly found in sprayed-on, troweled-on or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members. TSI refers to materials applied to pipes, fittings, boilers, ductwork, or other components to prevent heat loss or gain, or condensation. Any material that does not fall under the surfacing or TSI category, such as floor tile, drywall, and acoustical ceiling tile are placed into the miscellaneous materials category.

Following the completion of the visual inspection, Red Cedar staff identified the following materials as suspect ACBM:

- Asphalt Siding
- Asphalt Shingle
- Vapor Barrier
- Linoleum
- Vinyl Flooring
- 12"x12" Vinyl Tile
- Drywall & Joint Compound
- Glazing
- Surfacing Material

Red Cedar staff collected nineteen samples of suspect ACBM separated into nine distinct homogenous groups for laboratory analysis. Samples were collected and submitted to APEX Research Inc. Laboratories (APEX) (Accreditation Number 102118-0) for laboratory analysis. Analysis was completed utilizing polarized light microscopy (PLM) which is the Environmental Protection Agency (EPA) approved method for analysis of bulk materials for asbestos. PLM analysis completed pursuant to method (EPA 600/M4-82-020) identifies asbestos fiber bundles by the visual properties displayed when the sample is treated with various dispersion staining liquids. The laboratory report completed following the sample analysis indicates if asbestos is present, and at what percentage along with a description and percentage of other fibrous and non-fibrous materials and sample color. Chain-of-custody documentation was followed from sample collection through shipping and receiving of the samples at the designated laboratory. The documentation assures that samples will meet the quality assurance/quality control measures defined by AHERA. The laboratory analytical report prepared by APEX for the nineteen samples is included as Attachment A.

## **Hazardous Materials Inspection**

On April 14, 2017 the Subject Property was also inspected for the presence of hazardous materials which include but are not limited to polychlorinated biphenyls (PCBs) and potential mercury containing equipment and any items or containers that may contain or be classified as a hazardous or regulated material. Each material, if identified, was documented along with the approximate location. Any materials identified as hazardous are included in Table 1.

## **INSPECTION RESULTS AND RECOMMENDATIONS**

During the completion of the asbestos inspection, nineteen samples of suspect ACM were collected and are documented in Table 2 along with the Red Cedar sample number, description, friability, material type, ACM classification, sample location, material quantity and laboratory analytical results.

ACM, as defined by the USEPA NESHAP is “any material containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763 Section 1, Polarized Light Microscopy”.

Friable ACM is defined by NESHAP as any material containing more than 1 percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Friable ACM is a concern due the ease of unintentionally disturbing the ACM which may result in “visible emissions” which is known as a Fiber Release Episode.

Non-friable asbestos-containing material is defined as “material containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACM’s are separated into Category I and Category II ACM. Category I ACM is any asbestos containing packing’s, gaskets, resilient floor coverings (vinyl floor tile and linoleum are examples of these) and asphalt roofing products. Category II ACM is stated by NESHAP as any material excluding Category I non-friable ACM such as drywall, plaster or fiberboard insulation.

### **Presumed Asbestos Containing Material**

Presumed Asbestos Containing Materials (PACM) are suspect surfacing, TSI and miscellaneous materials found in buildings constructed prior to 1980 which are classified as and due to the age of the structure, are assumed to be ACM and do not require sample collection and analysis. OSHA dictates that PACM may be “rebutted” following a complete inspection pursuant to AHERA protocol.

No PACM was identified during the completion of this inspection. All suspect materials identified were sampled and analyzed for ACM.

Table 3 lists the location, material description, friability, condition, material type (surfacing, thermal or miscellaneous) and approximate quantity of all PACM documented at the Subject Property.

Table 4 provides a summary all ACM documented at the Subject Property which includes the material location, description, and approximate quantity.



### **Friable ACM's**

No friable ACM's were identified during the completion of this inspection.

### **Category I ACM**

One type of resilient floor covering (9"x9" Red Vinyl Floor Tile) located within the SW Bedroom was found to contain up to 5% Chrysotile asbestos. The assessment to quantify the extent of this material identified approximately 120 sq. ft. of this material within the Building.

Asphalt siding samples collected during the completion of the inspection were found to contain up to 10% Chrysotile asbestos. The assessment to quantify the extent of this material identified 1,320 sq. ft. of asphalt siding materials on the Building.

### **Category II ACM**

No Category II non-friable ACM was identified during the completion of this inspection.

## **RECOMMENDATIONS**

### **Asbestos Containing Materials**

The Category I asphalt siding materials and resilient floor coverings (9"x9" Red Vinyl Floor Tile) are non-friable ACM's that may be left in place as long as the demolition/renovation activities are completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note: The location of samples obtained during this inspection were in a random fashion and areas that were not identified during this inspection may be damaged or have become damaged since the inspection was completed. If Category I or Category II friable materials are discovered prior to or during the demolition/renovation process, these materials must be abated prior to commencement of any demolition/renovation activities at the Subject Property.

### **Hazardous Materials**

Hazardous Materials identified at the Subject Property and documented in Table 1 which require proper removal and disposal consist of the following items:

- Smoke Detector (1)
- Television (1)
- Automobile Tires (2)

Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-26-770-004-0030-00

## **REGULATORY REQUIREMENTS**

A Notification of Intent to Renovate/Demolish form must be filed with the Michigan Department of Environmental Quality- Air Quality Division at least 10 working days prior to any renovation or demolition activities at a site.

The Notification of Intent to Renovate/Demolish form must also be completed and submitted to the MIOSHA-Asbestos Program whenever demolition, encapsulation and/or renovation activities at a site involving greater than ten lineal feet and/or fifteen square feet of ACM will be completed.

Regulated asbestos containing materials per NESHAP (40 CFR Part 61) which falls into any of the following categories are ACM's that must be removed prior to any renovation/demolition activities at the Subject Property.

- Friable asbestos material.
- Category I non-friable ACM that has become friable.
- Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading.
- Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations.

Asbestos abatement should only be performed by a certified asbestos abatement contractor licensed to complete abatement work. The contractor must also follow the standards and requirements set forth per the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61).

Additional information regarding the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61) can be obtained by contacting the associated agency below.

NESHAP Asbestos Program  
Department of Environmental Quality  
Phone: 517-284-6777

MIOSHA-CSHD-Asbestos Program  
State of Michigan  
Phone: 517-284-7680  
Email: [asbestos@michigan.gov](mailto:asbestos@michigan.gov)

Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-26-770-004-0030-00

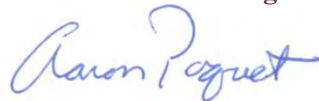
**DISCLAIMER**

Red Cedar Consulting performed destructive testing methods in an attempt to access and inspect all areas of the Building. Unfortunately, due to the age of construction along with multiple additions/renovations that may have been completed on the Building, additional inspections may be required if suspect ACM material not documented within this report is encountered during renovation/demolition activities.

This report was prepared at the request and for exclusive use by the Muskegon County Land Bank and may not be reproduced or sold without written permission from Red Cedar Consulting.

We appreciate the opportunity to provide the requested services. Please contact us at (888) 449-4566 with any questions or concerns.

Sincerely,  
**Red Cedar Consulting**



Aaron Paquet  
Michigan/EPA Certified Asbestos Building Inspector  
(A30955)

Red Cedar Consulting

***Attachment 1***  
***APEX Research Laboratory Analytical Results***



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 3320 Sanford St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69626  
Date Collected: 04/14/17  
Date Received: 04/17/17  
Date Analyzed: 04/18/17  
Date Reported: 04/24/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69626 - 01 Cust. #: SS-HM-01A Material: Asphalt Siding Location: Appearance: black, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 10%	Cellulose - 20% Other - 70%
Lab ID #: 69626 - 02 Cust. #: SS-HM-01B Material: Asphalt Siding Location: Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69626 - 03 Cust. #: SS-HM-02A Material: Roofing Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 15% Other - 85%

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: 3320 Sanford St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69626  
Date Collected: 04/14/17  
Date Received: 04/17/17  
Date Analyzed: 04/18/17  
Date Reported: 04/24/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69626 - 03a Cust. #: SS-HM-02A Material: Vapor Barrier Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69626 - 04 Cust. #: SS-HM-02B Material: Roofing Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 15% Other - 85%
Lab ID #: 69626 - 04a Cust. #: SS-HM-02B Material: Vapor Barrier Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%

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.



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P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69626  
Date Collected: 04/14/17  
Date Received: 04/17/17  
Date Analyzed: 04/18/17  
Date Reported: 04/24/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69626 - 05 Cust. #: SS-HM-03A Material: Grey Linoleum Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Fiberglass - 10% Other - 60%
Lab ID #: 69626 - 06 Cust. #: SS-HM-03B Material: Grey Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Fiberglass - 10% Other - 60%
Lab ID #: 69626 - 07 Cust. #: SS-HM-04A Material: Wood Grain Vinyl Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Fiberglass - 5% Other - 75%

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

Robert T. Letarte Jr., Laboratory Director

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P.O. Box 13216  
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ARI Report # 17-69626  
Date Collected: 04/14/17  
Date Received: 04/17/17  
Date Analyzed: 04/18/17  
Date Reported: 04/24/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69626 - 08 Cust. #: SS-HM-04B Material: Wood Grain Vinyl Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Fiberglass - 5% Other - 75%
Lab ID #: 69626 - 09 Cust. #: SS-HM-05A Material: White Layered Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69626 - 10 Cust. #: SS-HM-05B Material: White Layered Linoleum Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 60% Other - 40%

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

Robert T. Letarte Jr., Laboratory Director

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ARI Report # 17-69626  
Date Collected: 04/14/17  
Date Received: 04/17/17  
Date Analyzed: 04/18/17  
Date Reported: 04/24/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69626 - 11 Cust. #: SS-HM-06A Material: 9x9 Red VFT Location: Appearance: red, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>YES</b> Chrysotile - 5%	Other - 95%
Lab ID #: 69626 - 11a Cust. #: SS-HM-06A Material: Mastic Location: Appearance: black, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69626 - 12 Cust. #: SS-HM-06B Material: 9x9 Red VFT Location: Appearance: Layer: 1 of 2	Asbestos Present:  NOT ANALYZED	

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

Robert T. Letarte Jr., Laboratory Director

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P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69626  
Date Collected: 04/14/17  
Date Received: 04/17/17  
Date Analyzed: 04/18/17  
Date Reported: 04/24/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69626 - 12a Cust. #: SS-HM-06B Material: Mastic Location: Appearance: black,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69626 - 13 Cust. #: SS-HM-07A Material: Drywall Location: Appearance: beige,fibrous,nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69626 - 13a Cust. #: SS-HM-07A Material: Joint Compound Location: Appearance: white,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> 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.



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P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69626  
Date Collected: 04/14/17  
Date Received: 04/17/17  
Date Analyzed: 04/18/17  
Date Reported: 04/24/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69626 - 14 Cust. #: SS-HM-07B Material: Drywall Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69626 - 14a Cust. #: SS-HM-07B Material: Joint Compound Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69626 - 15 Cust. #: SS-HM-08A Material: Window Glazing Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Wollastonite - 1% 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.



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## Test Method, Polarized Light Microscopy (PLM)

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ARI Report # 17-69626  
Date Collected: 04/14/17  
Date Received: 04/17/17  
Date Analyzed: 04/18/17  
Date Reported: 04/24/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69626 - 16 Cust. #: SS-HM-08B Material: Window Glazing Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Wollastonite - 1% Other - 98%
Lab ID #: 69626 - 17 Cust. #: SS-HS-01A Material: Surfacing Material Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69626 - 18 Cust. #: SS-HS-01B Material: Surfacing Material Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> 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: 3320 Sanford St

**Report To:**

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Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69626  
Date Collected: 04/14/17  
Date Received: 04/17/17  
Date Analyzed: 04/18/17  
Date Reported: 04/24/17

**Sample Information****Asbestos Type/Percent****Non-Asbestos**

Lab ID #: 69626 - 19 Cust. #: SS-HS-01C Material: Surfacing Material Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	
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

69626

1 of 2

# APEX Research, Inc.

E-mail: [apexresearch@chartermi.net](mailto:apexresearch@chartermi.net)

Fax: 734-449-9991



11054 Hi Tech Drive, Whitmore Lake, MI 48189

Phone: 734-449-9990

Client Name: Red Cedar Consulting

Date of Survey: 4-14-17

Address: PO Box 13216

Project: 3320 *Handheld AT*

City, St., Zip: Lansing, MI 48901

Project #:

Phone: (888) 449-4566 Fax: (888) 448-8739

Contact Person: Aaron Paquet

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

Asbestos: Bulk  Wipe  Point Count  PCM

48 hour 72 hour

Lead: Bulk  Wipe  Air  Paint  Soil

Other: *5 day*

Mold: Bulk  Tape  Biosis  Other  Viable

Other: *5 day* All samples

TEM: AHERA 7400 Bulk/NOB EPA Level II

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	55-HM-01A	<i>Asphalt Sealing</i>			
2	55-HM-01B	.. ..			
3	55-HM-02A	<i>Roofing Shingle + Vapor Barrier</i>			
4	55-HM-02B	.. ..			
5	55-HM-03A	<i>Grey Sinterstone</i>			
6	55-HM-03B	.. ..			
7	55-HM-04A	<i>Woodgrain Vinyl</i>			
8	55-HM-04B	.. ..			
9	55-HM-05A	<i>White Sinterstone</i>			
10	55-HM-05B	.. ..			
11	55-HM-06A	<i>9x9 Red VET</i>			

Relinquished by: *[Signature]* Received by: *UTS*  
Date: 4-14-17 Date: 4-14-17

Relinquished by: \_\_\_\_\_ Received by: *[Signature]*  
Date: \_\_\_\_\_ Date: APR 17 2017

RECEIVED

69626

2 of 2

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189  
Phone: 734-449-9990  
E-mail: [apexresearch@chartermi.net](mailto:apexresearch@chartermi.net)  
Fax: 734-449-9991



Client Name: Red Cedar Consulting

Date of Survey: 4-14-17

Address: PO Box 13216

Project: 3320 Sanford St

City, St., Zip: Lansing, MI 48901

Project #: \_\_\_\_\_

Phone: (888) 449-4566 Fax: (888) 448-8739

Contact Person: Aaron Paquet

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM.  
apaquet@redcedarconsulting.net

Rush 24 hour

Asbestos: Bulk  Wipe  Point Count  PCM

48 hour 72 hour

Lead: Bulk  Wipe  Air  Paint  Soil

Other: Sdey All Samples

Mold: Bulk  Tape  BioSIS  Other  Viable

TEM: AHERA 7400 Bulk/NOB EPA Level II

Lab Use Only  
Log-in \_\_\_\_\_  
Report \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	55-HH-06B	9 x 9 Red VET			
13	55-HH-07A	Wegman's Fruit Cakes			
14	55-HH-07B	" " " "			
15	55-HH-08A	Winders Blogging			
16	55-HH-08B	" " " "			
17	55-HS-01A	Surfacing Material			
18	55-HS-01B	" " " "			
19	55-HS-01C	" " " "			

Relinquished by: [Signature] Received by: UTS  
Date: 4-14-17 Date: 4-14-17

Relinquished by: \_\_\_\_\_ Received by: [Signature]  
Date: \_\_\_\_\_ Date: APR 17 2017

***Tables***



**Table 1 - Summary of Hazardous Materials, 3320 Sanford St., Muskegon Heights, Michigan**

<b>Hazardous Materials Description and Location</b>		
<b>Location</b>	<b>Material Description</b>	<b>Quantity</b>
Garage	Television	1
Garage	Automobile Tires	2
Dining Room	Smoke Detector	1

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 3320 Sanford St., Muskegon Heights, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
SS-HM-01A	Asphalt Siding	No	M	Category I	10%CH	Exterior	1,320 sq. ft.
SS-HM-01B	Asphalt Siding	No	M	Category I	NA	Exterior	NA
SS-HM-02A	Roofing Shingle & Vapor Barrier	No	M	Category I	ND/ND	Exterior	NA
SS-HM-02B	Roofing Shingle & Vapor Barrier	No	M	Category I	ND/ND	Exterior	NA
SS-HM-03A	Gray Linoleum	No	M	Category I	ND	Kitchen	NA
SS-HM-03B	Gray Linoleum	No	M	Category I	ND	Kitchen	NA
SS-HM-04A	Woodgrain Vinyl	No	M	Category I	ND	Bathroom	NA
SS-HM-04B	Woodgrain Vinyl	No	M	Category I	ND	Bathroom	NA
SS-HM-05A	White Layered Linoleum	No	M	Category I	ND	SE Bedroom	NA
SS-HM-05B	White Layered Linoleum	No	M	Category I	ND	SE Bedroom	NA
SS-HM-06A	Red 9"x9" Vinyl Tile	No	M	Category I	5%CH/ND	SW Bedroom	120 sq. ft.
SS-HM-06B	Red 9"x9" Vinyl Tile	No	M	Category I	NA/ND	SW Bedroom	NA
SS-HM-07A	Drywall & Joint Compound	No	M	Category II	ND/ND	Kitchen Ceiling	NA
SS-HM-07B	Drywall & joint Compound	No	M	Category II	ND/ND	Living Room Wall	NA
SS-HM-08A	Glazing	Yes	M	Category II	ND	NW Dining Room	NA
SS-HM-08B	Glazing	Yes	M	Category II	ND	SW Dining Room	NA
SS-HS-01A	Surfacing Material	No	S	Category II	ND	Kitchen Ceiling	NA
SS-HS-01B	Surfacing Material	No	S	Category II	ND	Dining Room Ceiling	NA
SS-HS-01C	Surfacing Material	No	S	Category II	ND	Living Room Ceiling	NA

**Notes:**

Material Types

M = Miscellaneous building material  
 TSI = Thermal System Insulation  
 S = Surfacing Material  
 PC = Point Count Analysis  
 CH = Chrysotile Asbestos

Abbreviations

NQ = Not quantified  
 NA = Not applicable  
 ND = Not detected. Laboratory result is less than 1 % asbestos  
 lin. ft. = linear feet  
 sq. ft. = square feet

Asbestos Containing Material (ACM) is defined as any material containing more than 1 percent asbestos as determined utilizing Polarized Light Microscopy.

**Table 3 - Summary of Presumed Asbestos Containing Materials, 3320 Sanford St., Muskegon Heights, Michigan**

<b>Asbestos Containing Material Description and Location</b>					
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Condition</b>	<b>Material Type</b>	<b>Approx. Quantity</b>
No Presumed Asbestos Containing Materials Identified					

**Notes:**

Material Types

- M = Miscellaneous building material
- TSI = Thermal System Insulation
- S = Surfacing Material

Abbreviations

- lin. ft. = linear feet
- sq. ft. = square feet

**Table 4 - Summary of All Asbestos Containing Materials, 3320 Sanford St., Muskegon Heights, Michigan**

<b>Exterior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Building Exterior	Asphalt Siding	No	1,320 sq. ft.
<b>Total</b>			<b>1,320 sq. ft.</b>
<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
SW Bedroom	Red 9"x9" Vinyl Tile	No	120 sq. ft.
<b>Total</b>			<b>120 sq. ft.</b>

**Notes:**

Abbreviations

lin. ft. = linear feet

sq. ft. = square feet

**Shaded/Bolded** = Friable ACM and any Category I and Category II non-friable ACM that has a high probability of becoming crumbled, pulverized, or reduced to powder by the demolition or renovation activities that must be properly abated prior to commencement of any demolition/renovation activities.

Demolition/renovation activities completed with intact Category I non-friable ACM are regulated by OSHA and must be completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note that a Negative Pressure Enclosure must be utilized during abatement when Site Conditions Warrant. Examples of these conditions include the abatement of Plaster and Vermiculite insulation, HVAC Duct Wrap in Poor Condition, and Air-O-Cell/Mag Pipe Wrap. Conditions outside of these should be assessed on a case by case basis during the Asbestos Abatement Contractors site walk and Work Plan Preparation.



P.O. Box 13216  
Lansing, MI 48901  
Phone: 888.449.4566  
Fax: 888.448.8739  
www.redcedarconsulting.net

May 8, 2017

Mr. Tim Burgess  
Muskegon County Land Bank  
Land Bank Coordinator  
173 E. Apple Avenue, Suite 104  
Muskegon, MI 49442

**RE: *Asbestos Containing Material and Hazardous Materials Inspection***  
***3336 8th St., Muskegon Heights, MI 49444***  
***Parcel ID: 61-26-400-010-0013-00***

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 3336 8th St., Muskegon Heights, Michigan (Subject Property). This inspection was completed at the request of the Muskegon County Land Bank to comply with the United States Environmental Protection Agency (USEPA) requirements for demolition and renovation set forth under the National Emissions Standards for Hazardous Air Pollutants (NESHAP, 40 CFR Part 61). This inspection was also completed to comply with the Occupational Safety and Health Administration (OSHA) Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

### **SUBJECT PROPERTY**

The Subject Property is comprised of a .12 acre residential parcel which contains a 280 sq. ft. detached garage and approximate 624 square foot residential building (the Building) constructed in 1945. The Building was constructed on a concrete block basement with one aboveground floor. The exterior walls of the Building were finished with Transite siding over a vapor barrier while the roof was sealed with asphalt shingles. The Building can be further divided into a front entry, living room, kitchen, bathroom and two bedrooms.

### **VISUAL INSPECTION AND SAMPLING**

#### **Asbestos Containing Materials Inspection**

Aaron Paquet and Darrell DeMasters of Red Cedar Consulting (Red Cedar), accredited State Of Michigan/EPA Asbestos Building Inspectors (Accreditation Numbers A30955 and A31159, respectively) who completed training per the Michigan Asbestos Workers Accreditation Act 440, completed an inspection of the Subject Property on April 11, 2017 for suspected asbestos containing building materials.

This inspection, and subsequent sample collection was completed in accordance with the USEPA Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763) assessment and sampling protocol.

During the completion of the inspection, each area of the Subject Property was visually inspected for asbestos containing building materials (ACBM). Following the completion of the visual inspection, Red Cedar staff identified each suspect area of friable and non-friable ACBM and sorted them into one of three homogenous categories for sampling purposes. AHERA defines friable as a material that when dry, may be crumbled, pulverized, or reduced to powder by hand pressure. A homogenous area is defined by OSHA as an area of surfacing, thermal system insulation (TSI) or miscellaneous material that is uniform in color and texture. Surfacing materials are most commonly found in sprayed-on, troweled-on or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members. TSI refers to materials applied to pipes, fittings, boilers, ductwork, or other components to prevent heat loss or gain, or condensation. Any material that does not fall under the surfacing or TSI category, such as floor tile, drywall, and acoustical ceiling tile are placed into the miscellaneous materials category.

Following the completion of the visual inspection, Red Cedar staff identified the following materials as suspect ACBM:

- Asphalt Shingle
- Vapor Barrier
- Linoleum
- 12"x12" Vinyl Tile
- Drywall & Joint Compound
- Glazing
- Plaster

Red Cedar staff collected twenty five samples of suspect ACBM separated into eleven distinct homogenous groups for laboratory analysis. Samples were collected and submitted to APEX Research Inc. Laboratories (APEX) (Accreditation Number 102118-0) for laboratory analysis. Analysis was completed utilizing polarized light microscopy (PLM) which is the Environmental Protection Agency (EPA) approved method for analysis of bulk materials for asbestos. PLM analysis completed pursuant to method (EPA 600/M4-82-020) identifies asbestos fiber bundles by the visual properties displayed when the sample is treated with various dispersion staining liquids. The laboratory report completed following the sample analysis indicates if asbestos is present, and at what percentage along with a description and percentage of other fibrous and non-fibrous materials and sample color. Chain-of-custody documentation was followed from sample collection through shipping and receiving of the samples at the designated laboratory. The documentation assures that samples will meet the quality assurance/quality control measures defined by AHERA. The laboratory analytical report prepared by APEX for the twenty five samples is included as Attachment A.

## **Hazardous Materials Inspection**

On April 11, 2017 the Subject Property was also inspected for the presence of hazardous materials which include but are not limited to polychlorinated biphenyls (PCBs) and potential mercury containing equipment and any items or containers that may contain or be classified as a hazardous or regulated material. Each material, if identified, was documented along with the approximate location. Any materials identified as hazardous are included in Table 1.

## **INSPECTION RESULTS AND RECOMMENDATIONS**

During the completion of the asbestos inspection, twenty five samples of suspect ACM were collected and are documented in Table 2 along with the Red Cedar sample number, description, friability, material type, ACM classification, sample location, material quantity and laboratory analytical results.

ACM, as defined by the USEPA NESHAP is “any material containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763 Section 1, Polarized Light Microscopy”.

Friable ACM is defined by NESHAP as any material containing more than 1 percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Friable ACM is a concern due the ease of unintentionally disturbing the ACM which may result in “visible emissions” which is known as a Fiber Release Episode.

Non-friable asbestos-containing material is defined as “material containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACM’s are separated into Category I and Category II ACM. Category I ACM is any asbestos containing packing’s, gaskets, resilient floor coverings (vinyl floor tile and linoleum are examples of these) and asphalt roofing products. Category II ACM is stated by NESHAP as any material excluding Category I non-friable ACM such as drywall, plaster or fiberboard insulation.

## **Presumed Asbestos Containing Material**

Presumed Asbestos Containing Materials (PACM) are suspect surfacing, TSI and miscellaneous materials found in buildings constructed prior to 1980 which are classified as and due to the age of the structure, are assumed to be ACM and do not require sample collection and analysis. OSHA dictates that PACM may be “rebutted” following a complete inspection pursuant to AHERA protocol.

The Cementitious “Transite” Siding on the Building was classified as PACM due to the age of the structure and samples were not collected.

Table 3 lists the location, material description, friability, condition, material type (surfacing, thermal or miscellaneous) and approximate quantity of all PACM documented at the Subject Property.

Table 4 provides a summary all ACM documented at the Subject Property which includes the material location, description, and approximate quantity.

### **Friable ACM's**

A window glazing sample collected from a window in the Living Room was found to contain up to 5% asbestos following analysis. The assessment to quantify the extent of this material identified eleven windows at the following locations that would fall into the same homogenous group. The locations of the windows are listed below:

- Garage (1 window 20" wide x 30" tall)
- Living Room (3 windows 28" wide x 54" tall)
- Kitchen (2 windows 28" wide x 34" tall)
- Bathroom (1 window 24" wide x 38" tall)
- NE Bedroom (2 windows 28" wide x 54" tall)
- NW Bedroom (2 windows 28" wide x 54" tall)

### **Category I ACM**

No Category I ACM was identified during the completion of this inspection.

### **Category II ACM**

The cementitious "Transite" siding located on the exterior of the Building was classified as PACM and no samples were collected. The visual assessment to quantify the extent of this material identified 978 sq. ft. of cementitious (Transite) siding on the Building.

Drywall Compound samples, collected from the attic were found to contain up to 1.25% asbestos following analysis. The assessment to quantify the extent of this material identified approximately 528 sq. ft. of drywall compound within the Building.

## **RECOMMENDATIONS**

### **Asbestos Containing Materials**

Friable asbestos containing window glazing was identified on eleven windows throughout the Building. The locations of these windows that should be abated prior to demolition/renovation activities are listed below:

- Garage (1 window 20" wide x 30" tall)
- Living Room (3 windows 28" wide x 54" tall)
- Kitchen (2 windows 28" wide x 34" tall)
- Bathroom (1 window 24" wide x 38" tall)
- NE Bedroom (2 windows 28" wide x 54" tall)
- NW Bedroom (2 windows 28" wide x 54" tall)

Please note: Other different sized windows are located throughout the Building but these windows were assessed and found to be constructed either without window glazing or were sampled and found to not contain asbestos and therefore are not required to be removed.



Transite siding was identified on the exterior of the Building and must be abated prior to completion of any demolition activities at the Subject Property. In demolition, all cementitious ACM must be removed prior to demolition due to the likelihood of becoming regulated due to the demolition process.

Drywall Compound identified on the interior of the Building must be abated prior to completion of any renovation/demolition activities at the Subject Property. Any Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations must be properly abated.

Please note: The location of samples obtained during this inspection were in a random fashion and areas that were not identified during this inspection may be damaged or have become damaged since the inspection was completed. If Category I or Category II friable materials are discovered prior to or during the demolition/renovation process, these materials must be abated prior to commencement of any demolition/renovation activities at the Subject Property.

### **Hazardous Materials**

Hazardous Materials identified at the Subject Property and documented in Table 1 which require proper removal and disposal consist of the following items:

- Automobile Tire (64)
- 4' Fluorescent Light (Fixture and Ballast Only) (1)
- Television (1)

### **REGULATORY REQUIREMENTS**

A Notification of Intent to Renovate/Demolish form must be filed with the Michigan Department of Environmental Quality- Air Quality Division at least 10 working days prior to any renovation or demolition activities at a site.

The Notification of Intent to Renovate/Demolish form must also be completed and submitted to the MIOSHA-Asbestos Program whenever demolition, encapsulation and/or renovation activities at a site involving greater than ten lineal feet and/or fifteen square feet of ACM will be completed.

Regulated asbestos containing materials per NESHAP (40 CFR Part 61) which falls into any of the following categories are ACM's that must be removed prior to any renovation/demolition activities at the Subject Property.

- Friable asbestos material.
- Category I non-friable ACM that has become friable.
- Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading.
- Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations.

Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-26-400-010-0013-00

Asbestos abatement should only be performed by a certified asbestos abatement contractor licensed to complete abatement work. The contractor must also follow the standards and requirements set forth per the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61).

Additional information regarding the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61) can be obtained by contacting the associated agency below.

NESHAP Asbestos Program  
Department of Environmental Quality  
Phone: 517-284-6777

MIOSHA-CSHD-Asbestos Program  
State of Michigan  
Phone: 517-284-7680  
Email: asbestos@michigan.gov

### **DISCLAIMER**

Red Cedar Consulting performed destructive testing methods in an attempt to access and inspect all areas of the Building. Unfortunately, due to the age of construction along with multiple additions/renovations that may have been completed on the Building, additional inspections may be required if suspect ACM material not documented within this report is encountered during renovation/demolition activities.

This report was prepared at the request and for exclusive use by the Muskegon County Land Bank and may not be reproduced or sold without written permission from Red Cedar Consulting.

We appreciate the opportunity to provide the requested services. Please contact us at (888) 449-4566 with any questions or concerns.

Sincerely,  
**Red Cedar Consulting**



Aaron Paquet  
Michigan/EPA Certified Asbestos Building Inspector  
(A30955)

Red Cedar Consulting

***Attachment 1***  
***APEX Research Laboratory Analytical Results***



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 3336 8th St

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69583  
Date Collected: 04/11/17  
Date Received: 04/12/17  
Date Analyzed: 04/14/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69583 - 01 Cust. #: ES-HM-01A Material: Vapor Barrier Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 60% Other - 40%
Lab ID #: 69583 - 02 Cust. #: ES-HM-01B Material: Vapor Barrier Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 60% Other - 40%
Lab ID #: 69583 - 03 Cust. #: ES-HM-02A Material: House Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%

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: 3336 8th St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69583  
Date Collected: 04/11/17  
Date Received: 04/12/17  
Date Analyzed: 04/14/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69583 - 03a Cust. #: ES-HM-02A Material: Green Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69583 - 03b Cust. #: ES-HM-02A Material: Red Shingle Location: Appearance: black, fibrous, homogenous Layer: 3 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69583 - 03c Cust. #: ES-HM-02A Material: Red Shingle Location: Appearance: black, fibrous, homogenous Layer: 4 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%

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: 3336 8th St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69583  
Date Collected: 04/11/17  
Date Received: 04/12/17  
Date Analyzed: 04/14/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69583 - 04 Cust. #: ES-HM-02B Material: House Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69583 - 04a Cust. #: ES-HM-02B Material: Green Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69583 - 04b Cust. #: ES-HM-02B Material: Red Shingle Location: Appearance: black, fibrous, homogenous Layer: 3 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%

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: 3336 8th St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69583  
Date Collected: 04/11/17  
Date Received: 04/12/17  
Date Analyzed: 04/14/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69583 - 04c Cust. #: ES-HM-02B Material: Red Shingle Location: Appearance: black, fibrous, homogenous Layer: 4 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69583 - 05 Cust. #: ES-HM-03A Material: Rolled Roofing Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69583 - 06 Cust. #: ES-HM-03B Material: Rolled Roofing Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%

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: 3336 8th St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69583  
Date Collected: 04/11/17  
Date Received: 04/12/17  
Date Analyzed: 04/14/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69583 - 07 Cust. #: ES-HM-04A Material: Grey Layered Floor Tile Location: Appearance: black,nonfibrous,homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69583 - 07a Cust. #: ES-HM-04A Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69583 - 07b Cust. #: ES-HM-04A Material: Sheet Flooring Location: Appearance: white,fibrous,nonhomogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%

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: 3336 8th St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69583  
Date Collected: 04/11/17  
Date Received: 04/12/17  
Date Analyzed: 04/14/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69583 - 08 Cust. #: ES-HM-04B Material: Grey Layered Floor Tile Location: Appearance: black,nonfibrous,homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69583 - 08a Cust. #: ES-HM-04B Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69583 - 08b Cust. #: ES-HM-04B Material: Sheet Flooring Location: Appearance: white,fibrous,nonhomogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%

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: 3336 8th St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69583  
Date Collected: 04/11/17  
Date Received: 04/12/17  
Date Analyzed: 04/14/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69583 - 09 Cust. #: ES-HM-05A Material: Cream Linoleum Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 69583 - 09a Cust. #: ES-HM-05A Material: Sheet Flooring Location: Appearance: grey, fibrous, nonhomogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69583 - 10 Cust. #: ES-HM-05B Material: Cream Linoleum Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 3336 8th St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69583  
Date Collected: 04/11/17  
Date Received: 04/12/17  
Date Analyzed: 04/14/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69583 - 10a Cust. #: ES-HM-05B Material: Sheet Flooring Location: Appearance: grey, fibrous, nonhomogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69583 - 11 Cust. #: ES-HM-06A Material: Red Brick 12x12 VFT Location: Appearance: brown, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69583 - 11a Cust. #: ES-HM-06A Material: Glue Location: Appearance: clear, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



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Project: 3336 8th St

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Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69583  
Date Collected: 04/11/17  
Date Received: 04/12/17  
Date Analyzed: 04/14/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69583 - 12 Cust. #: ES-HM-06B Material: Red Brick 12x12 VFT Location: Appearance: brown,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69583 - 12a Cust. #: ES-HM-06B Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69583 - 13 Cust. #: ES-HM-07A Material: Window Glazing Location: Appearance: beige,fibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 5%	Other - 95%

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 3336 8th St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69583  
Date Collected: 04/11/17  
Date Received: 04/12/17  
Date Analyzed: 04/14/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69583 - 14 Cust. #: ES-HM-07B Material: Window Glazing Location: Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69583 - 15 Cust. #: ES-HM-08A Material: Red/Yellow Linoleum Location: Appearance: red, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69583 - 16 Cust. #: ES-HM-08B Material: Red/Yellow Linoleum Location: Appearance: red, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%

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: 3336 8th St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69583  
Date Collected: 04/11/17  
Date Received: 04/12/17  
Date Analyzed: 04/14/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69583 - 17 Cust. #: ES-HM-09A Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69583 - 17a Cust. #: ES-HM-09A Material: White Joint Compound Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69583 - 17b Cust. #: ES-HM-09A Material: Beige Joint Compound Location: Appearance: beige, fibrous, homogenous Layer: 3 of 3	Asbestos Present: <b>YES</b> Chrysotile - 1.25%  <b>POINT COUNT RESULT</b>	Other - 98.75%

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 3336 8th St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69583  
Date Collected: 04/11/17  
Date Received: 04/12/17  
Date Analyzed: 04/14/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69583 - 18 Cust. #: ES-HM-09B Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69583 - 18a Cust. #: ES-HM-09B Material: White Joint Compound Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69583 - 18b Cust. #: ES-HM-09B Material: Beige Joint Compound Location: Appearance: Layer: 3 of 3	Asbestos Present:  NOT ANALYZED	

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 3336 8th St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69583  
Date Collected: 04/11/17  
Date Received: 04/12/17  
Date Analyzed: 04/14/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69583 - 19 Cust. #: ES-HM-10A Material: Gold Layered Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69583 - 19a Cust. #: ES-HM-10A Material: Fiberboard Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 70% Other - 30%
Lab ID #: 69583 - 20 Cust. #: ES-HM-10B Material: Gold Layered Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%

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

Robert T. Letarte Jr., Laboratory Director

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# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 3336 8th St

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Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69583  
Date Collected: 04/11/17  
Date Received: 04/12/17  
Date Analyzed: 04/14/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69583 - 20a Cust. #: ES-HM-10B Material: Fiberboard Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 70% Other - 30%
Lab ID #: 69583 - 21 Cust. #: ES-HS-01A Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69583 - 21a Cust. #: ES-HS-01A Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%

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

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Lansing, MI 48901

ARI Report # 17-69583  
Date Collected: 04/11/17  
Date Received: 04/12/17  
Date Analyzed: 04/14/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69583 - 21b Cust. #: ES-HS-01A Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69583 - 22 Cust. #: ES-HS-01B Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69583 - 22a Cust. #: ES-HS-01B Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%

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Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

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Project: 3336 8th St

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69583  
Date Collected: 04/11/17  
Date Received: 04/12/17  
Date Analyzed: 04/14/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69583 - 23 Cust. #: ES-HS-01C Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69583 - 23a Cust. #: ES-HS-01C Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 5% Other - 95%
Lab ID #: 69583 - 23b Cust. #: ES-HS-01C Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%

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Robert T. Letarte Jr., Laboratory Director

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Project: 3336 8th St

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P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69583  
Date Collected: 04/11/17  
Date Received: 04/12/17  
Date Analyzed: 04/14/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69583 - 24 Cust. #: ES-HS-01D Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69583 - 24a Cust. #: ES-HS-01D Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 69583 - 25 Cust. #: ES-HS-01E Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Lansing, MI 48901

ARI Report # 17-69583  
Date Collected: 04/11/17  
Date Received: 04/12/17  
Date Analyzed: 04/14/17  
Date Reported: 04/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69583 - 25a Cust. #: ES-HS-01E Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

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

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NVLAP Lab Code 102118-0

**APEX Research, Inc.**

11054 Hi Tech Drive, Whitmore Lake, MI 48189  
 Phone: 734-449-9990  
 E-mail: apexresearch@chartermi.net  
 Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-11-17

Project: 3336 8th St

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
 Log-In \_\_\_\_\_  
 Report \_\_\_\_\_

**Turn Around Times: (Circle One)**

PLM EPA 600, PC all samples with a detection of <5% ACM.  
 apaquet@redcedarconsulting.net

Rush 24 hour

48 hour 72 hour

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_

Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_

Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BiosIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_

TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Other: Slag  All Samples Asbestos ~~Slag~~ ~~Lead~~ ~~Paint~~ ~~Soil~~ ~~Viable~~

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	ES-HH-01A	Vapor Barrier			
2	ES-HH-01B	"			
3	ES-HH-02A	House Shingle			
4	ES-HH-02B	"			
5	ES-HH-03A	Roof Roofing			
6	ES-HH-03B	"			
7	ES-HH-04A	Heavy Layered Flooring			
8	ES-HH-04B	"			
9	ES-HH-05A	Asm. Laminate Layered			
10	ES-HH-05B	"			
11	ES-HH-06A	Red Brick 12x12 VFT			

Relinquished by: Apple Received by: USPS  
 Date: 4-11-17 Date: 4-15-17

Relinquished by: \_\_\_\_\_ Received by: \_\_\_\_\_  
 Date: \_\_\_\_\_ Date: APR 12 2017

69583

243



# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189  
Phone: 734-449-9990  
E-mail: apexresearch@chartermi.net  
Fax: 734-449-9991

Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-11-17

Project: 3336

Project #: 824

Contact Person: Aaron Paquet

Lab Use Only  
Log-in \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM.  
apauquet@redcedarconsulting.net

Rush 24 hour

48 hour 72 hour

Other: 5 days

TTP All Samples  
Mold:  Asbestos:  Lead:  Air:  Paint:  Soil:  Other:  Viable:

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ Biosis \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	ES-HH-06B	Red Brick 12x12 VPT			
13	ES-HH-07A	Window Sill			
14	ES-HH-07B	" "			
15	ES-HH-08A	Red x Yellow Sill			
16	ES-HH-08B	" "			
17	ES-HH-09A	Wynell V Sill Compound			
18	ES-HM-09B	" "			
19	ES-HH-10A	Red Sill Sealant			
20	ES-HM-10B	" "			
21	ES-HS-01A	Plastic			
22	ES-HS-01B	" "			

Relinquished by: [Signature] Received by: [Signature]

Date: 4-11-17 Date: 4-11-17

Relinquished by: \_\_\_\_\_ Received by: [Signature]

Date: \_\_\_\_\_ Date: APR 12 2017

RECEIVED

69583

3 of 3

# APEX Research, Inc.



11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

E-mail: [apexresearch@charterni.net](mailto:apexresearch@charterni.net) Fax: 734-449-9991

Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St, Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-11-17

Project: 3336

Project #: 824

Contact Person: Aaron Paquet

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_

Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_

Other: Slag Mold: Asbestos Bulk \_\_\_\_\_ Tape \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_

TEM: TTP All Samples Asbestos AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
23	E5-H5-01C	Plaster			
24	E5-H5-01D	..			
25	E5-H5-01E	..			

Relinquished by: Alexander Received by: UPB

Date: 4-11-17 Date: 4-15-17

Relinquished by: \_\_\_\_\_ Received by: UPB

Date: \_\_\_\_\_ Date: APR 12 2017



***Tables***

**Table 1 - Summary of Hazardous Materials, 3336 8th St., Muskegon Heights, Michigan**

<b>Hazardous Materials Description and Location</b>		
<b>Location</b>	<b>Material Description</b>	<b>Quantity</b>
Exterior	Automobile Tire	4
Garage	Automobile Tire	60
Garage	4' Fluorescent Light (Fixture and Ballast Only)	1
NW Bedroom	Television	1

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 3336 8th St., Muskegon Heights, Michigan**

<b>Sample Number</b>	<b>Sample Description</b>	<b>Friable</b>	<b>Material Type</b>	<b>Material Classification</b>	<b>% Asbestos Laboratory Result</b>	<b>Sample Location</b>	<b>Approx. Material Quantity</b>
ES-HM-01A	Vapor Barrier	Yes	M	Category II	ND	Exterior	NA
ES-HM-01B	Vapor Barrier	Yes	M	Category II	ND	Exterior	NA
ES-HM-02A	Asphalt Shingle	No	M	Category I	ND/ND/ND/ND	Exterior	NA
ES-HM-02B	Asphalt Shingle	No	M	Category I	ND/ND/ND/ND	Exterior	NA
ES-HM-03A	Rolled Roofing	No	M	Category I	ND	Exterior	NA
ES-HM-03B	Rolled Roofing	No	M	Category I	ND	Exterior	NA
ES-HM-04A	Gray Layered Flooring	No	M	Category I	ND/ND/ND	Kitchen	NA
ES-HM-04B	Gray Layered Flooring	No	M	Category I	ND/ND/ND	Kitchen	NA
ES-HM-05A	Cream Linoleum Layered	No	M	Category I	ND/ND	Bathroom	NA
ES-HM-05B	Cream Linoleum Layered	No	M	Category I	ND/ND	Bathroom	NA
ES-HM-06A	Red Brick 12x12 Vinyl Tile	No	M	Category I	ND/ND	Front Entry	NA
ES-HM-06B	Red Brick 12x12 Vinyl Tile	No	M	Category I	ND/ND	Front Entry	NA
ES-HM-07A	Glazing	Yes	M	Category II	5% CH	Living Room	11 Windows
ES-HM-07B	Glazing	Yes	M	Category II	NA	NE Bedroom	NA
ES-HM-08A	Red & Yellow Linoleum	No	M	Category I	ND	Attic	NA
ES-HM-08B	Red & Yellow Linoleum	No	M	Category I	ND	Attic	NA
ES-HM-09A	Drywall & Joint Compound	Yes	M	Category II	ND/ND/1.25% CH	Attic Ceiling	528 sq. ft.
ES-HM-09B	Drywall & Joint Compound	Yes	M	Category II	ND/ND/NA	Attic Ceiling	NA
ES-HM-10A	Gold Layered Linoleum	No	M	Category I	ND/ND	Hallway	NA
ES-HM-10B	Gold Layered Linoleum	No	M	Category I	ND/ND	Hallway	NA
ES-HS-01A	Plaster	No	S	Category II	ND/ND/ND	Kitchen Ceiling	NA
ES-HS-01B	Plaster	No	S	Category II	ND/ND	Kitchen Wall	NA
ES-HS-01C	Plaster	No	S	Category II	ND/ND/ND	NW Bedroom Ceiling	NA
ES-HS-01D	Plaster	No	S	Category II	ND/ND	NW Bedroom Wall	NA
ES-HS-01E	Plaster	No	S	Category II	ND/ND	Living Room Wall	NA

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 3336 8th St., Muskegon Heights, Michigan**

**Notes:**

Material Types

- M = Miscellaneous building material
- TSI = Thermal System Insulation
- S = Surfacing Material
- PC = Point Count Analysis
- CH = Chrysotile Asbestos

Abbreviations

- NQ = Not quantified
- NA = Not applicable
- ND = Not detected. Laboratory result is less than 1 % asbestos
- lin. ft. = linear feet
- sq. ft. = square feet

Asbestos Containing Material (ACM) is defined as any material containing more than 1 percent asbestos as determined utilizing Polarized Light Microscopy.

**Table 3 - Summary of Presumed Asbestos Containing Materials, 3336 8th St., Muskegon Heights, Michigan**

<b>Asbestos Containing Material Description and Location</b>					
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Condition</b>	<b>Material Type</b>	<b>Approx. Quantity</b>
Building Exterior	Transite Siding	No	Fair	M	978 sq. ft.

**Notes:**

Material Types

- M = Miscellaneous building material
- TSI = Thermal System Insulation
- S = Surfacing Material

Abbreviations

- lin. ft. = linear feet
- sq. ft. = square feet

**Table 4 - Summary of All Asbestos Containing Materials, 3336 8th St., Muskegon Heights, Michigan**

<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Garage (1 window 20" wide x 30" tall)	Glazing	Yes	1 Window
Living (3 windows 28" wide x 54" tall)	Glazing	Yes	3 Windows
Kitchen (2 windows 28" wide x 34" tall)	Glazing	Yes	2 Windows
Bathroom (1 window 24" wide x 38" tall)	Glazing	Yes	1 Window
NE Bedroom (2 windows 28" wide x 54" tall)	Glazing	Yes	2 Windows
NW Bedroom (2 windows 28" wide x 54" tall)	Glazing	Yes	2 Windows
<b>Total</b>			<b>11 Windows</b>
<b>Exterior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Building Exterior	Transite Siding	No	978 sq. ft.
<b>Total</b>			<b>978 sq. ft.</b>
<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Attic Walls	Drywall Compound	No	384 sq. ft.
Attic Ceiling	Drywall Compound	No	144 sq. ft.
<b>Total</b>			<b>528 sq. ft.</b>

**Notes:**  
Abbreviations

lin. ft. = linear feet  
 sq. ft. = square feet

**Shaded/Bolded** = Friable ACM and any Category I and Category II non-friable ACM that has a high probability of becoming crumbled, pulverized, or reduced to powder by the demolition or renovation activities that must be properly abated prior to commencement of any demolition/renovation activities.

Demolition/renovation activities completed with intact Category I non-friable ACM are regulated by OSHA and must be completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note that a Negative Pressure Enclosure must be utilized during abatement when Site Conditions Warrant. Examples of these conditions include the abatement of Plaster and Vermiculite insulation, HVAC Duct Wrap in Poor Condition, and Air-O-Cell/Mag Pipe Wrap. Conditions outside of these should be assessed on a case by case basis during the Asbestos Abatement Contractors site walk and Work Plan Preparation.



P.O. Box 13216  
Lansing, MI 48901  
Phone: 888.449.4566  
Fax: 888.448.8739  
www.redcedarconsulting.net

May 8, 2017

Mr. Tim Burgess  
Muskegon County Land Bank  
Land Bank Coordinator  
173 E. Apple Avenue, Suite 104  
Muskegon, MI 49442

**RE: *Asbestos Containing Material and Hazardous Materials Inspection***  
***3337 9th St., Muskegon Heights, MI 49444***  
***Parcel ID: 61-26-400-008-0012-00***

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 3337 9th St., Muskegon Heights, Michigan (Subject Property). This inspection was completed at the request of the Muskegon County Land Bank to comply with the United States Environmental Protection Agency (USEPA) requirements for demolition and renovation set forth under the National Emissions Standards for Hazardous Air Pollutants (NESHAP, 40 CFR Part 61). This inspection was also completed to comply with the Occupational Safety and Health Administration (OSHA) Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

### **SUBJECT PROPERTY**

The Subject Property is comprised of a .12 acre residential parcel which contains an approximate 910 square foot residential building (the Building) constructed in 1935. The Building was constructed on a concrete block basement with two aboveground floors. The exterior walls of the Building were finished with wood lap while the roof was sealed with asphalt shingles. The Building can be further divided into a living room, dining room, kitchen and bath on the first floor while the second floor contains four bedrooms and a bathroom.

### **VISUAL INSPECTION AND SAMPLING**

#### **Asbestos Containing Materials Inspection**

Aaron Paquet and Darrell DeMasters of Red Cedar Consulting (Red Cedar), accredited State Of Michigan/EPA Asbestos Building Inspectors (Accreditation Numbers A30955 and A31159, respectively) who completed training per the Michigan Asbestos Workers Accreditation Act 440, completed an inspection of the Subject Property on April 19, 2017 for suspected asbestos containing building materials.

This inspection, and subsequent sample collection was completed in accordance with the USEPA Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763) assessment and sampling protocol.

During the completion of the inspection, each area of the Subject Property was visually inspected for asbestos containing building materials (ACBM). Following the completion of the visual inspection, Red Cedar staff identified each suspect area of friable and non-friable ACBM and sorted them into one of three homogenous categories for sampling purposes. AHERA defines friable as a material that when dry, may be crumbled, pulverized, or reduced to powder by hand pressure. A homogenous area is defined by OSHA as an area of surfacing, thermal system insulation (TSI) or miscellaneous material that is uniform in color and texture. Surfacing materials are most commonly found in sprayed-on, troweled-on or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members. TSI refers to materials applied to pipes, fittings, boilers, ductwork, or other components to prevent heat loss or gain, or condensation. Any material that does not fall under the surfacing or TSI category, such as floor tile, drywall, and acoustical ceiling tile are placed into the miscellaneous materials category.

Following the completion of the visual inspection, Red Cedar staff identified the following materials as suspect ACBM:

- Asphalt Shingle
- Vapor Barrier
- Linoleum
- 1'x1' Ceiling Tile
- 12"x12" Vinyl Tile
- 9"x9" Vinyl Tile
- Drywall & Joint Compound
- Glazing
- Plaster

Red Cedar staff collected thirty one samples of suspect ACBM separated into fourteen distinct homogenous groups for laboratory analysis. Samples were collected and submitted to APEX Research Inc. Laboratories (APEX) (Accreditation Number 102118-0) for laboratory analysis. Analysis was completed utilizing polarized light microscopy (PLM) which is the Environmental Protection Agency (EPA) approved method for analysis of bulk materials for asbestos. PLM analysis completed pursuant to method (EPA 600/M4-82-020) identifies asbestos fiber bundles by the visual properties displayed when the sample is treated with various dispersion staining liquids. The laboratory report completed following the sample analysis indicates if asbestos is present, and at what percentage along with a description and percentage of other fibrous and non-fibrous materials and sample color. Chain-of-custody documentation was followed from sample collection through shipping and receiving of the samples at the designated laboratory. The documentation assures that samples will meet the quality assurance/quality control measures defined by AHERA. The laboratory analytical report prepared by APEX for the thirty one samples is included as Attachment A.



## **Hazardous Materials Inspection**

On April 19, 2017 the Subject Property was also inspected for the presence of hazardous materials which include but are not limited to polychlorinated biphenyls (PCBs) and potential mercury containing equipment and any items or containers that may contain or be classified as a hazardous or regulated material. Each material, if identified, was documented along with the approximate location. Any materials identified as hazardous are included in Table 1.

## **INSPECTION RESULTS AND RECOMMENDATIONS**

During the completion of the asbestos inspection, thirty one samples of suspect ACM were collected and are documented in Table 2 along with the Red Cedar sample number, description, friability, material type, ACM classification, sample location, material quantity and laboratory analytical results.

ACM, as defined by the USEPA NESHAP is “any material containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763 Section 1, Polarized Light Microscopy”.

Friable ACM is defined by NESHAP as any material containing more than 1 percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Friable ACM is a concern due the ease of unintentionally disturbing the ACM which may result in “visible emissions” which is known as a Fiber Release Episode.

Non-friable asbestos-containing material is defined as “material containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACM’s are separated into Category I and Category II ACM. Category I ACM is any asbestos containing packing’s, gaskets, resilient floor coverings (vinyl floor tile and linoleum are examples of these) and asphalt roofing products. Category II ACM is stated by NESHAP as any material excluding Category I non-friable ACM such as drywall, plaster or fiberboard insulation.

### **Presumed Asbestos Containing Material**

Presumed Asbestos Containing Materials (PACM) are suspect surfacing, TSI and miscellaneous materials found in buildings constructed prior to 1980 which are classified as and due to the age of the structure, are assumed to be ACM and do not require sample collection and analysis. OSHA dictates that PACM may be “rebutted” following a complete inspection pursuant to AHERA protocol.

No PACM was identified during the completion of this inspection. All suspect materials identified were sampled and analyzed for ACM.

Table 3 lists the location, material description, friability, condition, material type (surfacing, thermal or miscellaneous) and approximate quantity of all PACM documented at the Subject Property.

Table 4 provides a summary all ACM documented at the Subject Property which includes the material location, description, and approximate quantity.

### **Friable ACM's**

No friable ACM's were identified during the completion of this inspection.

### **Category I ACM**

One type of resilient floor covering (9"x9" Brown Vinyl Floor Tile) located within the kitchen was found to contain up to 10% Chrysotile asbestos. The assessment to quantify the extent of this material identified approximately 128 sq. ft. of this material within the Building.

### **Category II ACM**

Texture Finish samples, collected from the Living Room Ceiling, Bathroom walls and 2nd Fl. NE Bedroom Ceiling were found to contain up to 1.5% asbestos following analysis. The assessment to quantify the extent of this material identified approximately 726 sq. ft. of Texture Finish within the Building.

Drywall Compound samples, collected from the Living Room and Kitchen were found to contain up to 1.5% asbestos following analysis. The assessment to quantify the extent of this material identified approximately 692 sq. ft. of drywall compound within the Building.

## **RECOMMENDATIONS**

### **Asbestos Containing Materials**

Texture Finish and Drywall Compound identified on the interior of the Building must be abated prior to completion of any renovation/demolition activities at the Subject Property. Any Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations must be properly abated.

The Category I resilient floor coverings (9"x9" Brown Vinyl Floor Tile) are non-friable ACM's that may be left in place as long as the demolition/renovation activities are completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note: The location of samples obtained during this inspection were in a random fashion and areas that were not identified during this inspection may be damaged or have become damaged since the inspection was completed. If Category I or Category II friable materials are discovered prior to or during the demolition/renovation process, these materials must be abated prior to commencement of any demolition/renovation activities at the Subject Property.

### **Hazardous Materials**

Hazardous Materials identified at the Subject Property and documented in Table 1 which require proper removal and disposal consist of the following items:

- Automobile Tires (2)
- Smoke Detector (2)

Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-26-400-008-0012-00

- Thermostat (1)
- Gallon Container Misc. Paint (9)

## **REGULATORY REQUIREMENTS**

A Notification of Intent to Renovate/Demolish form must be filed with the Michigan Department of Environmental Quality- Air Quality Division at least 10 working days prior to any renovation or demolition activities at a site.

The Notification of Intent to Renovate/Demolish form must also be completed and submitted to the MIOSHA-Asbestos Program whenever demolition, encapsulation and/or renovation activities at a site involving greater than ten lineal feet and/or fifteen square feet of ACM will be completed.

Regulated asbestos containing materials per NESHAP (40 CFR Part 61) which falls into any of the following categories are ACM's that must be removed prior to any renovation/demolition activities at the Subject Property.

- Friable asbestos material.
- Category I non-friable ACM that has become friable.
- Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading.
- Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations.

Asbestos abatement should only be performed by a certified asbestos abatement contractor licensed to complete abatement work. The contractor must also follow the standards and requirements set forth per the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61).

Additional information regarding the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61) can be obtained by contacting the associated agency below.

NESHAP Asbestos Program  
Department of Environmental Quality  
Phone: 517-284-6777

MIOSHA-CSHD-Asbestos Program  
State of Michigan  
Phone: 517-284-7680  
Email: [asbestos@michigan.gov](mailto:asbestos@michigan.gov)

Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-26-400-008-0012-00

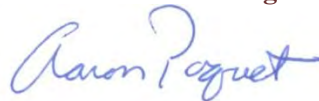
**DISCLAIMER**

Red Cedar Consulting performed destructive testing methods in an attempt to access and inspect all areas of the Building. Unfortunately, due to the age of construction along with multiple additions/renovations that may have been completed on the Building, additional inspections may be required if suspect ACM material not documented within this report is encountered during renovation/demolition activities.

This report was prepared at the request and for exclusive use by the Muskegon County Land Bank and may not be reproduced or sold without written permission from Red Cedar Consulting.

We appreciate the opportunity to provide the requested services. Please contact us at (888) 449-4566 with any questions or concerns.

Sincerely,  
**Red Cedar Consulting**



Aaron Paquet  
Michigan/EPA Certified Asbestos Building Inspector  
(A30955)

Red Cedar Consulting

***Attachment 1***  
***APEX Research Laboratory Analytical Results***



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 3337 Ninth St.

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69692  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/21/17  
Date Reported: 04/25/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69692 - 01 Cust. #: NS-HM-01A Material: Vapor Barrier Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 95% Other - 5%
Lab ID #: 69692 - 02 Cust. #: NS-HM-01B Material: Vapor Barrier Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 95% Other - 5%
Lab ID #: 69692 - 03 Cust. #: NS-HM-02A Material: Roofing Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 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: 3337 Ninth St.

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69692  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/21/17  
Date Reported: 04/25/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69692 - 03a Cust. #: NS-HM-02A Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 20% Other - 80%
Lab ID #: 69692 - 04 Cust. #: NS-HM-02B Material: Roofing Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 20% Other - 80%
Lab ID #: 69692 - 04a Cust. #: NS-HM-02B Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 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.



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# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 3337 Ninth St.

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69692  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/21/17  
Date Reported: 04/25/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69692 - 05 Cust. #: NS-HM-03A Material: Grey 12x12 Pebble VFT Location: Appearance: beige,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69692 - 05a Cust. #: NS-HM-03A Material: Mastic Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69692 - 06 Cust. #: NS-HM-03B Material: Grey 12x12 Pebble VFT Location: Appearance: beige,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> 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.



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# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 3337 Ninth St.

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69692  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/21/17  
Date Reported: 04/25/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69692 - 06a Cust. #: NS-HM-03B Material: Mastic Location: Appearance: clear, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69692 - 07 Cust. #: NS-HM-04A Material: Tan/Grey Marble Linoleum Location: Appearance: green, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 69692 - 08 Cust. #: NS-HM-04B Material: Tan/Grey Marble Linoleum Location: Appearance: green, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%

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: 3337 Ninth St.

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69692  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/21/17  
Date Reported: 04/25/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69692 - 09 Cust. #: NS-HM-05A Material: 9x9 Brown VFT Location: Appearance: beige, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>YES</b> Chrysotile - 10%	Other - 90%
Lab ID #: 69692 - 09a Cust. #: NS-HM-05A Material: Mastic Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>YES</b> Chrysotile - 10%	Other - 90%
Lab ID #: 69692 - 10 Cust. #: NS-HM-05B Material: 9x9 Brown VFT/Mastic Location: Appearance: Layer: of	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: 3337 Ninth St.

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69692  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/21/17  
Date Reported: 04/25/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69692 - 11 Cust. #: NS-HM-06A Material: 1x1 White Smooth Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 95% Other - 5%
Lab ID #: 69692 - 12 Cust. #: NS-HM-06B Material: 1x1 White Smooth Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 95% Other - 5%
Lab ID #: 69692 - 13 Cust. #: NS-HM-07A Material: 1x1 White Textured Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 95% Other - 5%

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: 3337 Ninth St.

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69692  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/21/17  
Date Reported: 04/25/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69692 - 14 Cust. #: NS-HM-07B Material: 1x1 White Textured Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 95% Other - 5%
Lab ID #: 69692 - 15 Cust. #: NS-HM-08A Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69692 - 15a Cust. #: NS-HM-08A Material: Joint Compound Location: Appearance: beige, fibrous, nonhomogenous Layer: 2 of 2	Asbestos Present: <b>YES</b> Chrysotile - 1.50%  <b>POINT COUNT RESULT</b>	Other - 98.50%

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: 3337 Ninth St.

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69692  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/21/17  
Date Reported: 04/25/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69692 - 16 Cust. #: NS-HM-08B Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69692 - 16a Cust. #: NS-HM-08B Material: Joint Compound Location: Appearance: Layer: 2 of 2	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69692 - 17 Cust. #: NS-HM-09A Material: Window Glazing Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> 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: 3337 Ninth St.

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69692  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/21/17  
Date Reported: 04/25/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69692 - 18 Cust. #: NS-HM-09B Material: Window Glazing Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69692 - 19 Cust. #: NS-HM-10A Material: Cream Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Fiberglass - 10% Other - 70%
Lab ID #: 69692 - 20 Cust. #: NS-HM-10B Material: Cream Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Fiberglass - 10% Other - 70%

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: 3337 Ninth St.

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69692  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/21/17  
Date Reported: 04/25/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69692 - 21 Cust. #: NS-HM-11A Material: Green Marble Linoleum Location: Appearance: green, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 69692 - 22 Cust. #: NS-HM-11B Material: Green Marble Linoleum Location: Appearance: green, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 69692 - 23 Cust. #: NS-HM-12A Material: Green Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%

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: 3337 Ninth St.

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69692  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/21/17  
Date Reported: 04/25/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69692 - 24 Cust. #: NS-HM-12B Material: Green Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 69692 - 25 Cust. #: NS-HM-13A Material: Blue Green Linoleum Location: Appearance: grey, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 69692 - 26 Cust. #: NS-HM-13B Material: Blue Green Linoleum Location: Appearance: grey, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%

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: 3337 Ninth St.

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69692  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/21/17  
Date Reported: 04/25/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69692 - 27 Cust. #: NS-HS-01A Material: Plaster Texture Location: Appearance: green, fibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>YES</b> Chrysotile - 1.50%  POINT COUNT RESULT	Other - 98.50%
Lab ID #: 69692 - 27a Cust. #: NS-HS-01A Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69692 - 27b Cust. #: NS-HS-01A Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 3337 Ninth St.

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69692  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/21/17  
Date Reported: 04/25/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69692 - 28 Cust. #: NS-HS-01B Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69692 - 28a Cust. #: NS-HS-01B Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 69692 - 29 Cust. #: NS-HS-01C Material: Plaster Texture Location: Appearance: Layer: 1 of 3	Asbestos Present:  NOT ANALYZED	

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

Robert T. Letarte Jr., Laboratory Director

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# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 3337 Ninth St.

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69692  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/21/17  
Date Reported: 04/25/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69692 - 29a Cust. #: NS-HS-01C Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69692 - 29b Cust. #: NS-HS-01C Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 69692 - 30 Cust. #: NS-HS-01D Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> 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: 3337 Ninth St.

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69692  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/21/17  
Date Reported: 04/25/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69692 - 30a Cust. #: NS-HS-01D Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 69692 - 31 Cust. #: NS-HS-01E Material: Plaster Texture Location: Appearance: Layer: 1 of 3	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69692 - 31a Cust. #: NS-HS-01E Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> 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: 3337 Ninth St.

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69692  
Date Collected: 04/19/17  
Date Received: 04/20/17  
Date Analyzed: 04/21/17  
Date Reported: 04/25/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69692 - 31b Cust. #: NS-HS-01E Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	
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



# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189  
 Phone: 734-449-9990  
 Fax: 734-449-9991  
 E-mail: apexresearch@chartermi.net

Client Name: Red Cedar Consulting

Date of Survey: 4-19-17

Address: PO Box 13216

Project: 3337 *Witch St*

City, St., Zip: Lansing, MI 48901

Project #: \_\_\_\_\_

Phone: (888) 449-4566 Fax: (888) 448-8739

Contact Person: Aaron Paquet

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM.  
 aapaquet@redcedarconsulting.net

Rush 24 hour

48 hour 72 hour

Other: *5 days* **TTP** All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
 Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_  
 Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ Biosis \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_  
 TEM: AHERA 7400 Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	NS-HM-01A	<i>Vapor Barrier</i>			
2	NS-HM-01B	.. ..			
3	NS-HM-02A	<i>Roofing Shingle</i>			
4	NS-HM-02B	.. ..			
5	NS-HM-03A	<i>dry 12x12 Tile VET</i>			
6	NS-HM-03B	.. ..			
7	NS-HM-04A	<i>Inst Heavy Wall Sinterum</i>			
8	NS-HM-04B	.. ..			
9	NS-HM-05A	<i>9x9 Brown VET</i>			
10	NS-HM-05B	.. ..			
11	NS-HM-06A	<i>1x1 White Smooth CT</i>			

Relinquished by: *APR/McIntire* Received by: *URS*

Relinquished by: \_\_\_\_\_

Received by: *APR* **RECEIVED**  
 APR 20 2017

Date: 4-19-17

Date: 4-19-17

Date: \_\_\_\_\_

Date: \_\_\_\_\_

69692

243

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189

Phone: 734-449-9990  
E-mail: apexresearch@chartermi.net  
Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216  
Lansing, MI 48901

City, St, Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-19-17

Project: 3337 *Unit B*

Project #:

Contact Person: Aaron Paquet

apaquet@redcedarconsulting.net

## Turn Around Times: (Circle One)

Rush 24 hour

48 hour 72 hour

Other: *5 day*  All Samples

Asbestos: Bulk  Wipe  Point Count  PCM

Lead: Bulk  Wipe  Air  Paint  Soil

Mold: Bulk  Tape  BIOSIS  Other  Viable

TEM: AHERA 7400 Bulk/NOB EPA Level II

Lab Use Only  
Log-in \_\_\_\_\_  
Report \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
L2	NS-HM-04B	1X White Smooth CT			
B3	NS-HM-07A	1X White Textured CT			
M4	NS-HM-07B	.. ..			
B9	NS-HM-08A	<i>Shower Stall Paint Removal</i>			
K6	NS-HM-08B	.. ..			
V7	NS-HM-09A	<i>Shower Staying</i>			
B8	NS-HM-09B	.. ..			
B9	NS-HM-10A	<i>Shower Stall</i>			
20	NS-HM-10B	.. ..			
21	NS-HM-11A	<i>Shower Stall</i>			
22	NS-HM-11B	.. ..			

Relinquished by: *[Signature]* Date: 4-19-17

Received by: *URS* Date: 4-19-17

Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_

Received by: *[Signature]* Date: APR 20 2017

RECEIVED

69692

3 of 3

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189  
Phone: 734-449-9990  
E-mail: apexresearch@charterni.net  
Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216  
Lansing, MI 48901

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 4-19-17

Project: 3337 *Mait*

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log-in \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM.  
apaquet@redcedarconsulting.net

Rush 24 hour

48 hour 72 hour

Other: 5 day All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_

Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_

Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BioSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_

TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
23	NS-HH-12A	<i>Green Staircase</i>			
24	NS-HH-12B	" "			
25	NS-HH-13A	<i>Blue Green Staircase</i>			
26	NS-HH-13B	" "			
27	NS-HS-01A	<i>Plaster</i>			
28	NS-HS-01B	" "			
29	NS-HS-01C	" "			
30	NS-HS-01D	" "			
31	NS-HS-01E	" "			

Relinquished by: *Alexandra* Received by: *UPS*  
Date: 4-19-17 Date: 4-19-17

Relinquished by: \_\_\_\_\_ Received by: *ME*  
Date: \_\_\_\_\_ Date: APR 20 2017

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***Tables***

**Table 1 - Summary of Hazardous Materials, 3337 9th St., Muskegon Heights, Michigan**

<b>Hazardous Materials Description and Location</b>		
<b>Location</b>	<b>Material Description</b>	<b>Quantity</b>
Exterior	Automobile Tires	2
Living Room	Smoke Detector	1
Living Room	Thermostat	1
Rear Entry	Gallon Container Misc. Paint	3
2 <sup>nd</sup> Floor Hallway	Smoke Detector	1
Basement	Gallon Container Misc. Paint	6

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 3337 9th St., Muskegon Heights, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
NS-HM-01A	Vapor Barrier	No	M	Category I	ND	Exterior	NA
NS-HM-01B	Vapor Barrier	No	M	Category I	ND	Exterior	NA
NS-HM-02A	Roofing Shingle	No	M	Category I	NDND	Exterior	NA
NS-HM-02B	Roofing Shingle	No	M	Category I	NDND	Exterior	NA
NS-HM-03A	Gray Pebble 12x12 Vinyl Floor Tile	No	M	Category I	NDND	Front Entry	NA
NS-HM-03B	Gray Pebble 12x12 Vinyl Floor Tile	No	M	Category I	ND/ND	Front Entry	NA
NS-HM-04A	Tan & Gray Marble Linoleum	No	M	Category I	ND	Dining	NA
NS-HM-04B	Tan & Gray Marble Linoleum	No	M	Category I	ND	Dining	NA
NS-HM-05A	Brown 9"x9" Vinyl Floor Tile	No	M	Category I	10%CH/10%CH	Kitchen	128 sq. ft.
NS-HM-05B	Brown 9"x9" Vinyl Floor Tile	No	M	Category I	NA	Kitchen	NA
NS-HM-06A	White Smooth 1'x1' Ceiling Tile	Yes	M	Category II	ND	Kitchen	NA
NS-HM-06B	White Smooth 1'x1' Ceiling Tile	Yes	M	Category II	ND	Dining Room	NA
NS-HM-07A	White Smooth 1'x1' Ceiling Tile	Yes	M	Category II	ND	Living Room	NA
NS-HM-07B	White Smooth 1'x1' Ceiling Tile	Yes	M	Category II	ND	Living Room	NA
NS-HM-08A	Drywall & Joint Compound	No	M	Category II	ND/1.50%CH-PC	Living Room Wall	692 sq. ft.
NS-HM-08B	Drywall & Joint Compound	No	M	Category II	ND/NA	Living Room Wall	NA
NS-HM-09A	Glazing	Yes	M	Category II	ND	Bathroom	NA
NS-HM-09B	Glazing	Yes	M	Category II	ND	Kitchen	NA
NS-HM-10A	Cream Linoleum	No	M	Category I	ND	Bathroom	NA
NS-HM-10B	Cream Linoleum	No	M	Category I	ND	Bathroom	NA
NS-HM-11A	Green Marble Linoleum	No	M	Category I	ND	SE Bedroom	NA
NS-HM-11B	Green Marble Linoleum	No	M	Category I	ND	SE Bedroom	NA
NS-HM-12A	Green Linoleum	No	M	Category I	ND	NE Bedroom	NA
NS-HM-12B	Green Linoleum	No	M	Category I	ND	NE Bedroom	NA
NS-HM-13A	Blue Green Linoleum	No	M	Category I	ND	SW Bedroom	NA
NS-HM-13B	Blue Green Linoleum	No	M	Category I	ND	SW Bedroom	NA
NS-HS-01A	Texture/Plaster	No	S	Category II	1.50%CH/ND/ND	Living Room Ceiling	726 sq. ft.
NS-HS-01B	Plaster	No	S	Category II	ND/ND	SW Bedroom Ceiling	NA

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 3337 9th St., Muskegon Heights, Michigan**

<b>Sample Number</b>	<b>Sample Description</b>	<b>Friable</b>	<b>Material Type</b>	<b>Material Classification</b>	<b>% Asbestos Laboratory Result</b>	<b>Sample Location</b>	<b>Approx. Material Quantity</b>
NS-HS-01C	Texture/Plaster	No	S	Category II	NA/ND/ND	Bathroom Wall	NA
NS-HS-01D	Plaster	No	S	Category II	ND/ND	Rear Entry Wall	NA
NS-HS-01E	Texture/Plaster	No	S	Category II	NA/ND/ND	NE Bedroom Ceiling	NA

**Notes:**

Material Types

M = Miscellaneous building material  
 TSI = Thermal System Insulation  
 S = Surfacing Material  
 PC = Point Count Analysis  
 CH = Chrysotile Asbestos

Abbreviations

NQ = Not quantified  
 NA = Not applicable  
 ND = Not detected. Laboratory result is less than 1 % asbestos  
 lin. ft. = linear feet  
 sq. ft. = square feet

Asbestos Containing Material (ACM) is defined as any material containing more than 1 percent asbestos as determined utilizing Polarized Light Microscopy.

**Table 3 - Summary of Presumed Asbestos Containing Materials, 3337 9th St., Muskegon Heights, Michigan**

<b>Asbestos Containing Material Description and Location</b>					
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Condition</b>	<b>Material Type</b>	<b>Approx. Quantity</b>
No Presumed Asbestos Containing Materials Identified					

**Notes:**

Material Types

- M = Miscellaneous building material
- TSI = Thermal System Insulation
- S = Surfacing Material

Abbreviations

- lin. ft. = linear feet
- sq. ft. = square feet

**Table 4 - Summary of All Asbestos Containing Materials, 3337 9th St., Muskegon Heights, Michigan**

<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Kitchen	Brown 9"x9" Vinyl Floor Tile	No	128 sq. ft.
<b>Total</b>			<b>128 sq. ft.</b>
<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
1 <sup>st</sup> Fl. Bathroom Walls	Texture Finish	No	340 sq. ft.
Living Ceiling	Texture Finish	No	310 sq. ft.
2 <sup>nd</sup> Fl. NE Bedroom Ceiling	Texture Finish	No	76 sq. ft.
<b>Total</b>			<b>726 sq. ft.</b>
<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Living Room Walls	Drywall Compound	No	560 sq. ft.
Kitchen S Wall	Drywall Compound	No	132 sq. ft.
<b>Total</b>			<b>692 sq. ft.</b>

**Notes:**

Abbreviations

lin. ft. = linear feet  
 sq. ft. = square feet

**Shaded/Bolded** = Friable ACM and any Category I and Category II non-friable ACM that has a high probability of becoming crumbled, pulverized, or reduced to powder by the demolition or renovation activities that must be properly abated prior to commencement of any demolition/renovation activities.

Demolition/renovation activities completed with intact Category I non-friable ACM are regulated by OSHA and must be completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note that a Negative Pressure Enclosure must be utilized during abatement when Site Conditions Warrant. Examples of these conditions include the abatement of Plaster and Vermiculite insulation, HVAC Duct Wrap in Poor Condition, and Air-O-Cell/Mag Pipe Wrap. Conditions outside of these should be assessed on a case by case basis during the Asbestos Abatement Contractors site walk and Work Plan Preparation.



P.O. Box 13216  
Lansing, MI 48901  
Phone: 888.449.4566  
Fax: 888.448.8739  
www.redcedarconsulting.net

May 12, 2017

Mr. Tim Burgess  
Muskegon County Land Bank  
Land Bank Coordinator  
173 E. Apple Avenue, Suite 104  
Muskegon, MI 49442

**RE: *Asbestos Containing Material and Hazardous Materials Inspection***  
***6085 Main St., Dalton, MI 49457***  
***Parcel ID: 61-07-830-005-0012-00***

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 6085 Main St., Dalton, Michigan (Subject Property). This inspection was completed at the request of the Muskegon County Land Bank to comply with the United States Environmental Protection Agency (USEPA) requirements for demolition and renovation set forth under the National Emissions Standards for Hazardous Air Pollutants (NESHAP, 40 CFR Part 61). This inspection was also completed to comply with the Occupational Safety and Health Administration (OSHA) Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

### **SUBJECT PROPERTY**

The Subject Property is comprised of a residential parcel which contains an approximate 1,176 square foot residential building (the Building) constructed in 1900. The Building was constructed on a concrete block basement with two aboveground floors. The exterior walls of the Building were finished with vinyl siding over asphalt siding which was over wood lap with Transite siding identified under the vinyl on the front gable. The roof was sealed with asphalt shingles. The Building can be further divided into a front entry, living room, dining room, kitchen, bath, bedroom and a rear entry on the first floor while the second floor contains two bedrooms.

### **VISUAL INSPECTION AND SAMPLING**

#### **Asbestos Containing Materials Inspection**

Aaron Paquet and Darrell DeMasters of Red Cedar Consulting (Red Cedar), accredited State Of Michigan/EPA Asbestos Building Inspectors (Accreditation Numbers A30955 and A31159, respectively) who completed training per the Michigan Asbestos Workers Accreditation Act 440, completed an inspection of the Subject Property on May 3, 2017 for suspected asbestos containing building materials.

This inspection, and subsequent sample collection was completed in accordance with the USEPA Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763) assessment and sampling protocol.

During the completion of the inspection, each area of the Subject Property was visually inspected for asbestos containing building materials (ACBM). Following the completion of the visual inspection, Red Cedar staff identified each suspect area of friable and non-friable ACBM and sorted them into one of three homogenous categories for sampling purposes. AHERA defines friable as a material that when dry, may be crumbled, pulverized, or reduced to powder by hand pressure. A homogenous area is defined by OSHA as an area of surfacing, thermal system insulation (TSI) or miscellaneous material that is uniform in color and texture. Surfacing materials are most commonly found in sprayed-on, troweled-on or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members. TSI refers to materials applied to pipes, fittings, boilers, ductwork, or other components to prevent heat loss or gain, or condensation. Any material that does not fall under the surfacing or TSI category, such as floor tile, drywall, and acoustical ceiling tile are placed into the miscellaneous materials category.

Following the completion of the visual inspection, Red Cedar staff identified the following materials as suspect ACBM:

- Asphalt Shingle
- Asphalt Siding
- Linoleum
- 12"x12" Vinyl Tile
- 9"x9" Vinyl Tile
- 2'x4' Ceiling Tile
- Drywall and Joint Compound
- Plaster

Red Cedar staff collected thirty samples of suspect ACBM separated into thirteen distinct homogenous groups for laboratory analysis. Samples were collected and submitted to APEX Research Inc. Laboratories (APEX) (Accreditation Number 102118-0) for laboratory analysis. Analysis was completed utilizing polarized light microscopy (PLM) which is the Environmental Protection Agency (EPA) approved method for analysis of bulk materials for asbestos. PLM analysis completed pursuant to method (EPA 600/M4-82-020) identifies asbestos fiber bundles by the visual properties displayed when the sample is treated with various dispersion staining liquids. The laboratory report completed following the sample analysis indicates if asbestos is present, and at what percentage along with a description and percentage of other fibrous and non-fibrous materials and sample color. Chain-of-custody documentation was followed from sample collection through shipping and receiving of the samples at the designated laboratory. The documentation assures that samples will meet the quality assurance/quality control measures defined by AHERA. The laboratory analytical report prepared by APEX for the thirty samples is included as Attachment A.



## **Hazardous Materials Inspection**

On May 3, 2017 the Subject Property was also inspected for the presence of hazardous materials which include but are not limited to polychlorinated biphenyls (PCBs) and potential mercury containing equipment and any items or containers that may contain or be classified as a hazardous or regulated material. Each material, if identified, was documented along with the approximate location. Any materials identified as hazardous are included in Table 1.

## **INSPECTION RESULTS AND RECOMMENDATIONS**

During the completion of the asbestos inspection, thirty samples of suspect ACM were collected and are documented in Table 2 along with the Red Cedar sample number, description, friability, material type, ACM classification, sample location, material quantity and laboratory analytical results.

ACM, as defined by the USEPA NESHAP is “any material containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763 Section 1, Polarized Light Microscopy”.

Friable ACM is defined by NESHAP as any material containing more than 1 percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Friable ACM is a concern due the ease of unintentionally disturbing the ACM which may result in “visible emissions” which is known as a Fiber Release Episode.

Non-friable asbestos-containing material is defined as “material containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACM’s are separated into Category I and Category II ACM. Category I ACM is any asbestos containing packing’s, gaskets, resilient floor coverings (vinyl floor tile and linoleum are examples of these) and asphalt roofing products. Category II ACM is stated by NESHAP as any material excluding Category I non-friable ACM such as drywall, plaster or fiberboard insulation.

### **Presumed Asbestos Containing Material**

Presumed Asbestos Containing Materials (PACM) are suspect surfacing, TSI and miscellaneous materials found in buildings constructed prior to 1980 which are classified as and due to the age of the structure, are assumed to be ACM and do not require sample collection and analysis. OSHA dictates that PACM may be “rebutted” following a complete inspection pursuant to AHERA protocol.

The Cementitious “Transite” Siding on the Building was classified as PACM due to the age of the structure and samples were not collected.

Table 3 lists the location, material description, friability, condition, material type (surfacing, thermal or miscellaneous) and approximate quantity of all PACM documented at the Subject Property.

Table 4 provides a summary all ACM documented at the Subject Property which includes the material location, description, and approximate quantity.

### **Friable ACM's**

No friable ACM's were identified during the completion of this inspection.

### **Category I ACM**

Four types of resilient floor covering (Red Brick Linoleum, Red Linoleum, Red 9"x9" Vinyl Tile and Tan 9"x9" Vinyl Tile) located within the Building were found to contain up to 30% Chrysotile asbestos. The assessment to quantify the extent of this material identified approximately 582 sq. ft. of this material within the Building.

### **Category II ACM**

The cementitious "Transite" siding located on the exterior of the Building was classified as PACM and no samples were collected. The visual assessment to quantify the extent of this material identified 108 sq. ft. of cementitious (Transite) siding on the Building.

## **RECOMMENDATIONS**

### **Asbestos Containing Materials**

Transite siding was identified on the exterior of the Building and must be abated prior to completion of any demolition activities at the Subject Property. In demolition, all cementitious ACM must be removed prior to demolition due to the likelihood of becoming regulated due to the demolition process.

The Category I resilient floor coverings (Red Brick Linoleum, Red Linoleum, Red 9"x9" Vinyl Tile and Tan 9"x9" Vinyl Tile) are non-friable ACM's that may be left in place as long as the demolition/renovation activities are completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note: The location of samples obtained during this inspection were in a random fashion and areas that were not identified during this inspection may be damaged or have become damaged since the inspection was completed. If Category I or Category II friable materials are discovered prior to or during the demolition/renovation process, these materials must be abated prior to commencement of any demolition/renovation activities at the Subject Property.

### **Hazardous Materials**

Hazardous Materials identified at the Subject Property and documented in Table 1 which require proper removal and disposal consist of the following items:

- Air Conditioner (1)

Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-07-830-005-0012-00

## **REGULATORY REQUIREMENTS**

A Notification of Intent to Renovate/Demolish form must be filed with the Michigan Department of Environmental Quality- Air Quality Division at least 10 working days prior to any renovation or demolition activities at a site.

The Notification of Intent to Renovate/Demolish form must also be completed and submitted to the MIOSHA-Asbestos Program whenever demolition, encapsulation and/or renovation activities at a site involving greater than ten lineal feet and/or fifteen square feet of ACM will be completed.

Regulated asbestos containing materials per NESHAP (40 CFR Part 61) which falls into any of the following categories are ACM's that must be removed prior to any renovation/demolition activities at the Subject Property.

- Friable asbestos material.
- Category I non-friable ACM that has become friable.
- Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading.
- Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations.

Asbestos abatement should only be performed by a certified asbestos abatement contractor licensed to complete abatement work. The contractor must also follow the standards and requirements set forth per the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61).

Additional information regarding the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61) can be obtained by contacting the associated agency below.

NESHAP Asbestos Program  
Department of Environmental Quality  
Phone: 517-284-6777

MIOSHA-CSHD-Asbestos Program  
State of Michigan  
Phone: 517-284-7680  
Email: [asbestos@michigan.gov](mailto:asbestos@michigan.gov)

Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-07-830-005-0012-00

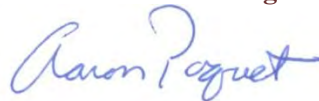
**DISCLAIMER**

Red Cedar Consulting performed destructive testing methods in an attempt to access and inspect all areas of the Building. Unfortunately, due to the age of construction along with multiple additions/renovations that may have been completed on the Building, additional inspections may be required if suspect ACM material not documented within this report is encountered during renovation/demolition activities.

This report was prepared at the request and for exclusive use by the Muskegon County Land Bank and may not be reproduced or sold without written permission from Red Cedar Consulting.

We appreciate the opportunity to provide the requested services. Please contact us at (888) 449-4566 with any questions or concerns.

Sincerely,  
**Red Cedar Consulting**



Aaron Paquet  
Michigan/EPA Certified Asbestos Building Inspector  
(A30955)

Red Cedar Consulting

***Attachment 1***  
***APEX Research Laboratory Analytical Results***



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 6085 Main St.

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69921  
Date Collected: 05/03/17  
Date Received: 05/04/17  
Date Analyzed: 05/08/17  
Date Reported: 05/09/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69921 - 01 Cust. #: MS-HM-01A Material: Asphalt Shingles Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 30% Other - 70%
Lab ID #: 69921 - 02 Cust. #: MS-HM-01B Material: Asphalt Shingles Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 30% Other - 70%
Lab ID #: 69921 - 03 Cust. #: MS-HM-02A Material: Asphalt Lap Siding Location: Appearance: black, fibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%

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: 6085 Main St.

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69921  
Date Collected: 05/03/17  
Date Received: 05/04/17  
Date Analyzed: 05/08/17  
Date Reported: 05/09/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69921 - 03a Cust. #: MS-HM-02A Material: Brown Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69921 - 03b Cust. #: MS-HM-02A Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 60% Other - 40%
Lab ID #: 69921 - 04 Cust. #: MS-HM-02B Material: Asphalt Lap Siding Location: Appearance: black, fibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%

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

Robert T. Letarte Jr., Laboratory Director

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# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 6085 Main St.

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69921  
Date Collected: 05/03/17  
Date Received: 05/04/17  
Date Analyzed: 05/08/17  
Date Reported: 05/09/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69921 - 04a Cust. #: MS-HM-02B Material: Brown Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 69921 - 04b Cust. #: MS-HM-02B Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 60% Other - 40%
Lab ID #: 69921 - 05 Cust. #: MS-HM-03A Material: Red Brick Linoleum Location: Appearance: red, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 30%	Other - 70%

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.



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# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 6085 Main St.

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69921  
Date Collected: 05/03/17  
Date Received: 05/04/17  
Date Analyzed: 05/08/17  
Date Reported: 05/09/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69921 - 06 Cust. #: MS-HM-03B Material: Red Brick Linoleum Location: Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69921 - 07 Cust. #: MS-HM-04A Material: Yellow Linoleum Location: Appearance: yellow, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Fiberglass - 10% Other - 88%
Lab ID #: 69921 - 08 Cust. #: MS-HM-04B Material: Yellow Linoleum Location: Appearance: yellow, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Fiberglass - 10% Other - 88%

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: 6085 Main St.

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69921  
Date Collected: 05/03/17  
Date Received: 05/04/17  
Date Analyzed: 05/08/17  
Date Reported: 05/09/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69921 - 09 Cust. #: MS-HM-05A Material: Blue 12x12 VFT Location: Appearance: blue,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69921 - 09a Cust. #: MS-HM-05A Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69921 - 10 Cust. #: MS-HM-05B Material: Blue 12x12 VFT Location: Appearance: blue,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> 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: 6085 Main St.

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69921  
Date Collected: 05/03/17  
Date Received: 05/04/17  
Date Analyzed: 05/08/17  
Date Reported: 05/09/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69921 - 10a Cust. #: MS-HM-05B Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69921 - 11 Cust. #: MS-HM-06A Material: Black/White 12x12 VFT Location: Appearance: black,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69921 - 11a Cust. #: MS-HM-06A Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> 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: 6085 Main St.

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Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69921  
Date Collected: 05/03/17  
Date Received: 05/04/17  
Date Analyzed: 05/08/17  
Date Reported: 05/09/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69921 - 12 Cust. #: MS-HM-06B Material: Black/White 12x12 VFT Location: Appearance: black,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69921 - 12a Cust. #: MS-HM-06B Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69921 - 13 Cust. #: MS-HM-07A Material: Red Linoleum Location: Appearance: red,fibrous,nonhomogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 30%	Other - 70%

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 6085 Main St.

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69921  
Date Collected: 05/03/17  
Date Received: 05/04/17  
Date Analyzed: 05/08/17  
Date Reported: 05/09/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69921 - 14 Cust. #: MS-HM-07B Material: Red Linoleum Location: Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69921 - 15 Cust. #: MS-HM-08A Material: Red 9x9 VFT Location: Appearance: red, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>YES</b> Chrysotile - 10%	Other - 90%
Lab ID #: 69921 - 15a Cust. #: MS-HM-08A Material: Glue Location: Appearance: beige, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Other - 99%

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Robert T. Letarte Jr., Laboratory Director

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## Test Method, Polarized Light Microscopy (PLM)

Project: 6085 Main St.

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ARI Report # 17-69921  
Date Collected: 05/03/17  
Date Received: 05/04/17  
Date Analyzed: 05/08/17  
Date Reported: 05/09/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69921 - 16 Cust. #: MS-HM-08B Material: Red 9x9 VFT Location: Appearance: Layer: 1 of 2	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69921 - 16a Cust. #: MS-HM-08B Material: Glue Location: Appearance: beige, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 69921 - 17 Cust. #: MS-HM-09A Material: Tan 9x9 VFT Location: Appearance: beige, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>YES</b> Chrysotile - 10%	Other - 90%

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Robert T. Letarte Jr., Laboratory Director

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Project: 6085 Main St.

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ARI Report # 17-69921  
Date Collected: 05/03/17  
Date Received: 05/04/17  
Date Analyzed: 05/08/17  
Date Reported: 05/09/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69921 - 17a Cust. #: MS-HM-09A Material: Glue Location: Appearance: beige, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 69921 - 18 Cust. #: MS-HM-09B Material: Tan 9x9 VFT Location: Appearance: Layer: 1 of 2	Asbestos Present:  NOT ANALYZED	
Lab ID #: 69921 - 18a Cust. #: MS-HM-09B Material: Glue Location: Appearance: beige, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Other - 99%

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Robert T. Letarte Jr., Laboratory Director

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## Test Method, Polarized Light Microscopy (PLM)

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ARI Report # 17-69921  
Date Collected: 05/03/17  
Date Received: 05/04/17  
Date Analyzed: 05/08/17  
Date Reported: 05/09/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69921 - 19 Cust. #: MS-HM-10A Material: White 2x4 Ceiling Tile Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 69921 - 20 Cust. #: MS-HM-10B Material: White 2x4 Ceiling Tile Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 69921 - 21 Cust. #: MS-HM-11A Material: Drywall Location: Appearance: white, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%

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Lansing, MI 48901

ARI Report # 17-69921  
Date Collected: 05/03/17  
Date Received: 05/04/17  
Date Analyzed: 05/08/17  
Date Reported: 05/09/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69921 - 21a Cust. #: MS-HM-11A Material: Joint Compound Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69921 - 22 Cust. #: MS-HM-11B Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69921 - 22a Cust. #: MS-HM-11B Material: Joint Compound Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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ARI Report # 17-69921  
Date Collected: 05/03/17  
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Date Analyzed: 05/08/17  
Date Reported: 05/09/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69921 - 23 Cust. #: MS-HS-01A Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69921 - 23a Cust. #: MS-HS-01A Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 69921 - 23b Cust. #: MS-HS-01A Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%

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ARI Report # 17-69921  
Date Collected: 05/03/17  
Date Received: 05/04/17  
Date Analyzed: 05/08/17  
Date Reported: 05/09/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69921 - 24 Cust. #: MS-HS-01B Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69921 - 24a Cust. #: MS-HS-01B Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: 69921 - 24b Cust. #: MS-HS-01B Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%

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Lansing, MI 48901

ARI Report # 17-69921  
Date Collected: 05/03/17  
Date Received: 05/04/17  
Date Analyzed: 05/08/17  
Date Reported: 05/09/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69921 - 25 Cust. #: MS-HS-01C Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 69921 - 25a Cust. #: MS-HS-01C Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 5% Other - 95%
Lab ID #: 69921 - 25b Cust. #: MS-HS-01C Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%

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Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69921  
Date Collected: 05/03/17  
Date Received: 05/04/17  
Date Analyzed: 05/08/17  
Date Reported: 05/09/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69921 - 26 Cust. #: MS-HS-01D Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 5% Other - 95%
Lab ID #: 69921 - 27 Cust. #: MS-HS-01E Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 5% Other - 95%
Lab ID #: 69921 - 28 Cust. #: MS-HS-02A Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 2% Other - 98%

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ARI Report # 17-69921  
Date Collected: 05/03/17  
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Date Analyzed: 05/08/17  
Date Reported: 05/09/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69921 - 29 Cust. #: MS-HS-02B Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: 69921 - 30 Cust. #: MS-HS-02C Material: Plaster/Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Other - 90%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

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NVLAP Lab Code 102118-0

69921

Pg 1 of 3

# APEX research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189

Phone: 734-449-9990



E-mail: apexresearch@chartermi.net

Fax: 734-449-9991

Client Name: Red Cedar Consulting

Address: PO Box 13216 Lansing, MI 48901

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

## Turn Around Times: (Circle One)

PJM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: STony All Samples

Asbestos: Bulk  Wipe  Point Count  PCM

Lead: Bulk  Wipe  Air  Paint  Soil

Mold: Bulk  Tape  BioSIS  Other  Viable

TEM: AHERA 7400 Bulk/NOB EPA Level II

Date of Survey: 5-3-17

Project: 6085 Main St.

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
 Log-In \_\_\_\_\_  
 Report \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	MS-HM-01A	Asphalt Shingles			
2	MS-HM-01B	" "			
3	MS-HM-02A	Asphalt Lap Siding			
4	MS-HM-02B	" "			
5	MS-HM-03A	Red Brick Linoleum			
6	MS-HM-03B	" "			
7	MS-HM-04A	Yellow Linoleum			
8	MS-HM-04B	" "			
9	MS-HM-05A	Blue 12x12 VFT			
10	MS-HM-05B	" "			
11	MS-HM-06A	Blocked White 12x12 VFT			

Relinquished by: [Signature] Date: 5-3-17

Received by: URS Date: 5-3-17

Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_

Received by: [Signature] Date: MAY 04 2017

69921

PJ 2 of 3

# APEX Research, Inc.

E-mail: [apexresearch@chartermi.net](mailto:apexresearch@chartermi.net)

Fax: 734-449-9991



11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

Client Name: Red Cedar Consulting

Date of Survey: 5-3-17

Address: PO Box 13216

Project: 6085 Main St.

City, St., Zip: Lansing, MI 48901

Project #:

Phone: (888) 449-4566 Fax: (888) 448-8739

Contact Person: Aaron Paquet

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

Asbestos: Bulk  Wipe  Point Count  PCM

48 hour 72 hour

Lead: Bulk  Wipe  Air  Paint  Soil

Other: 5 Day **TTP** All Samples

Mold: Bulk  Tape  BioSIS  Other  Viable

TEM: AHERA 7400 Bulk/NOB EPA Level II

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	MS-HM-06B	Black & White VFT			
13	MS-HM-07A	Red Linoleum			
14	MS-HM-07B	" "			
15	MS-HM-08A	Red GXA VFT			
16	MS-HM-08B	" "			
17	MS-HM-09A	Tan GXA VFT			
18	MS-HM-09B	" "			
19	MS-HM-10A	White 2x4 CT			
20	MS-HM-10B	" "			
21	MS-HM-11A	Drywall & compound			
22	MS-HM-11B	" "			

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

Relinquished by: [Signature] Received by: URS

Relinquished by: \_\_\_\_\_ Received by: \_\_\_\_\_

Date: 5-3-17

Date: 5-3-17

Date: \_\_\_\_\_

Date: \_\_\_\_\_

RECEIVED  
MAY 04 2017



69921

PJ 3 of 3

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

E-mail: [apexresearch@chartermi.net](mailto:apexresearch@chartermi.net) Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216  
Lansing, MI 48901

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 5-3-17

Project: 6085 Main St.

Project #:

Contact Person: Aaron Paquet

Lab Use Only  
Log-In \_\_\_\_\_  
Report \_\_\_\_\_

## Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. [apaquet@redcedarconsulting.net](mailto:apaquet@redcedarconsulting.net)

Rush 24 hour

48 hour 72 hour

Other: 5 Day All Samples

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_

Lead: Bulk \_\_\_\_\_ Wipe \_\_\_\_\_ Air \_\_\_\_\_ Paint \_\_\_\_\_ Soil \_\_\_\_\_

Mold: Bulk \_\_\_\_\_ Tape \_\_\_\_\_ BioSIS \_\_\_\_\_ Other \_\_\_\_\_ Viable \_\_\_\_\_

TEM: AHERA 7400 \_\_\_\_\_ Bulk/NOB \_\_\_\_\_ EPA Level II \_\_\_\_\_

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
23	MS-HS-01A	Plaster			
24	MS-HS-01B				
25	MS-HS-01C				
26	MS-HS-01D				
27	MS-HS-01E				
28	MS-HS-02A				
29	MS-HS-02B				
30	MS-HS-02C				

Relinquished by:

Date: 5-3-17

Received by:

Date: 5-3-17

Relinquished by: \_\_\_\_\_

Date: \_\_\_\_\_

Received by:

Date: MAY 04 2017

***Tables***

**Table 1 - Summary of Hazardous Materials, 6085 Main St., Dalton, Michigan**

<b>Hazardous Materials Description and Location</b>		
<b>Location</b>	<b>Material Description</b>	<b>Quantity</b>
Living Room	Air Conditioner	1

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 6085 Main St., Dalton, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
MS-HM-01A	Asphalt Shingle	No	M	Category I	ND	Exterior	NA
MS-HM-01B	Asphalt Shingle	No	M	Category I	ND	Exterior	NA
MS-HM-02A	Asphalt Siding	No	M	Category I	ND/ND/ND	Exterior	NA
MS-HM-02B	Asphalt Siding	No	M	Category I	ND/ND/ND	Exterior	NA
MS-HM-03A	Red Brick Linoleum	No	M	Category I	30%CH	Living	210 sq. ft.
MS-HM-03B	Red Brick Linoleum	No	M	Category I	NA	Living	NA
MS-HM-04A	Yellow Linoleum	No	M	Category I	ND	Dining	NA
MS-HM-04B	Yellow Linoleum	No	M	Category I	ND	Dining	NA
MS-HM-05A	Blue 12"x12" Vinyl Tile	No	M	Category I	ND/ND	Kitchen	NA
MS-HM-05B	Blue 12"x12" Vinyl Tile	No	M	Category I	ND/ND	Kitchen	NA
MS-HM-06A	Black & White 12"x12" Vinyl Tile	No	M	Category I	ND/ND	Bathroom	NA
MS-HM-06B	Black & White 12"x12" Vinyl Tile	No	M	Category I	ND/ND	Bathroom	NA
MS-HM-07A	Red Linoleum	No	M	Category I	30%CH	2 <sup>nd</sup> Fl. E Bedroom	180 sq. ft.
MS-HM-07B	Red Linoleum	No	M	Category I	NA	2 <sup>nd</sup> Fl. E Bedroom	NA
MS-HM-08A	Red 9"x9" Vinyl Tile	No	M	Category I	10%CH/ND	2 <sup>nd</sup> Fl. E Bedroom	180 sq. ft.
MS-HM-08B	Red 9"x9" Vinyl Tile	No	M	Category I	NA/ND	2 <sup>nd</sup> Fl. E Bedroom	NA
MS-HM-09A	Tan 9"x9" Vinyl Tile	No	M	Category I	10%CH/ND	2 <sup>nd</sup> Fl. Closet	12 sq. ft.
MS-HM-09B	Tan 9"x9" Vinyl Tile	No	M	Category I	NA/ND	2 <sup>nd</sup> Fl. Closet	NA
MS-HM-10A	White 2'x4' Ceiling Tile	Yes	M	Category II	ND	2 <sup>nd</sup> Fl. N Bedroom	NA
MS-HM-10B	White 2'x4' Ceiling Tile	Yes	M	Category II	ND	2 <sup>nd</sup> Fl. N Bedroom	NA
MS-HM-11A	Drywall and Joint Compound	No	M	Category II	ND/ND	Living Ceiling	NA
MS-HM-11B	Drywall and Joint Compound	No	M	Category II	ND/ND	Living Wall	NA
MS-HS-01A	Plaster	No	S	Category II	ND/ND/ND	2 <sup>nd</sup> Fl. E Bedroom Ceiling	NA
MS-HS-01B	Plaster	No	S	Category II	ND/ND/ND	2 <sup>nd</sup> Fl. E Bedroom Wall	NA
MS-HS-01C	Plaster	No	S	Category II	ND/NDND	2 <sup>nd</sup> Fl. E Bedroom Wall	NA
MS-HS-01D	Plaster	No	S	Category II	ND	2 <sup>nd</sup> Fl. N Bedroom Ceiling	NA

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 6085 Main St., Dalton, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
MS-HS-01E	Plaster	No	S	Category II	ND	2 <sup>nd</sup> Fl. N Bedroom Wall	NA
MS-HS-02A	Plaster	No	S	Category II	ND	Dining Ceiling	NA
MS-HS-02B	Plaster	No	S	Category II	ND	Dining Wall	NA
MS-HS-02C	Plaster	No	S	Category II	ND	Bedroom Wall	NA

**Notes:**

Material Types

M = Miscellaneous building material  
 TSI = Thermal System Insulation  
 S = Surfacing Material  
 PC = Point Count Analysis  
 CH = Chrysotile Asbestos

Abbreviations

NQ = Not quantified  
 NA = Not applicable  
 ND = Not detected. Laboratory result is less than 1 % asbestos  
 lin. ft. = linear feet  
 sq. ft. = square feet

Asbestos Containing Material (ACM) is defined as any material containing more than 1 percent asbestos as determined utilizing Polarized Light Microscopy.

**Table 3 - Summary of Presumed Asbestos Containing Materials, 6085 Main St., Dalton, Michigan**

<b>Asbestos Containing Material Description and Location</b>					
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Condition</b>	<b>Material Type</b>	<b>Approx. Quantity</b>
Building Exterior Front Gable	Transite Siding	No	Fair	M	108 sq. ft.

**Notes:**

Material Types

- M = Miscellaneous building material
- TSI = Thermal System Insulation
- S = Surfacing Material

Abbreviations

- lin. ft. = linear feet
- sq. ft. = square feet

**Table 4 - Summary of All Asbestos Containing Materials, 6085 Main St., Dalton, Michigan**

<b>Interior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Living	Red Brick Linoleum	No	210 sq. ft.
2 <sup>nd</sup> Fl. E Bedroom	Red Linoleum	No	180 sq. ft.
2 <sup>nd</sup> Fl. E Bedroom	Red 9"x9" Vinyl Tile	No	180 sq. ft.
2 <sup>nd</sup> Fl. Closet	Tan 9"x9" Vinyl Tile	No	12 sq. ft.
<b>Total</b>			<b>582 sq. ft.</b>
<b>Exterior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
Building Exterior Front Gable	Transite Siding	No	108 sq. ft.
<b>Total</b>			<b>108 sq. ft.</b>

**Notes:**

Abbreviations

lin. ft. = linear feet

sq. ft. = square feet

**Shaded/Bolded** = Friable ACM and any Category I and Category II non-friable ACM that has a high probability of becoming crumbled, pulverized, or reduced to powder by the demolition or renovation activities that must be properly abated prior to commencement of any demolition/renovation activities.

Demolition/renovation activities completed with intact Category I non-friable ACM are regulated by OSHA and must be completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note that a Negative Pressure Enclosure must be utilized during abatement when Site Conditions Warrant. Examples of these conditions include the abatement of Plaster and Vermiculite insulation, HVAC Duct Wrap in Poor Condition, and Air-O-Cell/Mag Pipe Wrap. Conditions outside of these should be assessed on a case by case basis during the Asbestos Abatement Contractors site walk and Work Plan Preparation.



P.O. Box 13216  
Lansing, MI 48901  
Phone: 888.449.4566  
Fax: 888.448.8739  
www.redcedarconsulting.net

May 12, 2017

Mr. Tim Burgess  
Muskegon County Land Bank  
Land Bank Coordinator  
173 E. Apple Avenue, Suite 104  
Muskegon, MI 49442

**RE: *Asbestos Containing Material and Hazardous Materials Inspection***  
***6622 Poppy Way Dalton, MI 49457***  
***Parcel ID: 61-07-507-023-0001-00***

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 6622 Poppy Way., Dalton, Michigan (Subject Property). This inspection was completed at the request of the Muskegon County Land Bank to comply with the United States Environmental Protection Agency (USEPA) requirements for demolition and renovation set forth under the National Emissions Standards for Hazardous Air Pollutants (NESHAP, 40 CFR Part 61). This inspection was also completed to comply with the Occupational Safety and Health Administration (OSHA) Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

### **SUBJECT PROPERTY**

The Subject Property is comprised of a residential parcel which contains a storage building (the Building) and a concrete foundation. The foundation was historically utilized for a mobile home. At the time of inspection, no mobile home was present at the site.

### **VISUAL INSPECTION AND SAMPLING**

#### **Asbestos Containing Materials Inspection**

Aaron Paquet and Darrell DeMasters of Red Cedar Consulting (Red Cedar), accredited State Of Michigan/EPA Asbestos Building Inspectors (Accreditation Numbers A30955 and A31159, respectively) who completed training per the Michigan Asbestos Workers Accreditation Act 440, completed an inspection of the Subject Property on May 3, 2017 for suspected asbestos containing building materials.

This inspection, and subsequent sample collection was completed in accordance with the USEPA Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763) assessment and sampling protocol.



During the completion of the inspection, each area of the Subject Property was visually inspected for asbestos containing building materials (ACBM). Following the completion of the visual inspection, Red Cedar staff identified each suspect area of friable and non-friable ACBM and sorted them into one of three homogenous categories for sampling purposes. AHERA defines friable as a material that when dry, may be crumbled, pulverized, or reduced to powder by hand pressure. A homogenous area is defined by OSHA as an area of surfacing, thermal system insulation (TSI) or miscellaneous material that is uniform in color and texture. Surfacing materials are most commonly found in sprayed-on, troweled-on or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members. TSI refers to materials applied to pipes, fittings, boilers, ductwork, or other components to prevent heat loss or gain, or condensation. Any material that does not fall under the surfacing or TSI category, such as floor tile, drywall, and acoustical ceiling tile are placed into the miscellaneous materials category.

Following the completion of the visual inspection, Red Cedar staff identified the following materials as suspect ACBM:

- Rolled Roofing
- Glazing

Red Cedar staff collected four samples of suspect ACBM separated into two distinct homogenous groups for laboratory analysis. Samples were collected and submitted to APEX Research Inc. Laboratories (APEX) (Accreditation Number 102118-0) for laboratory analysis. Analysis was completed utilizing polarized light microscopy (PLM) which is the Environmental Protection Agency (EPA) approved method for analysis of bulk materials for asbestos. PLM analysis completed pursuant to method (EPA 600/M4-82-020) identifies asbestos fiber bundles by the visual properties displayed when the sample is treated with various dispersion staining liquids. The laboratory report completed following the sample analysis indicates if asbestos is present, and at what percentage along with a description and percentage of other fibrous and non-fibrous materials and sample color. Chain-of-custody documentation was followed from sample collection through shipping and receiving of the samples at the designated laboratory. The documentation assures that samples will meet the quality assurance/quality control measures defined by AHERA. The laboratory analytical report prepared by APEX for the four samples is included as Attachment A.

### **Hazardous Materials Inspection**

On May 3, 2017 the Subject Property was also inspected for the presence of hazardous materials which include but are not limited to polychlorinated biphenyls (PCBs) and potential mercury containing equipment and any items or containers that may contain or be classified as a hazardous or regulated material. Each material, if identified, was documented along with the approximate location. Any materials identified as hazardous are included in Table 1.

### **INSPECTION RESULTS AND RECOMMENDATIONS**

During the completion of the asbestos inspection, four samples of suspect ACM were collected and are documented in Table 2 along with the Red Cedar sample number, description, friability, material type, ACM classification, sample location, material quantity and laboratory analytical results.

ACM, as defined by the USEPA NESHAP is “any material containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763 Section 1, Polarized Light Microscopy”.

Friable ACM is defined by NESHAP as any material containing more than 1 percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Friable ACM is a concern due to the ease of unintentionally disturbing the ACM which may result in “visible emissions” which is known as a Fiber Release Episode.

Non-friable asbestos-containing material is defined as “material containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACM’s are separated into Category I and Category II ACM. Category I ACM is any asbestos containing packing’s, gaskets, resilient floor coverings (vinyl floor tile and linoleum are examples of these) and asphalt roofing products. Category II ACM is stated by NESHAP as any material excluding Category I non-friable ACM such as drywall, plaster or fiberboard insulation.

### **Presumed Asbestos Containing Material**

Presumed Asbestos Containing Materials (PACM) are suspect surfacing, TSI and miscellaneous materials found in buildings constructed prior to 1980 which are classified as and due to the age of the structure, are assumed to be ACM and do not require sample collection and analysis. OSHA dictates that PACM may be “rebutted” following a complete inspection pursuant to AHERA protocol.

No PACM was identified during the completion of this inspection. All suspect materials identified were sampled and analyzed for ACM.

Table 3 lists the location, material description, friability, condition, material type (surfacing, thermal or miscellaneous) and approximate quantity of all PACM documented at the Subject Property.

Table 4 provides a summary all ACM documented at the Subject Property which includes the material location, description, and approximate quantity.

### **Friable ACM’s**

No friable ACM’s were identified during the completion of this inspection.

### **Category I ACM**

No Category I ACM was identified during the completion of this inspection.

### **Category II ACM**

No Category II non-friable ACM was identified during the completion of this inspection.

## **RECOMMENDATIONS**

### **Asbestos Containing Materials**

No ACM was identified within the Building that would require abatement prior to demolition/renovation of the structure.

Please note: The location of samples obtained during this inspection were in a random fashion and areas that were not identified during this inspection may be damaged or have become damaged since the inspection was completed. If Category I or Category II friable materials are discovered prior to or during the demolition/renovation process, these materials must be abated prior to commencement of any demolition/renovation activities at the Subject Property.

### **Hazardous Materials**

Hazardous Materials identified at the Subject Property and documented in Table 1 which require proper removal and disposal consist of the following items:

- Automobile Tires (20)

## **REGULATORY REQUIREMENTS**

A Notification of Intent to Renovate/Demolish form must be filed with the Michigan Department of Environmental Quality- Air Quality Division at least 10 working days prior to any renovation or demolition activities at a site.

The Notification of Intent to Renovate/Demolish form must also be completed and submitted to the MIOSHA-Asbestos Program whenever demolition, encapsulation and/or renovation activities at a site involving greater than ten lineal feet and/or fifteen square feet of ACM will be completed.

Regulated asbestos containing materials per NESHAP (40 CFR Part 61) which falls into any of the following categories are ACM's that must be removed prior to any renovation/demolition activities at the Subject Property.

- Friable asbestos material.
- Category I non-friable ACM that has become friable.
- Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading.
- Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations.

Asbestos abatement should only be performed by a certified asbestos abatement contractor licensed to complete abatement work. The contractor must also follow the standards and requirements set forth per the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61).

Project No.: 17-1083  
Muskegon County Land Bank  
Parcel ID: 61-07-507-023-0001-00

Additional information regarding the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61) can be obtained by contacting the associated agency below.

NESHAP Asbestos Program  
Department of Environmental Quality  
Phone: 517-284-6777

MIOSHA-CSHD-Asbestos Program  
State of Michigan  
Phone: 517-284-7680  
Email: asbestos@michigan.gov


**DISCLAIMER**

Red Cedar Consulting performed destructive testing methods in an attempt to access and inspect all areas of the Building. Unfortunately, due to the age of construction along with multiple additions/renovations that may have been completed on the Building, additional inspections may be required if suspect ACM material not documented within this report is encountered during renovation/demolition activities.

This report was prepared at the request and for exclusive use by the Muskegon County Land Bank and may not be reproduced or sold without written permission from Red Cedar Consulting.

We appreciate the opportunity to provide the requested services. Please contact us at (888) 449-4566 with any questions or concerns.

Sincerely,  
**Red Cedar Consulting**



Aaron Paquet  
Michigan/EPA Certified Asbestos Building Inspector  
(A30955)

Red Cedar Consulting

***Attachment 1***  
***APEX Research Laboratory Analytical Results***



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 6622 Poppy Way

**Report To:**  
Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69922  
Date Collected: 05/03/17  
Date Received: 05/04/17  
Date Analyzed: 05/08/17  
Date Reported: 05/09/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69922 - 01 Cust. #: PW-HM-01A Material: Rolled Roofing Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69922 - 02 Cust. #: PW-HM-01B Material: Rolled Roofing Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 69922 - 03 Cust. #: PW-HM-02A Material: Glazing Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> 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: 6622 Poppy Way

**Report To:**

Mr. Aaron Paquet  
Red Cedar Consulting  
P.O. Box 13216  
Lansing, MI 48901

ARI Report # 17-69922  
Date Collected: 05/03/17  
Date Received: 05/04/17  
Date Analyzed: 05/08/17  
Date Reported: 05/09/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 69922 - 04 Cust. #: PW-HM-02B Material: Glazing Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	
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





***Tables***

**Table 1 - Summary of Hazardous Materials, 6622 Poppy Way., Dalton, Michigan**

<b>Hazardous Materials Description and Location</b>		
<b>Location</b>	<b>Material Description</b>	<b>Quantity</b>
Exterior	Automobile Tires	20

**Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 6622 Poppy Way, Dalton, Michigan**

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
PW-HM-01A	Rolled Roofing	No	M	Category I	ND	Exterior	NA
PW-HM-01B	Rolled Roofing	No	M	Category I	ND	Exterior	NA
PW-HM-02A	Glazing	Yes	M	Category II	ND	Storage Shed	NA
PW-HM-02B	Glazing	Yes	M	Category II	ND	Storage Shed	NA

**Notes:**

Material Types

M = Miscellaneous building material  
 TSI = Thermal System Insulation  
 S = Surfacing Material  
 PC = Point Count Analysis  
 CH = Chrysotile Asbestos

Abbreviations

NQ = Not quantified  
 NA = Not applicable  
 ND = Not detected. Laboratory result is less than 1 % asbestos  
 lin. ft. = linear feet  
 sq. ft. = square feet

Asbestos Containing Material (ACM) is defined as any material containing more than 1 percent asbestos as determined utilizing Polarized Light Microscopy.

**Table 3 - Summary of Presumed Asbestos Containing Materials, 6622 Poppy Way, Dalton, Michigan**

<b>Asbestos Containing Material Description and Location</b>					
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Condition</b>	<b>Material Type</b>	<b>Approx. Quantity</b>
No Presumed Asbestos Containing Materials Identified					

**Notes:**

Material Types

- M = Miscellaneous building material
- TSI = Thermal System Insulation
- S = Surfacing Material

Abbreviations

- lin. ft. = linear feet
- sq. ft. = square feet

**Table 4 - Summary of All Asbestos Containing Materials, 6622 Poppy Way, Dalton, Michigan**

<b>Exterior - Asbestos Containing Materials</b>			
<b>Location</b>	<b>Material Description</b>	<b>Friable</b>	<b>Approx. Quantity</b>
No Asbestos Containing Materials Identified			

**Notes:**

Abbreviations

lin. ft. = linear feet

sq. ft. = square feet


**Shaded/Bolded** = Friable ACM and any Category I and Category II non-friable ACM that has a high probability of becoming crumbled, pulverized, or reduced to powder by the demolition or renovation activities that must be properly abated prior to commencement of any demolition/renovation activities.

Demolition/renovation activities completed with intact Category I non-friable ACM are regulated by OSHA and must be completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note that a Negative Pressure Enclosure must be utilized during abatement when Site Conditions Warrant. Examples of these conditions include the abatement of Plaster and Vermiculite insulation, HVAC Duct Wrap in Poor Condition, and Air-O-Cell/Mag Pipe Wrap. Conditions outside of these should be assessed on a case by case basis during the Asbestos Abatement Contractors site walk and Work Plan Preparation.

Grantor	Grantee	Sale Price	Sale Date	Inst. Type	Terms of Sale	Liber & Page	Verified By	Prcnt. Trans.
PROGRESSIVE HOLDING CO LLC	COUNTY OF MUSKEGON TREASURER	0	04/29/2015	WD	TAX REVERTED	4054/44	DEED	0.0
MUSKEGON COUNTY TREASURER	PROGRESSIVE HOLDING CO LLC	700	10/17/2012	QC	QUIT- CLAIM	3928/325	DEED	0.0
CRACKER BOX LLC	MUSKEGON COUNTY TREASURER	0	04/02/2012		FORECLOSURE	3914/255	DEED	0.0
BMF PROPERTIES INC	CRACKER BOX LLC	0	05/17/2007	WD	WARRANTY DEED	3746/385	DEED	100.0

Property Address	Class: 703.EXEMPT COUNTY	Zoning: R1-RES	Building Permit(s)	Date	Number	Status			
55 W OAKWOOD AVE	School: MUSKEGON HEIGHTS SCHOOLS			02/15/2006	SR-26-06				
	P.R.E. 0%								
Owner's Name/Address	MAP #: 26-061-007-380								
COUNTY OF MUSKEGON TREASURER 173 E APPLE AVE STE 104 MUSKEGON MI 49442	2017 Est TCV 0 TCV/TFA: 0.00								
	X Improved	Vacant	Land Value Estimates for Land Table 00010.SOUTHWEST						
	Public Improvements		* Factors *						
			Description	Frontage	Depth	Front Depth	Rate %Adj.	Reason	Value
			SOUTHWEST	36.00	100.00	1.0000	1.0000	70 100	2,520
			36 Actual Front Feet, 0.08 Total Acres Total Est. Land Value = 2,520						
Tax Description	X Dirt Road X Gravel Road X Paved Road X Storm Sewer X Sidewalk X Water X Sewer X Electric X Gas X Curb Street Lights Standard Utilities Underground Utils.								
HT6890 CHAS M STEELE'S SUB'D BLK 7 E 36 FT OF LOTS 37 38 39 & 40									
Comments/Influences									
	Topography of Site								
	X Level								
	Rolling								
	Low								
	High								
	Landscaped								
	Swamp								
	Wooded								
	Pond								
	Waterfront								
	Ravine								
	Wetland								
	Flood Plain								
	Year	Land Value	Building Value	Assessed Value	Board of Review	Tribunal/Other	Taxable Value		
Who	When	What	2017	EXEMPT	EXEMPT	EXEMPT	EXEMPT		
CEJ	12/31/1998	REVIEWED	2016	EXEMPT	EXEMPT	EXEMPT	EXEMPT		
RJ	08/25/2009	REVIEWED	2015	1,300	8,300	9,600	9,600S		
			2014	1,300	9,800	11,100	11,100S		

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\*\*\* Information herein deemed reliable but not guaranteed\*\*\*

Building Type		(3) Roof (cont.)		(11) Heating/Cooling			(15) Built-ins			(15) Fireplaces			(16) Porches/Decks		(17) Garage	
X	Single Family Mobile Home Town Home Duplex A-Frame		Eavestrough Insulation 0 Front Overhang 0 Other Overhang	X	Gas Wood		Oil Coal		Elec. Steam		Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi repl.Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum Security System		Interior 1 Story Interior 2 Story 2nd/Same Stack Two Sided Exterior 1 Story Exterior 2 Story Prefab 1 Story Prefab 2 Story Heat Circulator Raised Hearth Wood Stove Direct-Vented Gas	Area 98	Type WGEP (1 Story)	Year Built: 1955 Car Capacity: Class: CD Exterior: Siding Brick Ven.: 0 Stone Ven.: 0 Common Wall: Detache Foundation: 18 Inch Finished?: Auto. Doors: 0 Mech. Doors: 0 Area: 240 % Good: 0 Storage Area: 0 No Conc. Floor: 0
X	Wood Frame		Drywall Paneled	X	Plaster Wood T&G											
Building Style: 1 STY		Trim & Decoration		Central Air Wood Furnace			(12) Electric			Stories Exterior Foundation			Rate Bsmnt-Adj Heat-Adj		Size Cost	
Yr Built 1935	Remodeled 0	Ex	X	Ord		Min	No. of Elec. Outlets			Rate			Bsmnt-Adj		Heat-Adj	
Condition for Age: Average		Lg	X	Ord		Small	Many X Ave. Few			Other Additions/Adjustments			Rate		Size Cost	
Room List		(5) Floors		Kitchen: Hardwood Other: Carpeted Other: Tile			100 Amps Service			(14) Water/Sewer			1025.00		1 1,025	
	Basement 1st Floor 2nd Floor 2 Bedrooms	(6) Ceilings		No./Qual. of Fixtures			Average Fixture(s)			(16) Porches			1025.00		1 1,025	
(1) Exterior	X	Plaster					Ex. X Ord. Min			WGEP (1 Story), Standard			43.09		98 4,223	
X	Wood/Shingle Aluminum/Vinyl Brick	(7) Excavation		Basement: 520 S.F. Crawl: 0 S.F. Slab: 162 S.F. Height to Joists: 0.0			1 3 Fixture Bath 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan			(17) Garages			24.80		240 5,952	
(2) Windows	Many Avg. Few		Large Avg. Small	(8) Basement			Phy/Ab.Phy/Func/Econ/Comb.%Good= 45/100/100/100/45.0, Depr.Cost = 34,100			ECF (SOUTHWEST)			0.473 => TCV of Bldg: 1 = 16,129			
X	Wood Sash Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement Double Glass Patio Doors Storms & Screens	(9) Basement Finish		Recreation SF Living SF Walkout Doors No Floor SF			(14) Water/Sewer			Base Cost			24.80		240 5,952	
(3) Roof	X	Gable Hip Flat	Gambrel Mansard Shed	(10) Floor Support			1 Public Water 1 Public Sewer Water Well 1000 Gal Septic 2000 Gal Septic			Lump Sum Items:						
X	Asphalt Shingle			Joists: Unsupported Len: Cntr.Sup:												
Chimney: Brick																

\*\*\* Information herein deemed reliable but not guaranteed\*\*\*

Grantor	Grantee	Sale Price	Sale Date	Inst. Type	Terms of Sale	Liber & Page	Verified By	Prcnt. Trans.			
MUSKEGON COUNTY TREASURER	CITY OF MUSKEGON	0	12/17/2015	QC	OTHER	4073/223	DOC	0.0			
COOK KENNETH J	COUNTY OF MUSKEGON	0	03/31/2015	OT	OTHER	4053/746	DOC	0.0			
STATE OF MICHIGAN DNR	COOK KENNETH J	0	09/15/2000	OT	OTHER	UNRECOR'D	DOC	0.0			
COOK KENNETH J	STATE OF MICHIGAN DNR	0	05/02/2000	OT	OTHER	3087/553	DOC	0.0			
Property Address		Class: 703.EXEMPT COUNTY		Zoning: R-1	Building Permit(s)		Date	Number	Status		
139 MYRTLE AVE		School: MUSKEGON SCHOOLS									
Owner's Name/Address		P.R.E. 0%									
CITY OF MUSKEGON 993 TERRACE ST MUSKEGON MI 49440		MAP #: 24-31-20-361-004									
Tax Description		2017 Est TCV 0 TCV/TFA: 0.00									
CITY OF MUSKEGON REVISED PLAT OF 1903 W 27 FT LOT 5 BLK 208 Comments/Influences		X Improved	Vacant	Land Value Estimates for Land Table R11.1.R11.1 ANGELL GENERAL RESIDENTIAL							
		Public Improvements		* Factors *							
				Description	Frontage	Depth	Front	Depth	Rate %Adj. Reason	Value	
				<Site Value A>	ATYPICAL	.0-.13	2700	100	27*110	2,700	
				27 Actual Front Feet, 0.07 Total Acres Total Est. Land Value =						2,700	
		X	Dirt Road								
		X	Gravel Road								
		X	Paved Road								
		X	Storm Sewer								
		X	Sidewalk								
		X	Water								
		X	Sewer								
		X	Electric								
		X	Gas								
		X	Curb								
			Street Lights								
			Standard Utilities								
			Underground Utils.								
		Topography of Site									
		X	Level								
			Rolling								
			Low								
			High								
		X	Landscaped								
			Swamp								
			Wooded								
			Pond								
			Waterfront								
			Ravine								
			Wetland								
			Flood Plain								
		Who	When	What	Year	Land Value	Building Value	Assessed Value	Board of Review	Tribunal/Other	Taxable Value
		DES	/	/	2017	EXEMPT	EXEMPT	EXEMPT			EXEMPT
				INSPECTED	2016	EXEMPT	EXEMPT	EXEMPT			EXEMPT
					2015	1,400	8,400	9,800			8,312C
					2014	1,400	8,600	10,000			8,182C



Building Type		(3) Roof (cont.)		(11) Heating/Cooling			(15) Built-ins			(15) Fireplaces			(16) Porches/Decks		(17) Garage	
X	Single Family Mobile Home Town Home Duplex A-Frame		Eavestrough Insulation 0 Front Overhang 0 Other Overhang	X	Gas Wood		Oil Coal		Elec. Steam		Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi repl.Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum Security System		Interior 1 Story Interior 2 Story 2nd/Same Stack Two Sided Exterior 1 Story Exterior 2 Story Prefab 1 Story Prefab 2 Story Heat Circulator Raised Hearth Wood Stove Direct-Vented Gas	Area 120 40	Type WGEP (1 Story) CPP	Year Built: Car Capacity: Class: Exterior: Brick Ven.: Stone Ven.: Common Wall: Foundation: Finished ?: Auto. Doors: Mech. Doors: Area: % Good: Storage Area: No Conc. Floor:
X	Wood Frame			X	Forced Air w/o Ducts Forced Air w/ Ducts Forced Hot Water Electric Baseboard Elec. Ceil. Radiant Radiant (in-floor) Electric Wall Heat Space Heater Wall/Floor Furnace Forced Heat & Cool Heat Pump No Heating/Cooling											
Building Style: 1 STORY		Trim & Decoration		Central Air Wood Furnace												
Yr Built 0	Remodeled 0	Ex	X Ord	Min	(12) Electric											
Condition for Age: Average		Size of Closets		100 Amps Service												
Room List		(5) Floors		No./Qual. of Fixtures			Stories Exterior			Foundation Rate			Bsmnt-Adj Heat-Adj		Size Cost	
1	Basement	Kitchen: Linoleum Other: Hardwood Other:		Ex. X Ord. Min			1 Story Siding			Mich Bsmnt. 55.00			-4.81 0.72		782 39,812	
5	1st Floor			No. of Elec. Outlets			1 Story Siding			Crawl Space 55.00			-9.62 0.72		90 4,149	
2	2nd Floor			Many X Ave. Few			Other Additions/Adjustments			Rate			Size Cost			
2	Bedrooms	(6) Ceilings		(13) Plumbing			(14) Water/Sewer			Public Water 912.00			1 912			
(1) Exterior		X	Plaster	Average Fixture(s)			Public Sewer 912.00			16) Porches						
X	Wood/Shingle Aluminum/Vinyl Brick			1 3 Fixture Bath			WGEP (1 Story), Shallow 31.90						120 3,828			
X	Insulation	Basement: 782 S.F. Crawl: 90 S.F. Slab: 0 S.F. Height to Joists: 0.0		2 Fixture Bath			CPP, Shallow 12.05						40 482			
(2) Windows		(8) Basement		Softener, Auto			Phy/Ab.Phy/Func/Econ/Comb.%Good= 45/100/100/100/45.0,			Depr.Cost =			31,334			
Many Avg.	Large Avg.			Softener, Manual			ECF (R11.1 ANGELL GENERAL RESIDENTIAL) 0.550 => TCV of Bldg: 1 =			17,234						
X	Few	X	Small	Solar Water Heat												
X	Wood Sash Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement Double Glass Patio Doors Storms & Screens	Conc. Block Poured Conc. Stone Treated Wood Concrete Floor		No Plumbing												
(3) Roof		(9) Basement Finish		Extra Toilet												
X	Gable Hip Flat	Gambrel Mansard Shed	Recreation SF Living SF Walkout Doors No Floor SF	Extra Sink												
X	Asphalt Shingle			Separate Shower												
Chimney: Brick				Ceramic Tile Floor												
				Ceramic Tile Wains												
				Ceramic Tub Alcove												
				Vent Fan												
				(14) Water/Sewer												
				1 Public Water												
				1 Public Sewer												
				Water Well												
				1000 Gal Septic												
				2000 Gal Septic												
				Lump Sum Items:												

\*\*\* Information herein deemed reliable but not guaranteed\*\*\*

Grantor	Grantee	Sale Price	Sale Date	Inst. Type	Terms of Sale	Liber & Page	Verified By	Prcnt. Trans.				
BROWN SHANIA	COUNTY OF MUSKEGON TREASURER	0	04/29/2015	WD	TAX REVERTED	4053/883	DEED	0.0				
COLE, LUCILLE	BROWN, SHANIA	0	05/20/1997	LC	QUIT-CLAIM	2039/349	DEED	0.0				
Property Address		Class: 703.EXEMPT COUNTY		Zoning: R1-RES	Building Permit(s)		Date	Number	Status			
227 E HACKLEY AVE		School: MUSKEGON HEIGHTS SCHOOLS				05/06/2009	B-93-09					
Owner's Name/Address		P.R.E. 0%										
COUNTY OF MUSKEGON TREASURER 173 E APPLE AVE STE 104 MUSKEGON MI 49442		MAP #: 26-000-066-020		2017 Est TCV 0 TCV/TFA: 0.00								
Tax Description		X Improved		Vacant		Land Value Estimates for Land Table 00001.NORTHEAST						
HT0473 BLK 66 W 40 FT OF LOT 1 & N 38 FT OF W 40 FT OF LOT 2		Public Improvements				* Factors *						
Comments/Influences		Dirt Road		Description		Frontage	Depth	Front	Depth	Rate %Adj.	Reason	Value
		Gravel Road		NORTHEAST		40.00	88.00	1.0000	1.0000	80	100	3,200
		X Paved Road		40 Actual Front Feet, 0.08 Total Acres		Total Est. Land Value =				3,200		
		X Storm Sewer										
		X Sidewalk										
		X Water										
		X Sewer										
		X Electric										
		X Gas										
		X Curb										
		Street Lights										
		Standard Utilities										
		Underground Utils.										
		Topography of Site										
		X Level										
		Rolling										
		Low										
		High										
		Landscaped										
		Swamp										
		Wooded										
		Pond										
		Waterfront										
		Ravine										
		Wetland										
		Flood Plain										
		Year	Land Value	Building Value	Assessed Value	Board of Review	Tribunal/Other	Taxable Value				
Who	When	What	2017	EXEMPT	EXEMPT	EXEMPT		EXEMPT				
CEJ 06/30/1999	REVIEWED		2016	EXEMPT	EXEMPT	EXEMPT		EXEMPT				
			2015	1,600	6,200	7,800		7,800S				
			2014	1,600	6,700	8,300		8,300S				



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Building Type		(3) Roof (cont.)		(11) Heating/Cooling			(15) Built-ins			(15) Fireplaces			(16) Porches/Decks		(17) Garage	
X	Single Family Mobile Home Town Home Duplex A-Frame		Eavestrough Insulation 0 Front Overhang 0 Other Overhang	X	Gas Wood		Oil Coal		Elec. Steam		Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi repl.Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum Security System		Interior 1 Story Interior 2 Story 2nd/Same Stack Two Sided Exterior 1 Story Exterior 2 Story Prefab 1 Story Prefab 2 Story Heat Circulator Raised Hearth Wood Stove Direct-Vented Gas	Area	Type	Year Built: Car Capacity: Class: Exterior: Brick Ven.: Stone Ven.: Common Wall: Foundation: Finished ?: Auto. Doors: Mech. Doors: Area: % Good: Storage Area: No Conc. Floor:
X	Wood Frame		Drywall Paneled				Plaster Wood T&G									
Building Style: 1 STY		Trim & Decoration		Forced Air w/o Ducts Forced Air w/ Ducts Forced Hot Water Electric Baseboard Elec. Ceil. Radiant Radiant (in-floor) Electric Wall Heat Space Heater Wall/Floor Furnace Forced Heat & Cool Heat Pump No Heating/Cooling												
Yr Built 1925	Remodeled 0	Ex	X	Ord		Min	Size of Closets									
Condition for Age: Average		Lg	X	Ord		Small	Doors:									
Room List		(5) Floors		Central Air Wood Furnace												
	Basement 1st Floor 2nd Floor Bedrooms	Kitchen: Other: Other:		(12) Electric												
		(6) Ceilings		No./Qual. of Fixtures												
(1) Exterior		Ex.	X	Ord.		Min	100 Amps Service									
X	Wood/Shingle Aluminum/Vinyl Brick	No. of Elec. Outlets														
Insulation		(7) Excavation		No./Qual. of Fixtures												
(2) Windows		Basement: 768 S.F. Crawl: 0 S.F. Slab: 0 S.F. Height to Joists: 0.0		(13) Plumbing												
X	Many Avg. Few	X	Large Avg. Small	(8) Basement		Average Fixture(s) 1 3 Fixture Bath 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan										
Wood Sash Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement Double Glass Patio Doors Storms & Screens		Conc. Block Poured Conc. Stone Treated Wood Concrete Floor		(9) Basement Finish												
(3) Roof		Recreation SF Living SF Walkout Doors No Floor SF		(14) Water/Sewer												
X	Gable Hip Flat	Gambrel Mansard Shed		(10) Floor Support		1 Public Water 1 Public Sewer Water Well 1000 Gal Septic 2000 Gal Septic										
X	Asphalt Shingle	Joists: Unsupported Len: Cntr.Sup:		Lump Sum Items:												
Chimney: Brick																

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Grantor	Grantee	Sale Price	Sale Date	Inst. Type	Terms of Sale	Liber & Page	Verified By	Prcnt. Trans.			
COUNTY OF MUSKEGON TREASUR	CITY OF MUSKEGON	0	12/17/2015	QC	OTHER	4073/223	DOC	0.0			
PROGRESSIVE HOLDING CO LLC	COUNTY OF MUSKEGON	0	03/31/2015	OT	OTHER	4053/753	DOC	0.0			
MUSKEGON COUNTY TREASURER	PROGRESSIVE HOLDING CO LLC	1,800	09/26/2012	QC	OTHER	3928/160	DOC	100.0			
ALLEN TERESA L	MUSKEGON COUNTY TREASURER	0	04/02/2012	OT	COURT ORDER	3913/807	DOC	0.0			
Property Address		Class: 703.EXEMPT COUNTY		Zoning: R-1	Building Permit(s)		Date	Number	Status		
325 IONA AVE		School: MUSKEGON SCHOOLS		MECHANICAL		11/01/2000	ME-00-0381	COMPLETE			
Owner's Name/Address		P.R.E. 0%		BUILDING		05/28/1996	BD-96-0329	COMPLETE			
CITY OF MUSKEGON 933 TERRACE ST MUSKEGON MI 49440		MAP #: 24-31-29-135-003		2017 Est TCV 0 TCV/TFA: 0.00							
Tax Description		X Improved		Vacant		Land Value Estimates for Land Table R12.1.R12.1 MCLAUGHLIN GENERAL RES					
CITY OF MUSKEGON REVISED PLAT OF 1903 W 1/2 LOT 12 BLK 247		Public Improvements		* Factors *						Value	
Comments/Influences		Dirt Road		Description		Frontage	Depth	Front	Depth	Rate %Adj. Reason	Value
		Gravel Road		<Site Value B> TYPICAL		.14-.25	3000	100	3,000		
		X Paved Road		33 Actual Front Feet, 0.10 Total Acres Total Est. Land Value = 3,000							
		X Storm Sewer		Land Improvement Cost Estimates							
		X Sidewalk		Description		Rate	CountyMult.	Size	%Good	Cash Value	
		X Water		D/W/P: 3.5 Concrete		2.98	1.39	400	29	480	
		X Sewer		Total Estimated Land Improvements True Cash Value = 480							
		X Electric									
		X Gas									
		X Curb									
		Street Lights									
		Standard Utilities									
		Underground Utils.									
		Topography of Site									
		X Level									
		Rolling									
		Low									
		High									
		X Landscaped									
		Swamp									
		Wooded									
		Pond									
		Waterfront									
		Ravine									
		Wetland									
		Flood Plain		Year	Land Value	Building Value	Assessed Value	Board of Review	Tribunal/Other	Taxable Value	
		Who	When	What	2017	EXEMPT	EXEMPT	EXEMPT		EXEMPT	
		TGS	05/24/2006	DATA ENTRY	2016	EXEMPT	EXEMPT	EXEMPT		EXEMPT	
		AH	01/15/2002	INSPECTED	2015	1,500	6,600	8,100		7,741C	
		SKB	11/15/2000	DATA ENTRY	2014	1,500	6,200	7,700		7,620C	



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Building Type		(3) Roof (cont.)		(11) Heating/Cooling			(15) Built-ins			(15) Fireplaces			(16) Porches/Decks		(17) Garage	
X	Single Family Mobile Home Town Home Duplex A-Frame		Eavestrough Insulation 0 Front Overhang 0 Other Overhang	X	Gas Wood		Oil Coal		Elec. Steam		Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi repl.Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum Security System		Interior 1 Story Interior 2 Story 2nd/Same Stack Two Sided Exterior 1 Story Exterior 2 Story Prefab 1 Story Prefab 2 Story Heat Circulator Raised Hearth Wood Stove Direct-Vented Gas	Area 120 24	Type WGEP (1 Story) CPP	Year Built: Car Capacity: Class: Exterior: Brick Ven.: Stone Ven.: Common Wall: Foundation: Finished?: Auto. Doors: Mech. Doors: Area: % Good: Storage Area: No Conc. Floor:
X	Wood Frame		Drywall Paneled	X	Plaster Wood T&G											
Building Style: 1 1/2 STORY		Trim & Decoration		Forced Air w/o Ducts Forced Air w/ Ducts Forced Hot Water Electric Baseboard Elec. Ceil. Radiant Radiant (in-floor) Electric Wall Heat Space Heater Wall/Floor Furnace Forced Heat & Cool Heat Pump No Heating/Cooling												
Yr Built 0	Remodeled 0	Ex	X	Ord		Min	Size of Closets			Class: D Effec. Age: 61 Floor Area: 926 Total Base Cost: 43,685 Total Base New : 60,722 Total Depr Cost: 27,325 Estimated T.C.V: 13,662			CntyMult X 1.390 E.C.F. X 0.500		Bsmnt Garage:	
Condition for Age: Average		Lg	X	Ord		Small	Doors: Solid X H.C.			Total Base Cost: 43,685 Total Base New : 60,722 Total Depr Cost: 27,325 Estimated T.C.V: 13,662			CntyMult X 1.390 E.C.F. X 0.500		Carport Area: Roof:	
Room List		(5) Floors		Central Air Wood Furnace			(12) Electric			Stories Exterior Foundation Rate Bsmnt-Adj Heat-Adj Size Cost						
1	Basement	Kitchen: Linoleum Other: Hardwood Other:		No./Qual. of Fixtures			100 Amps Service			1 Story Siding Crawl Space 53.80 -9.44 0.66 120 5,402						
6	1st Floor			Ex. X Ord. Min						1.5 Story Siding Crawl Space 68.57 -9.44 0.98 537 32,279						
2	2nd Floor			No. of Elec. Outlets						Other Additions/Adjustments Rate Size Cost						
3	Bedrooms			Many X Ave. Few						(14) Water/Sewer Public Water 912.00 1 912 Public Sewer 912.00 1 912						
(1) Exterior		X	Plaster	(13) Plumbing						(16) Porches WGEP (1 Story), Shallow 31.90 120 3,828 CPP, Shallow 14.64 24 351 Phy/Ab.Phy/Func/Econ/Comb.%Good= 45/100/100/100/45.0, Depr.Cost = 27,325 ECF (R12.1 MCLAUGHLIN GENERAL RES) 0.500 => TCV of Bldg: 1 = 13,662						
X	Wood/Shingle Aluminum/Vinyl Brick			Average Fixture(s) 1 3 Fixture Bath 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan												
X	Insulation	Basement: 0 S.F. Crawl: 657 S.F. Slab: 0 S.F. Height to Joists: 0.0		(14) Water/Sewer												
(2) Windows		(8) Basement														
Many Avg.	Large Avg.															
X	Few	X	Small													
X	Wood Sash Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement Double Glass Patio Doors Storms & Screens	Conc. Block Poured Conc. Stone Treated Wood Concrete Floor														
(3) Roof		(9) Basement Finish														
X	Gable Hip Flat	Gambrel Mansard Shed	Recreation SF Living SF Walkout Doors No Floor SF													
X	Asphalt Shingle	(10) Floor Support														
Chimney: Brick		Joists: Unsupported Len: Cntr.Sup:														
		1 Public Water 1 Public Sewer Water Well 1000 Gal Septic 2000 Gal Septic														
		Lump Sum Items:														

\*\*\* Information herein deemed reliable but not guaranteed\*\*\*

Grantor	Grantee	Sale Price	Sale Date	Inst. Type	Terms of Sale	Liber & Page	Verified By	Prcnt. Trans.							
MUSKEGON COUNTY TREASURER	CITY OF MUSKEGON	0	12/17/2015	QC	OTHER	4073/223	DOC	0.0							
MCCORMICK KIMBERLY	COUNTY OF MUSKEGON	0	03/31/2015	OT	OTHER	4053/758	DOC	0.0							
FAMILY GARDEN LLC	MCCORMICK KIMBERLY	0	01/01/2014	QC	OTHER	4008/572	DOC	0.0							
FAMILY GARDEN LLC	MCCORMICK KIMBERLY	3,900	01/27/2012	LC	SELLER FINANCED	3901/433	PTA	100.0							
Property Address		Class: 703.EXEMPT COUNTY		Zoning: R-1	Building Permit(s)		Date	Number	Status						
333 CATHERINE AVE		School: MUSKEGON SCHOOLS													
Owner's Name/Address		P.R.E. 0%													
CITY OF MUSKEGON 993 TERRACE ST MUSKEGON MI 49440		MAP #: 24-31-29-180-005		2017 Est TCV 0 TCV/TFA: 0.00											
Tax Description		X Improved		Vacant		Land Value Estimates for Land Table R12.1.R12.1 MCLAUGHLIN GENERAL RES									
CITY OF MUSKEGON REVISED PLAT OF 1903 LOT 11 BLK 261 Comments/Influences		Public Improvements				* Factors *									
		Dirt Road				Description	Frontage	Depth	Front	Depth	Rate	%Adj.	Reason	Value	
		Gravel Road				<Site Value B>	TYPICAL	.14-.25	3000	100				3,000	
		X Paved Road				66 Actual Front Feet, 0.20 Total Acres Total Est. Land Value = 3,000									
		X Storm Sewer													
		X Sidewalk													
		X Water													
		X Sewer													
		X Electric													
		X Gas													
		X Curb													
		X Street Lights													
		X Standard Utilities													
		Underground Utils.													
		Topography of Site													
		X Level													
		Rolling													
		Low													
		High													
		X Landscaped													
		Swamp													
		Wooded													
		Pond													
		Waterfront													
		Ravine													
		Wetland													
		Flood Plain													
		Year		Land Value		Building Value		Assessed Value		Board of Review		Tribunal/Other		Taxable Value	
		Who		When		What		2017		EXEMPT		EXEMPT		EXEMPT	
		DRB 02/15/2012		DATA ENTRY		2016		EXEMPT		EXEMPT		EXEMPT		EXEMPT	
		DWC 02/09/2012		DATA ENTRY		2015		1,500		11,000		12,500		11,767C	
		DWC 05/12/2011		DATA ENTRY		2014		1,500		10,200		11,700		11,582C	



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Building Type		(3) Roof (cont.)		(11) Heating/Cooling			(15) Built-ins			(15) Fireplaces			(16) Porches/Decks		(17) Garage	
X	Single Family Mobile Home Town Home Duplex A-Frame		Eavestrough Insulation 0 Front Overhang 0 Other Overhang	X	Gas Wood		Oil Coal		Elec. Steam		Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi repl.Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum Security System		Interior 1 Story Interior 2 Story 2nd/Same Stack Two Sided Exterior 1 Story Exterior 2 Story Prefab 1 Story Prefab 2 Story Heat Circulator Raised Hearth Wood Stove Direct-Vented Gas	Area 132 20	Type WGEP (1 Story) CPP	Year Built: Car Capacity: Class: Exterior: Brick Ven.: Stone Ven.: Common Wall: Foundation: Finished ?: Auto. Doors: Mech. Doors: Area: % Good: Storage Area: No Conc. Floor:
X	Wood Frame		Drywall Paneled	X	Plaster Wood T&G											
Building Style: 1 1/2 STORY		Trim & Decoration		Forced Air w/o Ducts Forced Air w/ Ducts Forced Hot Water Electric Baseboard Elec. Ceil. Radiant Radiant (in-floor) Electric Wall Heat Space Heater Wall/Floor Furnace Forced Heat & Cool Heat Pump No Heating/Cooling												
Yr Built 0	Remodeled 0	Ex	X	Ord		Min	Size of Closets			Class: C -5 Effec. Age: 59 Floor Area: 1184 Total Base Cost: 75,492 Total Base New : 104,934 Total Depr Cost: 47,220 Estimated T.C.V: 23,610						
Condition for Age: Average		Lg	X	Ord		Small	Doors: Solid X H.C.			CntyMult X 1.390 E.C.F. X 0.500						
Room List		(5) Floors		Central Air Wood Furnace			(12) Electric 100 Amps Service			Stories Exterior Foundation Rate Bsmnt-Adj Heat-Adj Size Cost 1 Story Siding Basement 65.57 0.00 0.00 260 17,048 1.5 Story Siding Basement 83.44 0.00 0.00 616 51,399 Other Additions/Adjustments Rate Size Cost (14) Water/Sewer Public Water 1162.00 1 1,162 Public Sewer 1162.00 1 1,162 (16) Porches WGEP (1 Story), Shallow 33.13 132 4,373 CPP, Shallow 17.39 20 348 Phy/Ab.Phy/Func/Econ/Comb.%Good= 45/100/100/100/45.0, Depr.Cost = 47,220 ECF (R12.1 MCLAUGHLIN GENERAL RES) 0.500 => TCV of Bldg: 1 = 23,610			Bsmnt Garage: Carport Area: Roof:			
Basement 4 1st Floor 3 2nd Floor 3 Bedrooms		Kitchen: Linoleum Other: Hardwood Other: Carpeted		No./Qual. of Fixtures Ex. X Ord. Min			No. of Elec. Outlets Many X Ave. Few			(13) Plumbing Average Fixture(s) 1 3 Fixture Bath 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan						
(1) Exterior		X	Plaster	(7) Excavation Basement: 876 S.F. Crawl: 0 S.F. Slab: 0 S.F. Height to Joists: 0.0			(8) Basement Conc. Block Poured Conc. Stone Treated Wood Concrete Floor									
Wood/Shingle Aluminum/Vinyl Brick																
X	Asbestos															
X	Insulation															
(2) Windows		Many Avg.		Large Avg.												
X	Few	X	Small													
X	Wood Sash Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement Double Glass Patio Doors Storms & Screens															
(3) Roof																
X	Gable Hip Flat	Gambrel Mansard Shed		(10) Floor Support Joists: Unsupported Len: Cntr.Sup:			(14) Water/Sewer 1 Public Water 1 Public Sewer Water Well 1000 Gal Septic 2000 Gal Septic Lump Sum Items:									
X	Asphalt Shingle															
Chimney: Brick																

\*\*\* Information herein deemed reliable but not guaranteed\*\*\*

Grantor	Grantee	Sale Price	Sale Date	Inst. Type	Terms of Sale	Liber & Page	Verified By	Prcnt. Trans.									
PROGRESSIVE HOLDING CO	COUNTY OF MUSKEGON TREASURER	0	02/09/2015	JUD	FORECLOSURE	4054/9	DEED	0.0									
MUSKEGON COUNTY TREASURER	PROGRESSIVE HOLDING CO	750	10/17/2012	QC	QUIT- CLAIM	3928/300	DEED	0.0									
REDDER MARSHALL	MUSKEGON COUNTY TREASURER	0	04/02/2012		FORECLOSURE	3914/222	DEED	0.0									
STATE OF MICHIGAN	REDDER MARSHALL	4,500	09/24/2002	QC	TAX DEEDS	3506/389	DEED	100.0									
Property Address		Class: 703.EXEMPT COUNTY		Zoning:		Building Permit(s)		Date	Number	Status							
415 E COLUMBIA AVE		School: MUSKEGON HEIGHTS SCHOOLS						10/13/2002	B-317-02								
Owner's Name/Address		P.R.E. 0%															
COUNTY OF MUSKEGON TREASURER 173 E APPLE AVE STE 104 MUSKEGON MI 49442		MAP #: 26-000-256-070		2017 Est TCV 0 TCV/TFA: 0.00													
Tax Description		X Improved		Vacant		Land Value Estimates for Land Table 00007. SKY BLUE											
HT3995 BLK 256 LOTS 7 8 & 9 MUSKEGON IMPROVEMENT CO'S ANNEX #1		X Public Improvements				* Factors *											
Comments/Influences		X Dirt Road				Description Frontage Depth Front Depth Rate %Adj. Reason Value											
		X Gravel Road				NEIGHBORHOOD #7 120.00 125.00 1.0000 1.0000 70 100 8,400											
		X Paved Road				120 Actual Front Feet, 0.34 Total Acres Total Est. Land Value = 8,400											
		X Storm Sewer															
		X Sidewalk															
		X Water															
		X Sewer															
		X Electric															
		X Gas															
		X Curb															
		X Street Lights															
		X Standard Utilities															
		Underground Utils.															
		Topography of Site															
		X Level															
		Rolling															
		Low															
		High															
		Landscaped															
		Swamp															
		Wooded															
		Pond															
		Waterfront															
		Ravine															
		Wetland															
		Flood Plain															
		Year		Land Value		Building Value		Assessed Value		Board of Review		Tribunal/Other		Taxable Value			
		Who		When		What		2017		EXEMPT		EXEMPT		EXEMPT		EXEMPT	
		CEJ 12/31/1992		REVIEWED				2016		EXEMPT		EXEMPT		EXEMPT		EXEMPT	
								2015		4,200		3,100		7,300		7,300S	
								2014		4,200		3,600		7,800		7,602C	




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Building Type		(3) Roof (cont.)		(11) Heating/Cooling			(15) Built-ins			(15) Fireplaces			(16) Porches/Decks		(17) Garage					
X	Single Family Mobile Home Town Home Duplex A-Frame		Eavestrough Insulation 0 Front Overhang 0 Other Overhang	X	Gas Wood		Oil Coal		Elec. Steam		Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi repl.Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum Security System		Interior 1 Story Interior 2 Story 2nd/Same Stack Two Sided Exterior 1 Story Exterior 2 Story Prefab 1 Story Prefab 2 Story Heat Circulator Raised Hearth Wood Stove Direct-Vented Gas	Area 140	Type Treated Wood	Year Built: 1940 Car Capacity: Class: D Exterior: Siding Brick Ven.: 0 Stone Ven.: 0 Common Wall: Detache Foundation: 18 Inch Finished?: Auto. Doors: 0 Mech. Doors: 0 Area: 360 % Good: 0 Storage Area: 0 No Conc. Floor: 0				
X	Wood Frame		Drywall Paneled		Plaster Wood T&G															
Building Style: 1 STY		Trim & Decoration		Central Air Wood Furnace			(12) Electric			Stories Exterior Foundation Rate Bsmnt-Adj Heat-Adj			CnlyMult		Bsmnt Garage:					
Yr Built 1930	Remodeled 0	Ex	X	Ord		Min	100 Amps Service			Total Base Cost: 45,212			X	1.390						
Condition for Age: Average		Lg	X	Ord		Small	No Heating/Cooling			Total Base New : 62,844				E.C.F.						
Room List		Doors:		Solid	X	H.C.	No Heating/Cooling			Total Depr Cost: 14,140			X	0.479						
Basement 1st Floor 2nd Floor Bedrooms		Kitchen:		Other:		Other:		No Heating/Cooling			Estimated T.C.V: 6,773					Roof:				
(1) Exterior		(5) Floors		No./Qual. of Fixtures			Other Additions/Adjustments			Rate			Size		Cost					
X	Wood/Shingle Aluminum/Vinyl Brick	Kitchen: Other: Other:		(12) Electric			Rate			Bsmnt-Adj			Heat-Adj		Size		Cost			
Insulation		(6) Ceilings		No./Qual. of Fixtures			Rate			Bsmnt-Adj			Heat-Adj		Size		Cost			
(2) Windows		Basement: 480 S.F. Crawl: 0 S.F. Slab: 294 S.F. Height to Joists: 0.0		No. of Elec. Outlets			Rate			Bsmnt-Adj			Heat-Adj		Size		Cost			
Many Avg. Few	X	Large Avg. Small	Ex.		X	Ord.		Min	Rate			Bsmnt-Adj			Heat-Adj		Size		Cost	
Wood Sash Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement Double Glass Patio Doors Storms & Screens		(7) Excavation		Many			X	Ave.		Few	Rate			Heat-Adj		Size		Cost		
(3) Roof		Basement: 480 S.F. Crawl: 0 S.F. Slab: 294 S.F. Height to Joists: 0.0		(13) Plumbing			Rate			Bsmnt-Adj			Heat-Adj		Size		Cost			
X	Gable Hip Flat	Conc. Block Poured Conc. Stone Treated Wood Concrete Floor		Average Fixture(s)			Rate			Bsmnt-Adj			Heat-Adj		Size		Cost			
Chimney: Brick		(8) Basement		1 3 Fixture Bath 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan			Rate			Bsmnt-Adj			Heat-Adj		Size		Cost			
(10) Floor Support		(9) Basement Finish		1 Public Water 1 Public Sewer Water Well 1000 Gal Septic 2000 Gal Septic			Rate			Bsmnt-Adj			Heat-Adj		Size		Cost			
Joists: Unsupported Len: Cntr.Sup:		Recreation SF Living SF Walkout Doors No Floor SF		Lump Sum Items:			Rate			Bsmnt-Adj			Heat-Adj		Size		Cost			

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Grantor	Grantee	Sale Price	Sale Date	Inst. Type	Terms of Sale	Liber & Page	Verified By	Prcnt. Trans.				
COUNTY OF MUSKEGON TREASUR	CITY OF MUSKEGON	0	12/17/2015	QC	OTHER	4073/223	DOC	0.0				
WENDLANDT IAN	COUNTY OF MUSKEGON	0	03/31/2015	OT	OTHER	4053/730	DOC	0.0				
ELLIOTT GEORGE II/RONDA	WENDLANDT IAN	0	12/22/2009	QC	ARMS-LENGTH	3834/303	DOC	100.0				
DEUTSCHE BANK NATIONAL TRU	ELLIOTT GEORGE II	7,000	12/12/2006	OT	ARMS-LENGTH	3727/853	DOC	100.0				
Property Address		Class: 703.EXEMPT COUNTY		Zoning: R-1	Building Permit(s)		Date	Number	Status			
430 ALLEN AVE		School: MUSKEGON SCHOOLS			BUILDING		08/28/1996	BD-96-0679	COMPLETE			
Owner's Name/Address		P.R.E. 0%			BUILDING		05/02/1995	BD-95-0274	COMPLETE			
CITY OF MUSKEGON 933 TERRACE ST MUSKEGON MI 49440		MAP #: 24-31-20-459-014		2017 Est TCV 0 TCV/TFA: 0.00								
Tax Description		X Improved		Vacant		Land Value Estimates for Land Table R11.1.R11.1 ANGELL GENERAL RESIDENTIAL						
CITY OF MUSKEGON REVISED PLAT OF 1903 LOT 11& W 1/2 LOT 12 BLK 55 Comments/Influences		Public Improvements		Dirt Road Gravel Road X Paved Road X Storm Sewer X Sidewalk X Water X Sewer X Electric X Gas X Curb Street Lights Standard Utilities Underground Utils.		* Factors * Description Frontage Depth Front Depth Rate %Adj. Reason Value <Site Value C> LARGE .26-.50 4100 100 66*132 4,100 99 Actual Front Feet, 0.30 Total Acres Total Est. Land Value = 4,100						
		Topography of Site		X Level Rolling Low High X Landscaped Swamp Wooded Pond Waterfront Ravine Wetland Flood Plain		Year	Land Value	Building Value	Assessed Value	Board of Review	Tribunal/Other	Taxable Value
		Who	When	What	2017	EXEMPT	EXEMPT	EXEMPT				EXEMPT
The Equalizer. Copyright (c) 1999 - 2009. Licensed To: County of Muskegon, Michigan		DVK 04/02/2001 DATA ENTRY		2016	EXEMPT	EXEMPT	EXEMPT					EXEMPT
		CMH 07/25/2000 DATA ENTRY		2015	2,100	8,700	10,800					10,800S
		DES / / INSPECTED		2014	2,100	9,000	11,100					11,100S

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Building Type		(3) Roof (cont.)		(11) Heating/Cooling			(15) Built-ins			(15) Fireplaces			(16) Porches/Decks			(17) Garage	
X	Single Family Mobile Home Town Home Duplex A-Frame		Eavestrough Insulation 0 Front Overhang 0 Other Overhang	X	Gas Wood		Oil Coal		Elec. Steam		Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi repl.Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum Security System		Interior 1 Story Interior 2 Story 2nd/Same Stack Two Sided Exterior 1 Story Exterior 2 Story Prefab 1 Story Prefab 2 Story Heat Circulator Raised Hearth Wood Stove Direct-Vented Gas	Area	Type	Year Built: Car Capacity: Class: Exterior: Brick Ven.: Stone Ven.: Common Wall: Foundation: Finished ?: Auto. Doors: Mech. Doors: Area: % Good: Storage Area: No Conc. Floor:	
			(4) Interior	X	Forced Air w/o Ducts Forced Air w/ Ducts Forced Hot Water Electric Baseboard Elec. Ceil. Radiant Radiant (in-floor) Electric Wall Heat Space Heater Wall/Floor Furnace Forced Heat & Cool Heat Pump No Heating/Cooling								35	CCP (1 Story)			
X	Wood Frame		Drywall Paneled	X	Plaster Wood T&G												
Building Style: 1 STORY		Trim & Decoration															
Yr Built	Remodeled	Ex	X	Ord		Min											
0	0	Size of Closets															
Condition for Age: Average		Lg	X	Ord		Small											
Room List		Doors:		Solid	X	H.C.											
1 Basement 5 1st Floor 2nd Floor 3 Bedrooms		(5) Floors		Kitchen: Tile Other: Other:			(12) Electric										
							100 Amps Service										
(1) Exterior		(6) Ceilings		No./Qual. of Fixtures			Stories Exterior			Foundation			Rate Bsmnt-Adj Heat-Adj			Size Cost	
Wood/Shingle Aluminum/Vinyl Brick				Ex. X Ord. Min			1 Story Siding			Mich Bsmnt.			61.64 -4.60 0.00			836 47,685	
X Asphalt X Insulation		(7) Excavation		No. of Elec. Outlets			Other Additions/Adjustments			Rate						Size Cost	
				Many X Ave. Few			(14) Water/Sewer										
(2) Windows		Basement: 836 S.F. Crawl: 0 S.F. Slab: 0 S.F. Height to Joists: 0.0		(13) Plumbing			(16) Porches										
X	Many Avg. Few		Large Avg. Small	Average Fixture(s)			CCP (1 Story), Shallow			35.05			35			1,227	
X	Wood Sash Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement Double Glass Patio Doors X Storms & Screens	Conc. Block Poured Conc. Stone Treated Wood Concrete Floor		1 3 Fixture Bath 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan			Phy/Ab.Phy/Func/Econ/Comb.%Good= 46/100/100/100/46.0,			Depr.Cost =			32,585				
		(9) Basement Finish		(14) Water/Sewer			ECF (R11.1 ANGELL GENERAL RESIDENTIAL)			0.550 => TCV of Bldg: 1 =			17,922				
		Recreation SF Living SF Walkout Doors No Floor SF															
(3) Roof		(10) Floor Support		1 Public Water 1 Public Sewer Water Well 1000 Gal Septic 2000 Gal Septic			Lump Sum Items:										
X	Gable Hip Flat		Gambrel Mansard Shed	Joists: Unsupported Len: Cntr.Sup:													
X	Asphalt Shingle																
Chimney: Brick																	

\*\*\* Information herein deemed reliable but not guaranteed\*\*\*

Grantor	Grantee	Sale Price	Sale Date	Inst. Type	Terms of Sale	Liber & Page	Verified By	Prcnt. Trans.
37 EAST MAIN LLC	COUNTY OF MUSKEGON	0	03/31/2015	OT	OTHER	4053/726	DOC	0.0
COUNTY OF MUSKEGON	37 E MAIN LLC	1,000	10/13/2011	QC	OTHER	3892/505	DOC	100.0
PARAMOUNT LAND HOLDING LLC	COUNTY OF MUSKEGON	0	03/31/2011	CO	COURT ORDER	3880/462	DOC	0.0
BRYCE PETERS FINANCIAL CORP	PARAMOUNT LAND HOLDING LLC	4,185	03/25/2009	QC	OTHER	3817/322	PTA	100.0

Property Address	Class: 703.EXEMPT COUNTY	Zoning: R-1	Building Permit(s)	Date	Number	Status
452 AMITY AVE	School: MUSKEGON SCHOOLS		RES. ADD/ALTER/REPAIR	10/21/2004	PB041183	COMPLETE
	P.R.E. 0%		RES. ADD/ALTER/REPAIR	10/21/2004	PB-04-1183	COMPLETE
Owner's Name/Address	MAP #: 24-31-20-457-015		RES. ADD/ALTER/REPAIR	10/01/2003	PB030864	COMPLETE
COUNTY OF MUSKEGON TREASURER 173 E APPLE AVE SUITE 104 MUSKEGON MI 49442	2017 Est TCV 0 TCV/TFA: 0.00		ELECTRICAL	07/30/2003	PE030411	COMPLETE

Tax Description	X Improved	Vacant	Land Value Estimates for Land Table R11.1.R11.1 ANGELL GENERAL RESIDENTIAL
CITY OF MUSKEGON REVISED PLAT OF 1903 LOTS 12 & 13 BLK 46 Comments/Influences			
			* Factors * Description Frontage Depth Front Depth Rate %Adj. Reason Value <Site Value B> TYPICAL .14-.25 3200 100 66*132 3,200 66 Actual Front Feet, 0.20 Total Acres Total Est. Land Value = 3,200

X Improved	Dirt Road
X Improved	Gravel Road
X Improved	Paved Road
X Improved	Storm Sewer
X Improved	Sidewalk
X Improved	Water
X Improved	Sewer
X Improved	Electric
X Improved	Gas
X Improved	Curb
X Improved	Street Lights
X Improved	Standard Utilities
X Improved	Underground Utils.



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Topography of Site	Year	Land Value	Building Value	Assessed Value	Board of Review	Tribunal/Other	Taxable Value
X Level	2017	EXEMPT	EXEMPT	EXEMPT			EXEMPT
X Rolling	2016	EXEMPT	EXEMPT	EXEMPT			EXEMPT
X Low	2015	1,600	14,700	16,300			12,155C
X High	2014	1,600	15,100	16,700			11,964C
X Landscaped							
X Swamp							
X Wooded							
X Pond							
X Waterfront							
X Ravine							
X Wetland							
X Flood Plain							

\*\*\* Information herein deemed reliable but not guaranteed\*\*\*

Building Type		(3) Roof (cont.)		(11) Heating/Cooling			(15) Built-ins			(15) Fireplaces			(16) Porches/Decks			(17) Garage					
X	Single Family Mobile Home Town Home Duplex A-Frame		Eavestrough Insulation 0 Front Overhang 0 Other Overhang	X	Gas Wood		Oil Coal		Elec. Steam		Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi repl.Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum Security System		Interior 1 Story Interior 2 Story 2nd/Same Stack Two Sided Exterior 1 Story Exterior 2 Story Prefab 1 Story Prefab 2 Story Heat Circulator Raised Hearth Wood Stove Direct-Vented Gas	Area	Type	Year Built: Car Capacity: Class: Exterior: Brick Ven.: Stone Ven.: Common Wall: Foundation: Finished ?: Auto. Doors: Mech. Doors: Area: % Good: Storage Area: No Conc. Floor:					
X	Wood Frame		(4) Interior	X	Drywall Paneled	X	Plaster Wood T&G		Forced Air w/o Ducts Forced Air w/ Ducts Forced Hot Water Electric Baseboard Elec. Ceil. Radiant Radiant (in-floor) Electric Wall Heat Space Heater Wall/Floor Furnace Forced Heat & Cool Heat Pump No Heating/Cooling				228	WGEP (1 Story)	40	CPP	20	WCP (1 Story)	80	WGEP (1 Story)	
Building Style: 1 STORY		Trim & Decoration		Central Air Wood Furnace			(12) Electric			Class: CD Effec. Age: 40 Floor Area: 996 Total Base Cost: 65,595 Total Base New : 91,177 Total Depr Cost: 54,706 Estimated T.C.V: 30,088			CntyMult X 1.390 E.C.F. X 0.550			Bsmnt Garage:					
Yr Built 0	Remodeled 0	Size of Closets		100 Amps Service			No./Qual. of Fixtures			Stories Exterior Foundation Rate Bsmnt-Adj Heat-Adj Size Cost											
Condition for Age: Average		Doors: Lg X Ord Small		Ex. X Ord Min			No. of Elec. Outlets			Other Additions/Adjustments			Rate			Size Cost					
Room List		(5) Floors		Kitchen: Tile Other: Other:			Many X Ave. Few			(13) Plumbing			Rate			Size Cost					
1	Basement	Kitchen: Tile		Average Fixture(s)			1 3 Fixture Bath			Public Water			1025.00			1 1,025					
4	1st Floor	Other:		1 2 Fixture Bath			2 Fixture Bath			Public Sewer			1025.00			1 1,025					
2	2nd Floor	Other:		2 Fixture Bath			Softener, Auto			(16) Porches			25.60			228 5,837					
2	Bedrooms	(6) Ceilings		Softener, Manual			Solar Water Heat			WGEP (1 Story), Shallow			12.60			40 504					
(1) Exterior		X Drywall		Softener, Manual			No Plumbing			WCP (1 Story), Shallow			44.39			20 888					
X	Wood/Shingle Aluminum/Vinyl Brick			Solar Water Heat			No Plumbing			WGEP (1 Story), Shallow			39.74			80 3,179					
X	Insulation	Basement: 624 S.F. Crawl: 372 S.F. Slab: 0 S.F. Height to Joists: 0.0		Extra Toilet			Extra Sink			Phy/Ab.Phy/Func/Econ/Comb.%Good= 60/100/100/100/60.0,			Depr.Cost =			54,706					
(2) Windows		X Many Avg. Few Large Avg. Small		Extra Toilet			Extra Sink			ECF (R11.1 ANGELL GENERAL RESIDENTIAL) 0.550 => TCV of Bldg: 1 =						30,088					
X	Many Avg. Few Large Avg. Small	(8) Basement		Separate Shower			Ceramic Tile Floor														
X	Wood Sash Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement Double Glass Patio Doors Storms & Screens	Conc. Block Poured Conc. Stone Treated Wood Concrete Floor		Ceramic Tile Wains			Ceramic Tub Alcove														
(3) Roof		(9) Basement Finish		Vent Fan			(14) Water/Sewer														
X	Gable Hip Flat	Recreation SF Living SF Walkout Doors No Floor SF		1 Public Water			1 Public Sewer														
X	Asphalt Shingle	(10) Floor Support		1 Water Well			1000 Gal Septic														
Chimney: Brick		Joists: Unsupported Len: Cntr.Sup:		2000 Gal Septic			Lump Sum Items:														

\*\*\* Information herein deemed reliable but not guaranteed\*\*\*

Grantor	Grantee	Sale Price	Sale Date	Inst. Type	Terms of Sale	Liber & Page	Verified By	Prcnt. Trans.
37 EAST MAIN LLC	COUNTY OF MUSKEGON	0	03/31/2015	OT	OTHER	4053/689	DOC	0.0
COUNTY OF MUSKEGON	37 E MAIN LLC	900	10/13/2011	QC	OTHER	3892/500	DOC	100.0
WAYSTE INC	COUNTY OF MUSKEGON	0	03/31/2011	CO	COURT ORDER	3880/337	DOC	0.0
COUNTY OF MUSKEGON	WAYSTE INC	5,300	08/08/2008	QC	OTHER	3788/147	DOC	100.0

Property Address	Class: 703.EXEMPT COUNTY	Zoning: R-1	Building Permit(s)	Date	Number	Status			
1773 SUPERIOR ST	School: MUSKEGON SCHOOLS								
	P.R.E. 0%								
Owner's Name/Address	MAP #: 24-31-29-484-011								
COUNTY OF MUSKEGON TREASURER 173 E APPLE AVE SUITE 104 MUSKEGON MI 49442	2017 Est TCV 0 TCV/TFA: 0.00								
	X Improved	Vacant	Land Value Estimates for Land Table R08.1.R08.01 MARSH FIELD GENERAL RES						
	Public Improvements		* Factors *						
			Description	Frontage	Depth	Front Depth	Rate %Adj.	Reason	Value
			<Site Value B> TYPICAL	.11-.29		4600	100	40*125	4,600
			40 Actual Front Feet, 0.12 Total Acres				Total Est. Land Value =	4,600	
			Land Improvement Cost Estimates						
			Description	Rate	CountyMult.	Size	%Good	Cash Value	
			D/W/P: Asphalt Paving	1.51	1.39	400	34	285	
			Total Estimated Land Improvements True Cash Value =						285
			X Electric X Gas X Curb Street Lights Standard Utilities Underground Utils.						
			Topography of Site						
	X Level		Rolling Low High X Landscaped Swamp Wooded Pond Waterfront Ravine Wetland Flood Plain						
			Year	Land Value	Building Value	Assessed Value	Board of Review	Tribunal/Other	Taxable Value
	Who	When	What	2017	EXEMPT	EXEMPT	EXEMPT		EXEMPT
	RMM	05/23/2011	DATA ENTRY	2016	EXEMPT	EXEMPT	EXEMPT		EXEMPT
	AH	09/28/2001	DATA ENTRY	2015	2,300	12,200	14,500		9,301C
	HMS	01/24/2001	DATA ENTRY	2014	2,300	12,800	15,100		9,155C



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Building Type		(3) Roof (cont.)		(11) Heating/Cooling			(15) Built-ins			(15) Fireplaces			(16) Porches/Decks			(17) Garage	
X	Single Family Mobile Home Town Home Duplex A-Frame		Eavestrough Insulation 0 Front Overhang 0 Other Overhang	X	Gas Wood	Oil Coal	Elec. Steam		Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi repl.Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum Security System		Interior 1 Story Interior 2 Story 2nd/Same Stack Two Sided Exterior 1 Story Exterior 2 Story Prefab 1 Story Prefab 2 Story Heat Circulator Raised Hearth Wood Stove Direct-Vented Gas	Area 176	Type CCP (1 Story)	Year Built: Car Capacity: Class: CD Exterior: Siding Brick Ven.: 0 Stone Ven.: 0 Common Wall: Detache Foundation: 18 Inch Finished ?: Auto. Doors: 0 Mech. Doors: 0 Area: 192 % Good: 0 Storage Area: 0 No Conc. Floor: 0			
X	Wood Frame		Drywall Paneled	X	Plaster Wood T&G	Forced Air w/o Ducts Forced Air w/ Ducts Forced Hot Water Electric Baseboard Elec. Ceil. Radiant Radiant (in-floor) Electric Wall Heat Space Heater Wall/Floor Furnace Forced Heat & Cool Heat Pump No Heating/Cooling			Class: CD Effec. Age: 59 Floor Area: 1056 Total Base Cost: 65,608 Total Base New : 91,195 Total Depr Cost: 41,038 Estimated T.C.V: 23,392			CntyMult X 1.390 E.C.F. X 0.570		Bsmnt Garage: Carport Area: Roof:			
Building Style: 1 STORY		Trim & Decoration		Central Air Wood Furnace			Stories Exterior Foundation Rate Bsmnt-Adj Heat-Adj Size Cost										
Yr Built 0	Remodeled 0	Ex	X	Ord	Min	(12) Electric			Rate Bsmnt-Adj Heat-Adj Size Cost								
Condition for Age: Average		Lg	X	Ord	Small	100 Amps Service			Total Base Cost: 65,608 X 1.390								
Room List		(5) Floors		No./Qual. of Fixtures			1 Story Siding Crawl Space 58.72 -8.64 -0.71 264 13,034										
1	Basement	Kitchen:		Ex.	X	Ord.	Min	1 Story Siding Crawl Space 58.72 -8.64 -0.71 396 19,551									
5	1st Floor	Other:		No. of Elec. Outlets			1 Story Siding Basement 58.72 0.00 -0.71 396 22,972										
2	2nd Floor	Other:		Many	X	Ave.	Few	Other Additions/Adjustments Rate Size Cost									
2	Bedrooms	(6) Ceilings		(13) Plumbing			(14) Water/Sewer										
(1) Exterior		X	Plaster	Average Fixture(s)			Public Water 1025.00 1 1,025										
X	Wood/Shingle Aluminum/Vinyl Brick	Basement: 396 S.F. Crawl: 660 S.F. Slab: 0 S.F. Height to Joists: 0.0		1 3 Fixture Bath			Public Sewer 1025.00 1 1,025										
X	Insulation	(7) Excavation		2 Fixture Bath			(16) Porches										
(2) Windows		Many Avg.	X	Large Avg.		Softener, Auto	CCP (1 Story), Shallow 18.41 176 3,240										
X	Wood Sash Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement Double Glass Patio Doors Storms & Screens	(8) Basement		Softener, Manual			(17) Garages										
(3) Roof		Conc. Block Poured Conc. Stone Treated Wood Concrete Floor		Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan			Class:CD Exterior: Siding Foundation: 18 Inch (Unfinished) Base Cost 24.80 192 4,762 Phy/Ab.Phy/Func/Econ/Comb.%Good= 45/100/100/100/45.0, Depr.Cost = 41,038 ECF (R08.1 MARSH FIELD GENERAL RES) 0.570 => TCV of Bldg: 1 = 23,392										
Gable Hip Flat		X	Gambrel Mansard Shed	(9) Basement Finish			(14) Water/Sewer										
X	Asphalt Shingle	Recreation SF Living SF Walkout Doors No Floor SF		(10) Floor Support			1 Public Water 1 Public Sewer Water Well 1000 Gal Septic 2000 Gal Septic										
Chimney: Brick		Joists: Unsupported Len: Cntr.Sup:		Lump Sum Items:													

\*\*\* Information herein deemed reliable but not guaranteed\*\*\*

Grantor	Grantee	Sale Price	Sale Date	Inst. Type	Terms of Sale	Liber & Page	Verified By	Prcnt. Trans.
COUNTY OF MUSKEGON TREASUR	CITY OF MUSKEGON - CNS	0	12/17/2015	QC	OTHER	4073/223	DOC	0.0
SIEGEL MARCELLA	COUNTY OF MUSKEGON	0	03/31/2015	OT	OTHER	4053/679	DOC	0.0
BAUER JAMES R	SIEGEL MARCELLA	0	06/05/2009	QC	OTHER	3816/264	DOC	100.0

Property Address	Class: 703.EXEMPT COUNTY	Zoning: R-1	Building Permit(s)	Date	Number	Status				
862 STEVENS ST	School: MUSKEGON SCHOOLS									
	P.R.E. 0%									
Owner's Name/Address	MAP #: 24-31-21-376-013									
CITY OF MUSKEGON - CNS 933 TERRACE ST MUSKEGON MI 49440	2017 Est TCV 0 TCV/TFA: 0.00									
Tax Description	X Improved	Vacant	Land Value Estimates for Land Table R14.1.R14.1 STEELE GENERAL RESIDENTIAL							
	Public Improvements		* Factors *							
			Description	Frontage	Depth	Front Depth	Rate %Adj. Reason	Value		
			<Site Value B>	TYPICAL	.15-.30	3900	100 66*132	3,900		
			66 Actual Front Feet, 0.20 Total Acres				Total Est. Land Value =	3,900		
	X	Dirt Road								
	X	Gravel Road								
	X	Paved Road								
	X	Storm Sewer								
	X	Sidewalk								
	X	Water								
	X	Sewer								
	X	Electric								
	X	Gas								
	X	Curb								
		Street Lights								
		Standard Utilities								
		Underground Utils.								
	Topography of Site									
	X	Level								
		Rolling								
		Low								
		High								
	X	Landscaped								
		Swamp								
		Wooded								
		Pond								
		Waterfront								
		Ravine								
		Wetland								
		Flood Plain								
	Who	When	What	Year	Land Value	Building Value	Assessed Value	Board of Review	Tribunal/Other	Taxable Value
	AH	08/15/2001	INSPECTED	2017	EXEMPT	EXEMPT	EXEMPT			EXEMPT
	DVK	11/01/1999	INSPECTED	2016	EXEMPT	EXEMPT	EXEMPT			EXEMPT
				2015	2,000	11,500	13,500			13,500S
				2014	2,000	11,900	13,900			13,628C



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Building Type		(3) Roof (cont.)		(11) Heating/Cooling			(15) Built-ins			(15) Fireplaces			(16) Porches/Decks			(17) Garage																			
X	Single Family Mobile Home Town Home Duplex A-Frame		Eavestrough Insulation 0 Front Overhang 0 Other Overhang	X	Gas Wood		Oil Coal		Elec. Steam		Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi repl.Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum Security System		Interior 1 Story Interior 2 Story 2nd/Same Stack Two Sided Exterior 1 Story Exterior 2 Story Prefab 1 Story Prefab 2 Story Heat Circulator Raised Hearth Wood Stove Direct-Vented Gas	Area 24 133	Type WCP (1 Story) Treated Wood	Year Built: Car Capacity: Class: Exterior: Brick Ven.: Stone Ven.: Common Wall: Foundation: Finished?: Auto. Doors: Mech. Doors: Area: % Good: Storage Area: No Conc. Floor:																			
X	Wood Frame		Drywall Paneled	X	Plaster Wood T&G																														
Building Style: 1 1/4 STORY		Trim & Decoration		Forced Air w/o Ducts Forced Air w/ Ducts Forced Hot Water Electric Baseboard Elec. Ceil. Radiant Radiant (in-floor) Electric Wall Heat Space Heater Wall/Floor Furnace Forced Heat & Cool Heat Pump No Heating/Cooling			Central Air Wood Furnace			Class: D Effec. Age: 55 Floor Area: 1014 Total Base Cost: 52,056 Total Base New : 72,358 Total Depr Cost: 32,561 Estimated T.C.V: 22,793			CntyMult X 1.390 E.C.F. X 0.700			Bsmnt Garage:																			
Yr Built 1923	Remodeled 0	Ex	X	Ord		Min	Size of Closets			No. of Elec. Outlets			Rate			Size		Cost																	
Condition for Age: Average		Lg	X	Ord		Small	No. of Elec. Outlets			Rate			Rate			Size		Cost																	
Room List		(5) Floors		Kitchen: Carpeted Other: Hardwood Other: Linoleum			(12) Electric			Stories Exterior			Foundation			Rate			Bsmnt-Adj		Heat-Adj		Size		Cost										
2	Basement						100			Amps Service			1.25			Story Siding			Basement			59.34			0.00		0.83		792		47,655				
4	1st Floor												1			Story Siding			Overhang			30.15			0.00		0.00		24		724				
2	2nd Floor																																		
3	Bedrooms																																		
(1) Exterior		X	Plaster				No. of Elec. Outlets			(14) Water/Sewer			Public Water			912.00									1		912								
X	Wood/Shingle Aluminum/Vinyl Brick						Many			X	Ave.		Few	(13) Plumbing			Public Sewer			912.00						1		912							
X	Insulation			Basement: 792 S.F. Crawl: 0 S.F. Slab: 0 S.F. Height to Joists: 0.0			Average Fixture(s)			(16) Porches			WCP (1 Story), Shallow			38.17									24		916								
(2) Windows		X	Many Avg. Few	X	Large Avg. Small				1			2			Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan			(16) Deck/Balcony Treated Wood, Standard			7.05						133		938						
X	Wood Sash Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement Double Glass Patio Doors Storms & Screens			Conc. Block Poured Conc. Stone Treated Wood Concrete Floor			(8) Basement			(14) Water/Sewer			Phy/Ab.Phy/Func/Econ/Comb.%Good= 45/100/100/100/45.0,			Depr.Cost =						32,561													
(3) Roof				Recreation SF Living SF Walkout Doors No Floor SF			(9) Basement Finish			(14) Water/Sewer			ECF (R14.1 STEELE GENERAL RESIDENTIAL) 0.700 => TCV of Bldg: 1 =									22,793													
X	Gable Hip Flat	Gambrel Mansard Shed		(10) Floor Support			1			Public Water			1			Public Sewer																			
X	Asphalt Shingle			Joists: Unsupported Len: Cntr.Sup:			1			Public Water			1			Public Sewer																			
Chimney: Brick							Lump Sum Items:																												

\*\*\* Information herein deemed reliable but not guaranteed\*\*\*

Grantor	Grantee	Sale Price	Sale Date	Inst. Type	Terms of Sale	Liber & Page	Verified By	Prcnt. Trans.					
HOFFMAN SHIRLEY L	COUNTY OF MUSKEGON	0	04/30/2015	OT	OTHER	4053/775	DOC	0.0					
Property Address		Class: 703.EXEMPT COUNTY	Zoning: R-1	Building Permit(s)		Date	Number	Status					
1699 PINE ST		School: MUSKEGON SCHOOLS		RES. ADD/ALTER/REPAIR		02/11/2003	PM030052	COMPLETE					
Owner's Name/Address		P.R.E. 0%		ELECTRICAL		02/07/2003	PE030047	COMPLETE					
COUNTY OF MUSKEGON TREASURER 173 E APPLE AVE STE 104 MUSKEGON MI 49442		MAP #: 24-31-29-380-014		RES. SINGLE FAMILY		01/31/2003	PF030016	COMPLETE					
Tax Description		2017 Est TCV 0 TCV/TFA: 0.00		RES. ADD/ALTER/REPAIR		01/17/2003	PB030054	COMPLETE					
CITY OF MUSKEGON REVISED PLAT OF 1903 N 7 1/2 FT LOT 22 & ALL LOT 23 BLK 298		X Improved		Vacant		Land Value Estimates for Land Table R12.1.R12.1 MCLAUGHLIN GENERAL RES							
Comments/Influences		Public Improvements		* Factors *									
		Dirt Road		Description		Frontage	Depth	Front	Depth	Rate	%Adj.	Reason	Value
		Gravel Road		<Site Value A> ATYPICAL		.0-.13	2500	100					2,500
		X Paved Road		38 Actual Front Feet, 0.12 Total Acres									2,500
		X Storm Sewer		Land Improvement Cost Estimates									
		X Sidewalk		Description		Rate	CountyMult.	Size	%Good	Cash Value			
		X Water		D/W/P: 3.5 Concrete		3.44	1.39	800	39	1,492			
		X Sewer		Fencing: Wd, Solid, 5 ft.		14.87	1.39	140	0	0			
		X Electric		Total Estimated Land Improvements True Cash Value =						1,492			
		X Gas											
		X Curb											
		Street Lights											
		Standard Utilities											
		Underground Utils.											
		Topography of Site											
		X Level		Year		Land Value	Building Value	Assessed Value	Board of Review	Tribunal/Other	Taxable Value		
		Rolling		2017	EXEMPT	EXEMPT	EXEMPT				EXEMPT		
		Low		2016	EXEMPT	EXEMPT	EXEMPT				EXEMPT		
		High		2015	1,300	14,100	15,400				14,657C		
		X Landscaped		2014	1,300	13,300	14,600				14,427C		
		Swamp											
		Wooded											
		Pond											
		Waterfront											
		Ravine											
		Wetland											
		Flood Plain											
		Who		When		What							
		APH 07/25/2003		INSPECTED									
		SKB 01/08/2001		DATA ENTRY									
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Building Type		(3) Roof (cont.)		(11) Heating/Cooling			(15) Built-ins			(15) Fireplaces			(16) Porches/Decks			(17) Garage	
X	Single Family Mobile Home Town Home Duplex A-Frame		Eavestrough Insulation 0 Front Overhang 0 Other Overhang	X	Gas Wood		Oil Coal		Elec. Steam		Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi repl.Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum Security System		Interior 1 Story Interior 2 Story 2nd/Same Stack Two Sided Exterior 1 Story Exterior 2 Story Prefab 1 Story Prefab 2 Story Heat Circulator Raised Hearth Wood Stove Direct-Vented Gas	Area 48	Type WCP (1 Story)	Year Built: 1988 Car Capacity: Class: C Exterior: Siding Brick Ven.: 0 Stone Ven.: 0 Common Wall: Detache Foundation: 18 Inch Finished?: Auto. Doors: 1 Mech. Doors: 0 Area: 432 % Good: 72 Storage Area: 0 No Conc. Floor: 0	
X	Wood Frame		Drywall Paneled	X	Plaster Wood T&G												
Building Style: 1 STORY		Trim & Decoration		Central Air Wood Furnace													
Yr Built 0	Remodeled 0	Ex	X	Ord		Min											
Condition for Age: Average		Lg	X	Ord		Small											
Room List		(5) Floors		(12) Electric													
1	Basement	Kitchen: Carpeted		100													
5	1st Floor	Other: Tile		Amps Service													
	2nd Floor	Other:															
3	Bedrooms																
(1) Exterior		(6) Ceilings		No./Qual. of Fixtures			Stories Exterior			Foundation			Rate Bsmnt-Adj Heat-Adj			Size Cost	
X	Wood/Shingle Aluminum/Vinyl Brick			Ex.	X	Ord.		Min	1	Story	Siding	Crawl Space	67.46	-9.83	0.00	84	4,841
				No. of Elec. Outlets			1			1			1				
				Many	X	Ave.		Few	1	Story	Siding	Crawl Space	67.46	-9.83	0.00	84	4,841
				(7) Excavation			1			1			1				
X	Insulation	Basement: 814 S.F. Crawl: 168 S.F. Slab: 0 S.F. Height to Joists: 0.0		(13) Plumbing			Other Additions/Adjustments			Rate			Size Cost				
(2) Windows				Average Fixture(s)			(14) Water/Sewer										
X	Many Avg. Few		Large Avg. Small	1			Public Water			1162.00			1			1,162	
				2			Public Sewer			1162.00			1			1,162	
X	Wood Sash Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement Double Glass Patio Doors Storms & Screens	Conc. Block Poured Conc. Stone Treated Wood Concrete Floor		3			(16) Porches			WCP (1 Story), Shallow			29.64			48 1,423	
				Softener, Auto			Phy/Ab.Phy/Func/Econ/Comb.%Good= 51/100/100/100/51.0,			Separately Depreciated Items:			Depr.Cost =			48,447	
				Softener, Manual			(17) Garages			Class:C Exterior: Siding Foundation: 18 Inch (Unfinished)							
				Solar Water Heat			Base Cost			19.88			432			8,588	
				No Plumbing			Automatic Doors			375.00			1			375	
				Extra Toilet			County Multiplier = 1.39 =>			Cost New =			12,459				
				Extra Sink			Phy/Ab.Phy/Func/Econ/Comb.%Good= 72/100/100/100/72.0,			Depr.Cost =			8,970				
				Separate Shower			Total Depreciated Cost =			57,417							
				Ceramic Tile Floor			ECF (R12.1 MCLAUGHLIN GENERAL RES)			0.500 => TCV of Bldg: 1 =			28,709				
				Ceramic Tile Wains													
				Ceramic Tub Alcove													
				Vent Fan													
(3) Roof		(9) Basement Finish		(14) Water/Sewer													
X	Gable Hip Flat		Gambrel Mansard Shed	1			1										
				1			Public Water										
				1			Public Sewer										
				Joists: Unsupported Len: Cntr.Sup:			Water Well										
X	Asphalt Shingle			1000 Gal Septic			2000 Gal Septic										
Chimney: Brick				Lump Sum Items:													

\*\*\* Information herein deemed reliable but not guaranteed\*\*\*

Grantor	Grantee	Sale Price	Sale Date	Inst. Type	Terms of Sale	Liber & Page	Verified By	Prcnt. Trans.
JENKINS CEDRIC E/SHAWN	COUNTY OF MUSKEGON TREASURER	0	02/09/2015	JUD	FORECLOSURE	4054/1	DEED	0.0
MUSKEGON COUNTY TREASURER	JENKINS CEDRIC E/SHAWN	1,000	10/17/2012	QC	QUIT- CLAIM	3928/294	DEED	0.0
COPELAND BILLY JR/MATIA	MUSKEGON COUNTY TREASURER	0	04/02/2012		FORECLOSURE	3914/215	DEED	0.0
LASALLE BANK	COPELAND BILLY JR/MATIA	0	03/24/2009		REDEMPTION	3805/871	DEED	0.0

Property Address	Class: 703.EXEMPT COUNTY	Zoning:	Building Permit(s)	Date	Number	Status
2019 LEAHY ST	School: MUSKEGON HEIGHTS SCHOOLS			03/10/2004	B-39-04	
	P.R.E. 0%			04/23/2003	B-79-03	
Owner's Name/Address	MAP #: 26-043-035-070					
COUNTY OF MUSKEGON TREASURER 173 E APPLE AVE STE 104 MUSKEGON MI 49442	2017 Est TCV 0 TCV/TFA: 0.00					

Tax Description	Improved	Vacant	Land Value Estimates for Land Table 00001.NORTHEAST						Value	
HT5422 MAFFETT'S ADD'N BLK 35 LOT 7	X		* Factors *						4,000	
Comments/Influences			Description	Frontage	Depth	Front	Depth	Rate %Adj.	Reason	Value
FORECLOSURE/REPO: ASKING \$17,900 12/08			NORTHEAST	50.00	125.00	1.0000	1.0000	80 100		4,000
PROPERTY VACANT 11/14/2010 EXCESSIVE			50 Actual Front Feet, 0.14 Total Acres Total Est. Land Value = 4,000							
DEFERRED MAINTENANCE/SUBSTANDARD 5/30/12										

Public Improvements

- X Dirt Road
- X Gravel Road
- X Paved Road
- X Storm Sewer
- X Sidewalk
- X Water
- X Sewer
- X Electric
- X Gas
- X Curb
- X Street Lights
- Standard Utilities
- Underground Utils.



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Who	When	What	Year	Land Value	Building Value	Assessed Value	Board of Review	Tribunal/Other	Taxable Value
			2017	EXEMPT	EXEMPT	EXEMPT			EXEMPT
CEJ	12/30/1997	REVIEWED	2016	EXEMPT	EXEMPT	EXEMPT			EXEMPT
CED	03/01/2002	DATA ENTER	2015	2,000	8,100	10,100			10,100S
RJ	11/21/2003	REVIEWED	2014	2,000	10,400	12,400			12,400S

Building Type		(3) Roof (cont.)		(11) Heating/Cooling			(15) Built-ins			(15) Fireplaces			(16) Porches/Decks			(17) Garage	
X	Single Family Mobile Home Town Home Duplex A-Frame		Eavestrough Insulation 0 Front Overhang 0 Other Overhang	X	Gas Wood		Oil Coal		Elec. Steam		Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi repl.Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum Security System		Interior 1 Story Interior 2 Story 2nd/Same Stack Two Sided Exterior 1 Story Exterior 2 Story Prefab 1 Story Prefab 2 Story Heat Circulator Raised Hearth Wood Stove Direct-Vented Gas	Area 120	Type WCP (1 Story)	Year Built: 1997 Car Capacity: Class: D Exterior: Siding Brick Ven.: 0 Stone Ven.: 0 Common Wall: 1 Wall Foundation: 42 Inch Finished ?: Auto. Doors: 0 Mech. Doors: 0 Area: 240 % Good: 20 Storage Area: 0 No Conc. Floor: 0	
X	Wood Frame		Drywall Paneled				Plaster Wood T&G										
Building Style: 1 3/4 STY		Trim & Decoration		Forced Air w/o Ducts Forced Air w/ Ducts Forced Hot Water Electric Baseboard Elec. Ceil. Radiant Radiant (in-floor) Electric Wall Heat Space Heater Wall/Floor Furnace Forced Heat & Cool Heat Pump No Heating/Cooling			Central Air Wood Furnace			Class: D +10 Effec. Age: 55 Floor Area: 1306 Total Base Cost: 69,603 Total Base New : 96,748 Total Depr Cost: 31,279 Estimated T.C.V: 15,733			CntyMult X 1.390 E.C.F. X 0.503			Bsmnt Garage:	
Yr Built 1928	Remodeled 0	Size of Closets		100 Amps Service			(12) Electric			Stories Exterior Foundation Rate Bsmnt-Adj Heat-Adj Size Cost							
Condition for Age: Average		Lg	X	Ord		Small	No./Qual. of Fixtures			1.75 Story Siding Mich Bsmnt. 79.56 -4.85 1.27 616 46,804							
Room List		(5) Floors		Kitchen: Other: Other:			Ex. X Ord. Min			1 Story Siding Basement 55.43 0.00 0.72 228 12,802							
	Basement 1st Floor 2nd Floor 4 Bedrooms	Kitchen: Other: Other:		(6) Ceilings			No. of Elec. Outlets			Other Additions/Adjustments Rate Size Cost							
(1) Exterior				Basement: 844 S.F. Crawl: 0 S.F. Slab: 0 S.F. Height to Joists: 0.0			Many X Ave. Few			(14) Water/Sewer							
X	Wood/Shingle Aluminum/Vinyl Brick			(7) Excavation			Average Fixture(s)			Public Water 912.00 1 912							
(2) Windows				Basement: 844 S.F. Crawl: 0 S.F. Slab: 0 S.F. Height to Joists: 0.0			13 Fixture Bath			Public Sewer 912.00 1 912							
	Insulation			(8) Basement			2 Fixture Bath			(16) Porches							
X	Many Avg. Few	X	Large Avg. Small				Softener, Auto			WCP (1 Story), Standard 24.20 120 2,904							
Wood Sash Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement Double Glass Patio Doors Storms & Screens							Softener, Manual			Phy/Ab.Phy/Func/Econ/Comb.%Good= 45/ 75/100/100/33.8, Depr.Cost = 30,181							
(3) Roof							Solar Water Heat			(17) Garages							
	Wood Sash Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement Double Glass Patio Doors Storms & Screens						No Plumbing			Class:D Exterior: Siding Foundation: 42 Inch (Unfinished)							
(3) Roof							Extra Toilet			Base Cost 26.85 240 6,444							
X	Gable Hip Flat		Gambrel Mansard Shed				Extra Sink			Common Wall: 1 Wall -1175.00 1 -1,175							
Chimney: Brick							Separate Shower			County Multiplier = 1.39 => Cost New = 7,324							
(10) Floor Support							Ceramic Tile Floor			Phy/Ab.Phy/Func/Econ/Comb.%Good= 20/ 75/100/100/15.0, Depr.Cost = 1,099							
Joists: Unsupported Len: Cntr.Sup:							Ceramic Tile Wains			Total Depreciated Cost = 31,279							
							Ceramic Tub Alcove			ECF (NORTHEAST) 0.503 => TCV of Bldg: 1 = 15,733							
							Vent Fan										
							(14) Water/Sewer										
							1 Public Water										
							1 Public Sewer										
							Water Well										
							1000 Gal Septic										
							2000 Gal Septic										
							Lump Sum Items:										

\*\*\* Information herein deemed reliable but not guaranteed\*\*\*

Grantor	Grantee	Sale Price	Sale Date	Inst. Type	Terms of Sale	Liber & Page	Verified By	Prcnt. Trans.
BELL MARY L	COUNTY OF MUSKEGON TREASURER	0	04/29/2015	WD	TAX REVERTED	4053/874	DEED	0.0
MUSKEGON COUNTY TREASURER	BELL MARY L	100	10/17/2012	QC	QUIT- CLAIM	3928/222	DEED	0.0
MCLAUGHLIN GEORGE L	MUSKEGON COUNTY TREASURER	0	04/02/2012		FORECLOSURE	3913/993	DEED	0.0

Property Address	Class: 703.EXEMPT COUNTY	Zoning: R1-RES	Building Permit(s)	Date	Number	Status					
2113 HOWDEN ST	School: MUSKEGON HEIGHTS SCHOOLS										
	P.R.E. 0%										
Owner's Name/Address	MAP #: 26-000-059-040										
COUNTY OF MUSKEGON TREASURER 173 E APPLE AVE STE 104 MUSKEGON MI 49442	2017 Est TCV 0 TCV/TFA: 0.00										
Tax Description	X Improved	Vacant	Land Value Estimates for Land Table 00001.NORTHEAST								
HT0334 BLK 59 LOT 4	Public Improvements		* Factors *								
Comments/Influences	Dirt Road		Description	Frontage	Depth	Front	Depth	Rate	%Adj.	Reason	Value
CONDEMNED 8/10	Gravel Road		NORTHEAST	50.00	125.00	1.0000	1.0000	80	100		4,000
	Paved Road		50 Actual Front Feet, 0.14 Total Acres				Total Est. Land Value =	4,000			
	Storm Sewer										
	Sidewalk										
	Water										
	Sewer										
	Electric										
	Gas										
	Curb										
	Street Lights										
	Standard Utilities										
	Underground Utils.										
	Topography of Site										
	Level										
	Rolling										
	Low										
	High										
	Landscaped										
	Swamp										
	Wooded										
	Pond										
	Waterfront										
	Ravine										
	Wetland										
	Flood Plain										
	Year	Land Value	Building Value	Assessed Value	Board of Review	Tribunal/Other	Taxable Value				
Who	When	What	2017	EXEMPT	EXEMPT	EXEMPT	EXEMPT				
CEJ 05/30/1999	REVIEWED		2016	EXEMPT	EXEMPT	EXEMPT	EXEMPT				
			2015	2,000	2,000	4,000	4,000S				
			2014	2,000	2,100	4,100	4,100S				



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\*\*\* Information herein deemed reliable but not guaranteed\*\*\*

Building Type		(3) Roof (cont.)		(11) Heating/Cooling			(15) Built-ins			(15) Fireplaces			(16) Porches/Decks			(17) Garage													
X	Single Family Mobile Home Town Home Duplex A-Frame		Eavestrough Insulation 0 Front Overhang 0 Other Overhang	X	Gas Wood		Oil Coal		Elec. Steam		Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi repl.Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum Security System		Interior 1 Story Interior 2 Story 2nd/Same Stack Two Sided Exterior 1 Story Exterior 2 Story Prefab 1 Story Prefab 2 Story Heat Circulator Raised Hearth Wood Stove Direct-Vented Gas	Area 108	Type CCP (1 Story)	Year Built: Car Capacity: Class: Exterior: Brick Ven.: Stone Ven.: Common Wall: Foundation: Finished?: Auto. Doors: Mech. Doors: Area: % Good: Storage Area: No Conc. Floor:													
X	Wood Frame		Drywall Paneled		Plaster Wood T&G	X	Forced Air w/o Ducts Forced Air w/ Ducts Forced Hot Water Electric Baseboard Elec. Ceil. Radiant Radiant (in-floor) Electric Wall Heat Space Heater Wall/Floor Furnace Forced Heat & Cool Heat Pump No Heating/Cooling		Central Air Wood Furnace		(12) Electric 100 Amps Service		Class: D Effec. Age: 56 Floor Area: 908 Total Base Cost: 49,047 Total Base New : 68,175 Total Depr Cost: 7,670 Estimated T.C.V: 3,858	CntyMult X 1.390 E.C.F. X 0.503	Bsmnt Garage: Carport Area: Roof:														
Building Style: 1 STY		Trim & Decoration		No./Qual. of Fixtures			Stories Exterior			Foundation			Rate		Bsmnt-Adj		Heat-Adj		Size		Cost								
Yr Built 1925	Remodeled 0	Ex	X	Ord		Min	No. of Elec. Outlets			1 Story Siding			Basement			49.54		0.00		0.66		768		38,554					
Condition for Age: Average		Lg	X	Ord		Small	Many			X	Ave.		Few	1 Story Siding			Crawl Space			49.54		-8.65		0.66		140		5,817	
Room List		(5) Floors		Kitchen: Other: Other:			(13) Plumbing			(14) Water/Sewer			Public Water			912.00					1		912						
	Basement 1st Floor 2nd Floor Bedrooms	Basement: 768 S.F. Crawl: 140 S.F. Slab: 0 S.F. Height to Joists: 0.0		Average Fixture(s) 1 3 Fixture Bath 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan			Public Water			Public Sewer			912.00							108		2,852							
(1) Exterior		(7) Excavation		(8) Basement			(14) Water/Sewer			(16) Porches			CCP (1 Story), Standard			26.41					108		2,852						
X	Wood/Shingle Aluminum/Vinyl Brick	(9) Basement Finish		Recreation SF Living SF Walkout Doors No Floor SF			(14) Water/Sewer			Phy/Ab.Phy/Func/Econ/Comb.%Good= 45/ 50/100/ 50/11.3,			Economic Depreciation because of: OBSERVATION			0.503 => TCV of Bldg: 1 =					3,858								
X	Insulation	(10) Floor Support		Joists: Unsupported Len: Cntr.Sup:			1 Public Water 1 Public Sewer Water Well 1000 Gal Septic 2000 Gal Septic			ECF (NORTHEAST)																			
(2) Windows		Many Avg. Few	X	Large Avg. Small	Lump Sum Items:																								
X	Wood Sash Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement Double Glass Patio Doors Storms & Screens	Conc. Block Poured Conc. Stone Treated Wood Concrete Floor																											
(3) Roof		Gable Hip Flat		Gambrel Mansard Shed																									
X	Asphalt Shingle																												
Chimney: Brick																													

\*\*\* Information herein deemed reliable but not guaranteed\*\*\*

Grantor	Grantee	Sale Price	Sale Date	Inst. Type	Terms of Sale	Liber & Page	Verified By	Prcnt. Trans.					
SANDERS J ARTHUR	COUNTY OF MUSKEGON TREASURER	0	04/29/2015	WD	TAX REVERTED	4053/872	DEED	0.0					
Property Address		Class: 703.EXEMPT COUNTY		Zoning:		Building Permit(s)		Date	Number	Status			
2116 JEFFERSON ST		School: MUSKEGON HEIGHTS SCHOOLS						07/29/2002	B-222-02				
Owner's Name/Address		P.R.E. 0%											
COUNTY OF MUSKEGON TREASURER 173 E APPLE AVE STE 104 MUSKEGON MI 49442		MAP #: 26-000-052-200		2017 Est TCV 0 TCV/TFA: 0.00									
Tax Description		<input checked="" type="checkbox"/> Improved <input type="checkbox"/> Vacant		Land Value Estimates for Land Table 00013.ORANGE									
HT0280 BLK 52 S 40 FT OF LOT 20		Public Improvements		* Factors *									
Comments/Influences		<input checked="" type="checkbox"/> Dirt Road <input checked="" type="checkbox"/> Gravel Road <input checked="" type="checkbox"/> Paved Road <input checked="" type="checkbox"/> Storm Sewer <input checked="" type="checkbox"/> Sidewalk <input checked="" type="checkbox"/> Water <input checked="" type="checkbox"/> Sewer <input checked="" type="checkbox"/> Electric <input checked="" type="checkbox"/> Gas <input checked="" type="checkbox"/> Curb <input checked="" type="checkbox"/> Street Lights <input checked="" type="checkbox"/> Standard Utilities <input type="checkbox"/> Underground Utils.		Description		Frontage	Depth	Front	Depth	Rate	%Adj.	Reason	Value
				NEIGHBORHOOD		13	40.00	125.00	1.0000	1.0000	80	100	3,200
				40 Actual Front Feet, 0.12 Total Acres						Total Est. Land Value =		3,200	
		Topography of Site		Year		Land Value	Building Value	Assessed Value	Board of Review	Tribunal/Other	Taxable Value		
		<input checked="" type="checkbox"/> Level <input type="checkbox"/> Rolling <input type="checkbox"/> Low <input type="checkbox"/> High <input type="checkbox"/> Landscaped <input type="checkbox"/> Swamp <input type="checkbox"/> Wooded <input type="checkbox"/> Pond <input type="checkbox"/> Waterfront <input type="checkbox"/> Ravine <input type="checkbox"/> Wetland <input type="checkbox"/> Flood Plain		2017	EXEMPT	EXEMPT	EXEMPT			EXEMPT			
		Who When What		2016	EXEMPT	EXEMPT	EXEMPT			EXEMPT			
		CEJ 12/31/1992 REVIEWED		2015	1,600	7,300	8,900			8,900S			
		ROB 01/26/2012 REVIEWED		2014	1,600	7,400	9,000			9,000S			



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Building Type		(3) Roof (cont.)		(11) Heating/Cooling			(15) Built-ins			(15) Fireplaces			(16) Porches/Decks		(17) Garage			
X	Single Family Mobile Home Town Home Duplex A-Frame		Eavestrough Insulation 0 Front Overhang 0 Other Overhang	X	Gas Wood		Oil Coal		Elec. Steam		Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi repl.Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum Security System		Interior 1 Story Interior 2 Story 2nd/Same Stack Two Sided Exterior 1 Story Exterior 2 Story Prefab 1 Story Prefab 2 Story Heat Circulator Raised Hearth Wood Stove Direct-Vented Gas	Area 40	Type WSEP (1 Story)	Year Built: Car Capacity: Class: Exterior: Brick Ven.: Stone Ven.: Common Wall: Foundation: Finished ?: Auto. Doors: Mech. Doors: Area: % Good: Storage Area: No Conc. Floor:		
X	Wood Frame		Drywall Paneled		Plaster Wood T&G	X	Forced Air w/o Ducts Forced Air w/ Ducts Forced Hot Water Electric Baseboard Elec. Ceil. Radiant Radiant (in-floor) Electric Wall Heat Space Heater Wall/Floor Furnace Forced Heat & Cool Heat Pump No Heating/Cooling		Central Air Wood Furnace		(12) Electric 100 Amps Service		Class: D Effec. Age: 57 Floor Area: 936 Total Base Cost: 46,525 Total Base New : 64,670 Total Depr Cost: 24,736 Estimated T.C.V: 11,750		CntyMult X 1.390 E.C.F. X 0.475	Bsmnt Garage: Carport Area: Roof:		
Building Style: 1 STY		Trim & Decoration		No./Qual. of Fixtures			Stories Exterior			Foundation			Rate Bsmnt-Adj Heat-Adj		Size Cost			
Yr Built 1920	Remodeled 0	Ex	X	Ord		Min	No. of Elec. Outlets			Rate			Rate		Size Cost			
Condition for Age: Average		Lg	X	Ord		Small	Many X Ave. Few			Other Additions/Adjustments			Rate		Size Cost			
Room List		(5) Floors		Kitchen: Other: Other:			(13) Plumbing			(16) Porches			Rate		Size Cost			
	Basement 1st Floor 2nd Floor Bedrooms	Kitchen: Other: Other:		Average Fixture(s) 1 3 Fixture Bath 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan			1 Public Water 1 Public Sewer Water Well 1000 Gal Septic 2000 Gal Septic			WSEP (1 Story), Standard Phy/Ab.Phy/Func/Econ/Comb.%Good= 45/100/100/ 85/38.3, ECF (ORANGE)			48.39 0.475 => TCV of Bldg: 1 =		40 1 =		1,936 24,736 11,750	
(1) Exterior		(6) Ceilings		Basement: 480 S.F. Crawl: 456 S.F. Slab: 0 S.F. Height to Joists: 0.0			(14) Water/Sewer			Public Water Public Sewer			912.00 912.00		1 1		912 912	
X	Wood/Shingle Aluminum/Vinyl Brick	(7) Excavation		Recreation SF Living SF Walkout Doors No Floor SF			(14) Water/Sewer			WSEP (1 Story), Standard			48.39		40		1,936	
	Insulation	(8) Basement		Recreation SF Living SF Walkout Doors No Floor SF			(14) Water/Sewer			Phy/Ab.Phy/Func/Econ/Comb.%Good= 45/100/100/ 85/38.3, ECF (ORANGE)			0.475 => TCV of Bldg: 1 =		1 =		11,750	
(2) Windows		(9) Basement Finish		Lump Sum Items:														
X	Many Avg. Few	X	Large Avg. Small															
	Wood Sash Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement Double Glass Patio Doors Storms & Screens																	
(3) Roof		(10) Floor Support																
X	Gable Hip Flat	Gambrel Mansard Shed																
X	Asphalt Shingle																	
Chimney: Brick																		

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Grantor	Grantee	Sale Price	Sale Date	Inst. Type	Terms of Sale	Liber & Page	Verified By	Prcnt. Trans.			
HUGHES TYRONE	COUNTY OF MUSKEGON TREASURER	0	04/29/2015	WD	TAX REVERTED	4053/873	DEED	0.0			
Property Address		Class: 703.EXEMPT COUNTY		Zoning:	Building Permit(s)	Date	Number	Status			
2124 SANFORD ST		School: MUSKEGON HEIGHTS SCHOOLS									
Owner's Name/Address		P.R.E. 0%									
COUNTY OF MUSKEGON TREASURER 173 E APPLE AVE STE 104 MUSKEGON MI 49442		MAP #: 26-000-053-180									
Tax Description		2017 Est TCV 0 TCV/TFA: 0.00									
HT0302 BLK 53 LOT 18		X Improved		Vacant	Land Value Estimates for Land Table 00013.ORANGE						
Comments/Influences		Public Improvements		* Factors *							
		Dirt Road		Description	Frontage	Depth	Front	Depth	Rate %Adj.	Reason	Value
		Gravel Road		NEIGHBORHOOD	13	50.00	125.00	1.0000	1.0000	80 100	4,000
		X Paved Road		50 Actual Front Feet, 0.14 Total Acres Total Est. Land Value = 4,000							
		X Storm Sewer									
		X Sidewalk									
		X Water									
		X Sewer									
		X Electric									
		X Gas									
		X Curb									
		X Street Lights									
		X Standard Utilities									
		Underground Utils.									
		Topography of Site									
		X Level		Year	Land Value	Building Value	Assessed Value	Board of Review	Tribunal/Other	Taxable Value	
		Rolling		2017	EXEMPT	EXEMPT	EXEMPT			EXEMPT	
		Low		2016	EXEMPT	EXEMPT	EXEMPT			EXEMPT	
		High		2015	2,000	11,400	13,400			13,242C	
		Landscaped		2014	2,000	11,600	13,600			13,034C	
		Swamp									
		Wooded									
		Pond									
		Waterfront									
		Ravine									
		Wetland									
		Flood Plain									
		Who	When	What							
		CEJ	12/31/1992	REVIEWED							
		CED	06/01/2000	REVIEWED							



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Building Type		(3) Roof (cont.)		(11) Heating/Cooling			(15) Built-ins			(15) Fireplaces			(16) Porches/Decks			(17) Garage			
X	Single Family Mobile Home Town Home Duplex A-Frame		Eavestrough Insulation 0 Front Overhang 0 Other Overhang	X	Gas Wood		Oil Coal		Elec. Steam		Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi repl.Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum Security System		Interior 1 Story Interior 2 Story 2nd/Same Stack Two Sided Exterior 1 Story Exterior 2 Story Prefab 1 Story Prefab 2 Story Heat Circulator Raised Hearth Wood Stove Direct-Vented Gas	Area 208	Type CCP (1 Story)	Year Built: Car Capacity: Class: Exterior: Brick Ven.: Stone Ven.: Common Wall: Foundation: Finished ?: Auto. Doors: Mech. Doors: Area: % Good: Storage Area: No Conc. Floor:			
X	Wood Frame		Drywall Paneled				Plaster Wood T&G												
Building Style: 1 STY		Trim & Decoration		Forced Air w/o Ducts Forced Air w/ Ducts Forced Hot Water Electric Baseboard Elec. Ceil. Radiant Radiant (in-floor) Electric Wall Heat Space Heater Wall/Floor Furnace Forced Heat & Cool Heat Pump No Heating/Cooling			Central Air Wood Furnace			Class: CD -5 Effec. Age: 57 Floor Area: 996 Total Base Cost: 62,043 Total Base New : 86,240 Total Depr Cost: 38,808 Estimated T.C.V: 18,434			CntyMult X 1.390 E.C.F. X 0.475			Bsmnt Garage:			
Yr Built 1920	Remodeled 0	Ex	X	Ord		Min	Size of Closets		No./Qual. of Fixtures		Stories	Exterior	Foundation	Rate	Bsmnt-Adj	Heat-Adj	Size	Cost	
Condition for Age: Average		Lg	X	Ord		Small	Doors: Solid X H.C.		(12) Electric		1	Story Siding	Basement	56.40	0.00	0.00	936	52,790	
Room List		(5) Floors		Kitchen: Other: Other:			100 Amps Service			No. of Elec. Outlets		1	Story Siding	Slab	56.40	-9.95	0.00	60	2,787
	Basement 1st Floor 2nd Floor Bedrooms	(6) Ceilings		Average Fixture(s) 1 3 Fixture Bath 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan			(13) Plumbing			Other Additions/Adjustments		Rate		Size		Cost			
(1) Exterior																			
X	Wood/Shingle Aluminum/Vinyl Brick																		
	Insulation	(7) Excavation		Basement: 936 S.F. Crawl: 0 S.F. Slab: 60 S.F. Height to Joists: 0.0			(14) Water/Sewer			Public Water		1025.00		1		1,025			
(2) Windows																			
X	Many Avg. Few	X	Large Avg. Small	(8) Basement		Recreation SF Living SF Walkout Doors No Floor SF			(14) Water/Sewer		Public Water		21.23		208		4,416		
	Wood Sash Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement Double Glass Patio Doors Storms & Screens	(9) Basement Finish		Conc. Block Poured Conc. Stone Treated Wood Concrete Floor			(14) Water/Sewer			Public Sewer		1025.00		1		1,025			
(3) Roof				(10) Floor Support		1 Public Water 1 Public Sewer Water Well 1000 Gal Septic 2000 Gal Septic			Phy/Ab.Phy/Func/Econ/Comb.%Good= 45/100/100/100/45.0, ECF (ORANGE)		0.475 => TCV of Bldg:		1		=		18,434		
X	Gable Hip Flat		Gambrel Mansard Shed	Joists: Unsupported Len: Cntr.Sup:		Lump Sum Items:													
X	Asphalt Shingle																		
Chimney: Brick																			

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Grantor	Grantee	Sale Price	Sale Date	Inst. Type	Terms of Sale	Liber & Page	Verified By	Prcnt. Trans.								
JONES BRANDON K	COUNTY OF MUSKEGON TREASURER	0	02/09/2015	JUD	FORECLOSURE	4054/35	DEED	0.0								
MUSKEGON COUNTY TREASURER	JONES BRANDON K	350	10/17/2012	QC	QUIT-CLAIM	3928/316	DEED	0.0								
NELSON EDITH J	MUSKEGON COUNTY TREASURER	0	04/02/2012		FORECLOSURE	3914/243	DEED	0.0								
ROSS VIRGINIA	NELSON EDITH J	0	03/14/1995	QC	QUIT-CLAIM	3686/505	DEED	0.0								
Property Address		Class: 703.EXEMPT COUNTY		Zoning: R1-RES		Building Permit(s)		Date	Number	Status						
2140 MCILWRAITH ST		School: MUSKEGON HEIGHTS SCHOOLS						04/30/2002	B-107-02							
Owner's Name/Address		P.R.E. 0%						10/06/2000	B-333-00							
COUNTY OF MUSKEGON TREASURER 173 E APPLE AVE STE 104 MUSKEGON MI 49442		MAP #: 26-052-007-270		2017 Est TCV 0 TCV/TFA: 0.00												
Tax Description		X Improved		Vacant		Land Value Estimates for Land Table 00001.NORTHEAST										
HT5919 OAK PARK ADD'N BLK 7 LOTS 27 28 & 29		X		Public Improvements		* Factors *										
Comments/Influences		X		Dirt Road		Description		Frontage		Depth	Front	Depth	Rate	%Adj.	Reason	Value
10/08/07 FIRE: MINIMAL DAMAGE \$500.00 LOSS 6/2010: WATER OFF DEFERRED MAINTENANCE: REPAIRS/RENOVATION		X		Gravel Road		NORTHEAST		75.00		120.00	1.0000	1.0000	80	100		6,000
		X		Paved Road		75 Actual Front Feet, 0.21 Total Acres		Total Est. Land Value =								6,000
		X		Storm Sewer												
		X		Sidewalk												
		X		Water												
		X		Sewer												
		X		Electric												
		X		Gas												
		X		Curb												
				Street Lights												
				Standard Utilities												
				Underground Utils.												
				Topography of Site												
		X		Level												
				Rolling												
				Low												
				High												
				Landscaped												
				Swamp												
				Wooded												
				Pond												
				Waterfront												
				Ravine												
				Wetland												
				Flood Plain												
		Who		When		What		Year	Land Value	Building Value	Assessed Value	Board of Review	Tribunal/Other	Taxable Value		
		RJ		12/31/1998		REVIEWED		2017	EXEMPT	EXEMPT	EXEMPT			EXEMPT		
		ROB		12/31/2011		REVIEWED		2016	EXEMPT	EXEMPT	EXEMPT			EXEMPT		
		ROB		03/13/2012		REVIEWED		2015	3,000	6,000	9,000			9,000S		
								2014	3,000	6,400	9,400			9,400S		



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Building Type		(3) Roof (cont.)		(11) Heating/Cooling			(15) Built-ins			(15) Fireplaces			(16) Porches/Decks			(17) Garage	
X	Single Family Mobile Home Town Home Duplex A-Frame		Eavestrough Insulation 0 Front Overhang 0 Other Overhang	X	Gas Wood		Oil Coal		Elec. Steam		Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi repl.Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum Security System		Interior 1 Story Interior 2 Story 2nd/Same Stack Two Sided Exterior 1 Story Exterior 2 Story Prefab 1 Story Prefab 2 Story Heat Circulator Raised Hearth Wood Stove Direct-Vented Gas	Area	Type	Year Built: Car Capacity: Class: Exterior: Brick Ven.: Stone Ven.: Common Wall: Foundation: Finished ?: Auto. Doors: Mech. Doors: Area: % Good: Storage Area: No Conc. Floor:	
X	Wood Frame		Drywall Paneled		Plaster Wood T&G		Forced Air w/o Ducts Forced Air w/ Ducts Forced Hot Water Electric Baseboard Elec. Ceil. Radiant Radiant (in-floor) Electric Wall Heat Space Heater Wall/Floor Furnace Forced Heat & Cool Heat Pump No Heating/Cooling							75 WSEP (1 Story) 72 WCP (1 Story)			
Building Style: 1 STY		Trim & Decoration		Central Air Wood Furnace			(12) Electric			Class: D Effec. Age: 57 Floor Area: 1149 Total Base Cost: 56,801 Total Base New : 78,954 Total Depr Cost: 23,094 Estimated T.C.V: 11,616			CntyMult X 1.390 E.C.F. X 0.503			Bsmnt Garage: Carport Area: Roof:	
Yr Built 1940	Remodeled 0	Size of Closets		100 Amps Service			No./Qual. of Fixtures			Stories Exterior Foundation Rate Bsmnt-Adj Heat-Adj			Size Cost				
Condition for Age: Average		Lg	X	Ord		Min	Ex. X Ord. Min			Rate			Rate				
Room List		Doors: Solid X H.C.		(5) Floors			No. of Elec. Outlets			Other Additions/Adjustments			Rate		Size Cost		
Basement 1st Floor 2nd Floor Bedrooms		Kitchen: Other: Other:		(6) Ceilings			Many X Ave. Few			(14) Water/Sewer			912.00		1 912		
(1) Exterior		Basement: 1149 S.F. Crawl: 0 S.F. Slab: 0 S.F. Height to Joists: 0.0		(7) Excavation			(13) Plumbing			(16) Porches			35.10		75 2,633		
X	Wood/Shingle Aluminum/Vinyl Brick	Insulation		Average Fixture(s) 1 3 Fixture Bath 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan			WSEP (1 Story), Standard WCP (1 Story), Standard			Phy/Ab.Phy/Func/Econ/Comb.%Good= 45/100/100/ 65/29.3, Economic Depreciation because of: OBSERVATION ECF (NORTHEAST)			29.63		72 2,133		
(2) Windows		Recreation SF Living SF Walkout Doors No Floor SF		(8) Basement			Public Water Public Sewer			0.503 => TCV of Bldg: 1 =			11,616				
Many Avg. Few	X	Conc. Block Poured Conc. Stone Treated Wood Concrete Floor		(9) Basement Finish			1 Public Water 1 Public Sewer Water Well 1000 Gal Septic 2000 Gal Septic										
X	Wood Sash Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement Double Glass Patio Doors Storms & Screens	Recreation SF Living SF Walkout Doors No Floor SF		(10) Floor Support			Lump Sum Items:										
(3) Roof		Recreation SF Living SF Walkout Doors No Floor SF		Joists: Unsupported Len: Cntr.Sup:													
X	Gable Hip Flat	Recreation SF Living SF Walkout Doors No Floor SF		Joists: Unsupported Len: Cntr.Sup:													
X	Asphalt Shingle	Recreation SF Living SF Walkout Doors No Floor SF		Joists: Unsupported Len: Cntr.Sup:													
Chimney: Brick		Recreation SF Living SF Walkout Doors No Floor SF		Joists: Unsupported Len: Cntr.Sup:													

\*\*\* Information herein deemed reliable but not guaranteed\*\*\*

Grantor	Grantee	Sale Price	Sale Date	Inst. Type	Terms of Sale	Liber & Page	Verified By	Prcnt. Trans.			
HUGHES TYRONE	COUNTY OF MUSKEGON TREASURER	0	04/29/2015	WD	TAX REVERTED	4053/873	DEED	0.0			
Property Address		Class: 703.EXEMPT COUNTY		Zoning:	Building Permit(s)	Date	Number	Status			
2124 SANFORD ST		School: MUSKEGON HEIGHTS SCHOOLS									
Owner's Name/Address		P.R.E. 0%									
COUNTY OF MUSKEGON TREASURER 173 E APPLE AVE STE 104 MUSKEGON MI 49442		MAP #: 26-000-053-180									
Tax Description		2017 Est TCV 0 TCV/TFA: 0.00									
HT0302 BLK 53 LOT 18		X Improved		Vacant	Land Value Estimates for Land Table 00013.ORANGE						
Comments/Influences		Public Improvements		* Factors *							
		Dirt Road		Description	Frontage	Depth	Front	Depth	Rate %Adj.	Reason	Value
		Gravel Road		NEIGHBORHOOD	13	50.00	125.00	1.0000	1.0000	80 100	4,000
		X Paved Road		50 Actual Front Feet, 0.14 Total Acres Total Est. Land Value = 4,000							
		X Storm Sewer									
		X Sidewalk									
		X Water									
		X Sewer									
		X Electric									
		X Gas									
		X Curb									
		X Street Lights									
		X Standard Utilities									
		Underground Utils.									
		Topography of Site									
		X Level		Year	Land Value	Building Value	Assessed Value	Board of Review	Tribunal/Other	Taxable Value	
		Rolling		2017	EXEMPT	EXEMPT	EXEMPT			EXEMPT	
		Low		2016	EXEMPT	EXEMPT	EXEMPT			EXEMPT	
		High		2015	2,000	11,400	13,400			13,242C	
		Landscaped		2014	2,000	11,600	13,600			13,034C	
		Swamp									
		Wooded									
		Pond									
		Waterfront									
		Ravine									
		Wetland									
		Flood Plain									
		Who	When	What							
		CEJ	12/31/1992	REVIEWED							
		CED	06/01/2000	REVIEWED							



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\*\*\* Information herein deemed reliable but not guaranteed\*\*\*

Building Type		(3) Roof (cont.)		(11) Heating/Cooling			(15) Built-ins			(15) Fireplaces			(16) Porches/Decks			(17) Garage	
X	Single Family Mobile Home Town Home Duplex A-Frame		Eavestrough Insulation 0 Front Overhang 0 Other Overhang	X	Gas Wood		Oil Coal		Elec. Steam		Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi repl.Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum Security System		Interior 1 Story Interior 2 Story 2nd/Same Stack Two Sided Exterior 1 Story Exterior 2 Story Prefab 1 Story Prefab 2 Story Heat Circulator Raised Hearth Wood Stove Direct-Vented Gas	Area 208	Type CCP (1 Story)	Year Built: Car Capacity: Class: Exterior: Brick Ven.: Stone Ven.: Common Wall: Foundation: Finished ?: Auto. Doors: Mech. Doors: Area: % Good: Storage Area: No Conc. Floor:	
X	Wood Frame		Drywall Paneled		Plaster Wood T&G	X	Forced Air w/o Ducts Forced Air w/ Ducts Forced Hot Water Electric Baseboard Elec. Ceil. Radiant Radiant (in-floor) Electric Wall Heat Space Heater Wall/Floor Furnace Forced Heat & Cool Heat Pump No Heating/Cooling		Central Air Wood Furnace		(12) Electric 100 Amps Service		Class: CD -5 Effec. Age: 57 Floor Area: 996 Total Base Cost: 62,043 Total Base New : 86,240 Total Depr Cost: 38,808 Estimated T.C.V: 18,434		CntyMult X 1.390 E.C.F. X 0.475	Bsmnt Garage: Carport Area: Roof:	
Building Style: 1 STY		Trim & Decoration		No./Qual. of Fixtures			Stories Exterior			Foundation			Rate Bsmnt-Adj Heat-Adj		Size Cost		
Yr Built 1920	Remodeled 0	Ex	X	Ord		Min	1	Story	Siding	Basement	56.40	0.00	0.00	936	52,790		
Condition for Age: Average		Lg	X	Ord		Small	1	Story	Siding	Slab	56.40	-9.95	0.00	60	2,787		
Room List		(5) Floors		No. of Elec. Outlets			Other Additions/Adjustments			Rate			Size Cost				
	Basement 1st Floor 2nd Floor Bedrooms	Kitchen: Other: Other:		(13) Plumbing			(14) Water/Sewer			Public Water Public Sewer			1025.00 1025.00		1 1 1,025 1,025		
(1) Exterior		(6) Ceilings		Average Fixture(s)			(16) Porches			CCP (1 Story), Standard			21.23		208 4,416		
X	Wood/Shingle Aluminum/Vinyl Brick	Basement: 936 S.F. Crawl: 0 S.F. Slab: 60 S.F. Height to Joists: 0.0		1 3 Fixture Bath 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan			Phy/Ab.Phy/Func/Econ/Comb.%Good= 45/100/100/100/45.0, ECF (ORANGE)			0.475 => TCV of Bldg: 1 =			38,808 18,434				
(2) Windows		(7) Excavation		(14) Water/Sewer			Lump Sum Items:										
Many Avg. Few	X	Large Avg. Small	Recreation SF Living SF Walkout Doors No Floor SF		1 Public Water 1 Public Sewer Water Well 1000 Gal Septic 2000 Gal Septic												
Wood Sash Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement Double Glass Patio Doors Storms & Screens		(9) Basement Finish															
(3) Roof		(10) Floor Support															
X	Gable Hip Flat		Gambrel Mansard Shed														
X	Asphalt Shingle																
Chimney: Brick																	

\*\*\* Information herein deemed reliable but not guaranteed\*\*\*

Grantor	Grantee	Sale Price	Sale Date	Inst. Type	Terms of Sale	Liber & Page	Verified By	Prcnt. Trans.			
BROWN TERRANCE L	COUNTY OF MUSKEGON TREASURER	0	03/31/2015	QC	TAX REVERTED	4053/885	DEED	0.0			
MUSKEGON COUNTY TREASURER	BROWN TERRANCE L	650	10/17/2012	QC	QUIT- CLAIM	3928/228	DEED	0.0			
PARKER ALMA	MUSKEGON COUNTY TREASURER	650	04/02/2012	QC	QUIT- CLAIM	3913/862	DEED	0.0			
PARKER MELVIN	PARKER ALMA	0	03/02/2009	QC	QUIT-CLAIM	3803/752	DEED	0.0			
Property Address		Class: 703.EXEMPT COUNTY		Zoning: R1-RES	Building Permit(s)	Date	Number	Status			
2204 HOYT ST		School: MUSKEGON HEIGHTS SCHOOLS									
Owner's Name/Address		P.R.E. 0%									
COUNTY OF MUSKEGON TREASURER 173 E APPLE AVE STE 104 MUSKEGON MI 49442		MAP #: 26-000-066-230									
Tax Description		2017 Est TCV 0 TCV/TFA: 0.00									
HT0495 BLK 66 LOT 23		X Improved		Vacant	Land Value Estimates for Land Table 00001.NORTHEAST						
Comments/Influences		Public Improvements		* Factors *					Value		
NO ADDRESS LISTED ON QC DEED		Dirt Road		Description	Frontage	Depth	Front	Depth	Rate %Adj.	Reason	Value
		Gravel Road		NORTHEAST	50.00	125.00	1.0000	1.0000	80	100	4,000
		X Paved Road		50 Actual Front Feet, 0.14 Total Acres Total Est. Land Value = 4,000							
		X Storm Sewer									
		X Sidewalk									
		X Water									
		X Sewer									
		X Electric									
		X Gas									
		X Curb									
		Street Lights									
		Standard Utilities									
		Underground Utils.									
		Topography of Site									
		X Level		Year	Land Value	Building Value	Assessed Value	Board of Review	Tribunal/Other	Taxable Value	
		Rolling		2017	EXEMPT	EXEMPT	EXEMPT			EXEMPT	
		Low		2016	EXEMPT	EXEMPT	EXEMPT			EXEMPT	
		High		2015	2,000	10,200	12,200			12,200S	
		Landscaped		2014	2,000	11,000	13,000			13,000S	
		Swamp									
		Wooded									
		Pond									
		Waterfront									
		Ravine									
		Wetland									
		Flood Plain									
		Who When What									
		CEJ 06/30/1999 REVIEWED									



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\*\*\* Information herein deemed reliable but not guaranteed\*\*\*



Building Type		(3) Roof (cont.)		(11) Heating/Cooling			(15) Built-ins			(15) Fireplaces			(16) Porches/Decks		(17) Garage			
X	Single Family Mobile Home Town Home Duplex A-Frame		Eavestrough Insulation 0 Front Overhang 0 Other Overhang	X	Gas Wood		Oil Coal		Elec. Steam		Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi repl.Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum Security System		Interior 1 Story Interior 2 Story 2nd/Same Stack Two Sided Exterior 1 Story Exterior 2 Story Prefab 1 Story Prefab 2 Story Heat Circulator Raised Hearth Wood Stove Direct-Vented Gas	Area 140	Type WGEP (1 Story)	Year Built: Car Capacity: Class: Exterior: Brick Ven.: Stone Ven.: Common Wall: Foundation: Finished ?: Auto. Doors: Mech. Doors: Area: % Good: Storage Area: No Conc. Floor:		
X	Wood Frame		Drywall Paneled	X	Plaster Wood T&G													
Building Style: 1 1/2 STY		Trim & Decoration		Forced Air w/o Ducts Forced Air w/ Ducts Forced Hot Water Electric Baseboard Elec. Ceil. Radiant Radiant (in-floor) Electric Wall Heat Space Heater Wall/Floor Furnace Forced Heat & Cool Heat Pump No Heating/Cooling														
Yr Built 1915	Remodeled 0	Ex	X	Ord		Min	Size of Closets			Class: CD Effec. Age: 56 Floor Area: 1038 Total Base Cost: 63,387 Total Base New : 88,108 Total Depr Cost: 39,649 Estimated T.C.V: 19,943								
Condition for Age: Average		Lg	X	Ord		Small	No Heating/Cooling			CnlyMult X 1.390 E.C.F. X 0.503								
Room List		(5) Floors		Central Air Wood Furnace			(12) Electric 100 Amps Service			Stories Exterior 1.5 Story Siding 1 Story Siding Other Additions/Adjustments			Foundation Basement Crawl Space	Rate 81.40 63.77	Bsmnt-Adj 0.00 -9.54	Heat-Adj 0.00 0.00	Size 624 102	Cost 50,794 5,531
	Basement 1 1st Floor 2 2nd Floor 3 Bedrooms	Kitchen: Hardwood Other: Softwood Other: Tile		No./Qual. of Fixtures Ex. X Ord. Min			No. of Elec. Outlets Many X Ave. Few			(14) Water/Sewer Public Water Public Sewer WGEP (1 Story), Standard Phy/Ab.Phy/Func/Econ/Comb.%Good= 45/100/100/45.0, ECF (NORTHEAST)								
(1) Exterior		X	Plaster	(6) Ceilings		(13) Plumbing Average Fixture(s) 1 3 Fixture Bath 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan			(16) Porches 0.503 => TCV of Bldg: 1 =									
X	Wood/Shingle Aluminum/Vinyl Brick Insulation	(7) Excavation Basement: 624 S.F. Crawl: 102 S.F. Slab: 0 S.F. Height to Joists: 0.0		(8) Basement Conc. Block Poured Conc. Stone Treated Wood Concrete Floor			(9) Basement Finish Recreation SF Living SF Walkout Doors No Floor SF			(14) Water/Sewer 1 Public Water 1 Public Sewer Water Well 1000 Gal Septic 2000 Gal Septic Lump Sum Items:								
(2) Windows		Many Avg. Few	X	Large Avg. Small	(10) Floor Support Joists: Unsupported Len: Cntr.Sup:													
X	Wood Sash Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement Double Glass Patio Doors Storms & Screens	(9) Basement Finish		(14) Water/Sewer														
(3) Roof		Gable Hip Flat		Gambrel Mansard Shed														
X	Asphalt Shingle																	
Chimney: Brick																		

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Grantor	Grantee	Sale Price	Sale Date	Inst. Type	Terms of Sale	Liber & Page	Verified By	Prcnt. Trans.
DYE ROBERT	COUNTY OF MUSKEGON TREASURER	0	04/29/2015	WD	TAX REVERTED	4053/878	DEED	0.0
MUSKEGON COUNTY TREASURER	DYE ROBERT	1,200	08/12/2009	QC	TAX DEEDS	3822/313	DEED	100.0
DYE LOUIS C	MUSKEGON COUNTY TREASURER	0	04/02/2009	CD	ASSIGNMENT	3808/460	DEED	0.0

Property Address	Class: 703.EXEMPT COUNTY	Zoning: R1-RES	Building Permit(s)	Date	Number	Status			
2228 RIORDAN ST	School: MUSKEGON HEIGHTS SCHOOLS			06/30/2001	B-11-01				
	P.R.E. 0%								
Owner's Name/Address	MAP #: 26-000-063-170								
COUNTY OF MUSKEGON TREASURER 173 E APPLE AVE STE 104 MUSKEGON MI 49442	2017 Est TCV 0 TCV/TFA: 0.00								
Tax Description	X Improved	Vacant	Land Value Estimates for Land Table 00001.NORTHEAST						
HT0416 BLK 63 LOT 17	Public Improvements		* Factors *						
Comments/Influences	Dirt Road		Description	Frontage	Depth	Front Depth	Rate %Adj.	Reason	Value
VACANT/ SUBSTANDARD 6/09	Gravel Road		NORTHEAST	50.00	125.00	1.0000	1.0000	80 100	4,000
	X	Paved Road	50 Actual Front Feet, 0.14 Total Acres Total Est. Land Value = 4,000						
	X	Storm Sewer							
	X	Sidewalk							
	X	Water							
	X	Sewer							
	X	Electric							
	X	Gas							
	X	Curb							
		Street Lights							
		Standard Utilities							
		Underground Utils.							
	Topography of Site								
	X	Level	Year	Land Value	Building Value	Assessed Value	Board of Review	Tribunal/Other	Taxable Value
		Rolling	2017	EXEMPT	EXEMPT	EXEMPT			EXEMPT
		Low	2016	EXEMPT	EXEMPT	EXEMPT			EXEMPT
		High	2015	2,000	3,200	5,200			5,200S
		Landscaped	2014	2,000	3,400	5,400			5,400S
		Swamp							
		Wooded							
		Pond							
		Waterfront							
		Ravine							
		Wetland							
		Flood Plain							

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Building Type		(3) Roof (cont.)		(11) Heating/Cooling			(15) Built-ins			(15) Fireplaces			(16) Porches/Decks		(17) Garage			
X	Single Family Mobile Home Town Home Duplex A-Frame		Eavestrough Insulation 0 Front Overhang 0 Other Overhang	X	Gas Wood		Oil Coal		Elec. Steam		Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi repl.Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum Security System		Interior 1 Story Interior 2 Story 2nd/Same Stack Two Sided Exterior 1 Story Exterior 2 Story Prefab 1 Story Prefab 2 Story Heat Circulator Raised Hearth Wood Stove Direct-Vented Gas	Area	Type	Year Built: Car Capacity: Class: Exterior: Brick Ven.: Stone Ven.: Common Wall: Foundation: Finished ?: Auto. Doors: Mech. Doors: Area: % Good: Storage Area: No Conc. Floor:		
X	Wood Frame		Drywall Paneled				Plaster Wood T&G											
Building Style: 1 STY		Trim & Decoration		Forced Air w/o Ducts Forced Air w/ Ducts Forced Hot Water Electric Baseboard Elec. Ceil. Radiant Radiant (in-floor) Electric Wall Heat Space Heater Wall/Floor Furnace Forced Heat & Cool Heat Pump No Heating/Cooling														
Yr Built 1910	Remodeled 0	Ex	X	Ord		Min	Size of Closets			Class: D Effec. Age: 55 Floor Area: 560 Total Base Cost: 28,273 Total Base New : 39,299 Total Depr Cost: 12,379 Estimated T.C.V: 6,227								
Condition for Age: Average		Lg	X	Ord		Small	Central Air Wood Furnace			CnlyMult X 1.390								
Room List		(5) Floors		Kitchen: Other: Other:			(12) Electric 100 Amps Service			Total Depr Cost: 12,379 X 0.503					Bsmnt Garage:			
	Basement 1st Floor 2nd Floor Bedrooms	(6) Ceilings		No./Qual. of Fixtures			Stories Exterior 1 Story Siding			Foundation Crawl Space			Rate	Bsmnt-Adj	Heat-Adj	Size	Cost	
(1) Exterior					Ex.	X	Ord.		Min	Other Additions/Adjustments			Rate					
X	Wood/Shingle Aluminum/Vinyl Brick	(7) Excavation		No. of Elec. Outlets			Average Fixture(s)			Public Water Public Sewer			912.00			1	912	
	Insulation	Basement: 0 S.F. Crawl: 560 S.F. Slab: 0 S.F. Height to Joists: 0.0		Many			X	Ave.		Few	(13) Plumbing			912.00			1	912
(2) Windows		Basement: 0 S.F. Crawl: 560 S.F. Slab: 0 S.F. Height to Joists: 0.0		(14) Water/Sewer			Phy/Ab.Phy/Func/Econ/Comb.%Good= 45/100/ 70/100/31.5, Functional Depreciation because of: SIZE/SUBSTANDARD/DISREPAIR ECF (NORTHEAST)			Depr.Cost = 12,379 0.503 => TCV of Bldg: 1 = 6,227								
X	Many Avg. Few	X	Large Avg. Small	(8) Basement		1 3 Fixture Bath 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan												
	Wood Sash Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement Double Glass Patio Doors Storms & Screens	Conc. Block Poured Conc. Stone Treated Wood Concrete Floor		(9) Basement Finish			(14) Water/Sewer											
(3) Roof		Recreation SF Living SF Walkout Doors No Floor SF		1 Public Water 1 Public Sewer Water Well 1000 Gal Septic 2000 Gal Septic														
X	Gable Hip Flat	Gambrel Mansard Shed	(10) Floor Support		Lump Sum Items:													
X	Asphalt Shingle	Joists: Unsupported Len: Cntr.Sup:																
Chimney: Brick																		

\*\*\* Information herein deemed reliable but not guaranteed\*\*\*

Grantor	Grantee	Sale Price	Sale Date	Inst. Type	Terms of Sale	Liber & Page	Verified By	Prcnt. Trans.			
ANDERSON JOSEPH	COUNTY OF MUSKEGON TREASURER	0	03/31/2015	QC	QUIT- CLAIM	4053/905	DEED	0.0			
WILLIS ARIEAL	ANDERSON JOSEPH	0	03/17/2014	QC	QUIT- CLAIM	4014/741	DEED	0.0			
MUSKEGON COUNTY TREASURER	WILLIS ARIEAL	400	10/17/2012	QC	QUIT- CLAIM	3928/246	DEED	0.0			
PARAMOUNT LAND HOLDINGS LLC	MUSKEGON COUNTY TREASURER	0	04/02/2012		FORECLOSURE	3914/33	DEED	0.0			
Property Address		Class: 703.EXEMPT COUNTY		Zoning: R1-RES	Building Permit(s)	Date	Number	Status			
2324 WOOD ST		School: MUSKEGON HEIGHTS SCHOOLS				09/11/2002	B-275-02				
Owner's Name/Address		P.R.E. 0%				09/29/1998	B-338-98				
COUNTY OF MUSKEGON TREASURER 173 E APPLE AVE STE 104 MUSKEGON MI 49442		MAP #: 26-000-103-170		2017 Est TCV 0 TCV/TFA: 0.00							
Tax Description		X Improved		Vacant		Land Value Estimates for Land Table 00001.NORTHEAST					
HT1281 BLK 103 LOT 17		Public Improvements		* Factors *			Value				
Comments/Influences		Dirt Road		Description	Frontage	Depth	Front	Depth	Rate %Adj.	Reason	Value
		Gravel Road		NORTHEAST	50.00	125.00	1.0000	1.0000	80	100	4,000
		X Paved Road		50 Actual Front Feet, 0.14 Total Acres			Total Est. Land Value =				4,000
		X Storm Sewer									
		X Sidewalk									
		X Water									
		X Sewer									
		X Electric									
		X Gas									
		X Curb									
		Street Lights									
		Standard Utilities									
		Underground Utils.									
		Topography of Site									
		X Level									
		Rolling									
		Low									
		High									
		Landscaped									
		Swamp									
		Wooded									
		Pond									
		Waterfront									
		Ravine									
		Wetland									
		Flood Plain		Year	Land Value	Building Value	Assessed Value	Board of Review	Tribunal/Other	Taxable Value	
		Who	When	What	2017	EXEMPT	EXEMPT	EXEMPT		EXEMPT	
		CED 08/30/1999 REVIEWED			2016	EXEMPT	EXEMPT	EXEMPT	EXEMPTM	EXEMPT	
					2015	2,000	8,300	10,300		10,300S	
					2014	2,000	8,900	10,900		10,900S	



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Building Type		(3) Roof (cont.)		(11) Heating/Cooling			(15) Built-ins			(15) Fireplaces			(16) Porches/Decks		(17) Garage	
X	Single Family Mobile Home Town Home Duplex A-Frame		Eavestrough Insulation 0 Front Overhang 0 Other Overhang	X	Gas Wood		Oil Coal		Elec. Steam		Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi repl.Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum Security System		Interior 1 Story Interior 2 Story 2nd/Same Stack Two Sided Exterior 1 Story Exterior 2 Story Prefab 1 Story Prefab 2 Story Heat Circulator Raised Hearth Wood Stove Direct-Vented Gas	Area 60	Type WGEP (1 Story)	Year Built: Car Capacity: Class: Exterior: Brick Ven.: Stone Ven.: Common Wall: Foundation: Finished ?: Auto. Doors: Mech. Doors: Area: % Good: Storage Area: No Conc. Floor:
X	Wood Frame		Drywall Paneled	X	Plaster Wood T&G											
Building Style: 1 STY		Trim & Decoration		Forced Air w/o Ducts Forced Air w/ Ducts Forced Hot Water Electric Baseboard Elec. Ceil. Radiant Radiant (in-floor) Electric Wall Heat Space Heater Wall/Floor Furnace Forced Heat & Cool Heat Pump No Heating/Cooling												
Yr Built 1915	Remodeled 0	Ex	X	Ord		Min	Size of Closets			Class: CD Effec. Age: 55 Floor Area: 780 Total Base Cost: 51,593 Total Base New : 71,715 Total Depr Cost: 32,272 Estimated T.C.V: 16,233						
Condition for Age: Average		Lg	X	Ord		Small	Central Air Wood Furnace			CnlyMult X 1.390 E.C.F. X 0.503						
Room List		(5) Floors		Kitchen: Softwood Other: Carpeted Other: Tile			(12) Electric 100 Amps Service			Stories Exterior Foundation Rate Bsmnt-Adj Heat-Adj 1.5 Story Siding Basement 89.28 0.00 0.00 Other Additions/Adjustments Rate (14) Water/Sewer Public Water 1025.00 1 1,025 Public Sewer 1025.00 1 1,025 (16) Porches WGEP (1 Story), Standard 51.96 60 3,118 Phy/Ab.Phy/Func/Econ/Comb.%Good= 45/100/100/100/45.0, Depr.Cost = 32,272 ECF (NORTHEAST) 0.503 => TCV of Bldg: 1 = 16,233						
	Basement 2 1st Floor 2nd Floor 2 Bedrooms	(6) Ceilings		No./Qual. of Fixtures Ex. X Ord. Min			No. of Elec. Outlets Many X Ave. Few			(13) Plumbing Average Fixture(s) 1 3 Fixture Bath 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan						
(1) Exterior	X	Plaster					(14) Water/Sewer			Bsmnt-Adj Heat-Adj Size Cost 1025.00 1 1,025 1025.00 1 1,025						
X	Wood/Shingle Aluminum/Vinyl Brick Insulation	(7) Excavation		Basement: 520 S.F. Crawl: 0 S.F. Slab: 0 S.F. Height to Joists: 0.0			(14) Water/Sewer			Rate Bsmnt-Adj Heat-Adj 1025.00 1 1,025 1025.00 1 1,025						
(2) Windows	Many Avg. Few	X	Large Avg. Small	(8) Basement			(14) Water/Sewer			Rate Bsmnt-Adj Heat-Adj 1025.00 1 1,025 1025.00 1 1,025						
X	Wood Sash Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement Double Glass Patio Doors Storms & Screens	(9) Basement Finish		Conc. Block Poured Conc. Stone Treated Wood Concrete Floor			(14) Water/Sewer			Rate Bsmnt-Adj Heat-Adj 1025.00 1 1,025 1025.00 1 1,025						
(3) Roof	X	Gable Hip Flat	Gambrel Mansard Shed	(10) Floor Support			(14) Water/Sewer			Rate Bsmnt-Adj Heat-Adj 1025.00 1 1,025 1025.00 1 1,025						
X	Asphalt Shingle	Recreation SF Living SF Walkout Doors No Floor SF		Joists: Unsupported Len: Cntr.Sup:			(14) Water/Sewer			Rate Bsmnt-Adj Heat-Adj 1025.00 1 1,025 1025.00 1 1,025						
Chimney: Brick				1 Public Water 1 Public Sewer Water Well 1000 Gal Septic 2000 Gal Septic			Lump Sum Items:			Rate Bsmnt-Adj Heat-Adj 1025.00 1 1,025 1025.00 1 1,025						

\*\*\* Information herein deemed reliable but not guaranteed\*\*\*

Grantor	Grantee	Sale Price	Sale Date	Inst. Type	Terms of Sale	Liber & Page	Verified By	Prcnt. Trans.			
COOK MARSHALL D	COUNTY OF MUSKEGON TREASURER	0	03/31/2015	QC	QUIT- CLAIM	4053/894	DEED	0.0			
FEDERAL NATIONAL MORTGAGE	COOK MARSHALL	1,500	03/17/2009		FORECLOSURE PURCHASE	3807/424	DEED	100.0			
CHASE HOME FINANCE LLC	FEDERAL NATIONAL MORTGAGE	0	08/06/2008	QC	QUIT-CLAIM	3788/970	DEED	100.0			
SHERIFF	CHASE HOME FINANCE LLC	36,684	07/25/2008	PR	SHERIFF DEED	3787/700	DEED	0.0			
Property Address		Class: 703.EXEMPT COUNTY		Zoning: R1-RES	Building Permit(s)	Date	Number	Status			
2327 MAFFETT ST		School: MUSKEGON HEIGHTS SCHOOLS				08/13/2007	E-87-07				
Owner's Name/Address		P.R.E. 0%									
COUNTY OF MUSKEGON TREASURER 173 E APPLE AVE STE 104 MUSKEGON MI 49442		MAP #: 26-000-095-070		2017 Est TCV 0 TCV/TFA: 0.00							
Tax Description		X Improved		Vacant		Land Value Estimates for Land Table 00001.NORTHEAST					
HT1074 BLK 95 S 2/3 OF LOT 7		Public Improvements		* Factors *			Value				
Comments/Influences		Dirt Road		Description	Frontage	Depth	Front	Depth	Rate %Adj.	Reason	Value
CONDEMNED IN 4/06. FORECLOSURE / REPO: ASKING \$4,800 12/08		Gravel Road		NORTHEAST	33.00	125.00	1.0000	1.0000	80	100	2,640
		X Paved Road		33 Actual Front Feet, 0.10 Total Acres			Total Est. Land Value =				2,640
		X Storm Sewer									
		X Sidewalk									
		X Water									
		X Sewer									
		X Electric									
		X Gas									
		X Curb									
		Street Lights									
		Standard Utilities									
		Underground Utils.									
		Topography of Site									
		X Level									
		Rolling									
		Low									
		High									
		Landscaped									
		Swamp									
		Wooded									
		Pond									
		Waterfront									
		Ravine									
		Wetland									
		Flood Plain									
		Year	Land Value	Building Value	Assessed Value	Board of Review	Tribunal/Other	Taxable Value			
Who		When	What	2017	EXEMPT	EXEMPT	EXEMPT	EXEMPT			
CEJ 06/30/1999 REVIEWED				2016	EXEMPT	EXEMPT	EXEMPT	EXEMPT			
				2015	1,300	5,600	6,900	6,900S			
				2014	1,300	6,000	7,300	7,300S			



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\*\*\* Information herein deemed reliable but not guaranteed\*\*\*

Building Type		(3) Roof (cont.)		(11) Heating/Cooling			(15) Built-ins			(15) Fireplaces			(16) Porches/Decks		(17) Garage	
X	Single Family Mobile Home Town Home Duplex A-Frame		Eavestrough Insulation 0 Front Overhang 0 Other Overhang	X	Gas Wood		Oil Coal		Elec. Steam		Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi repl.Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum Security System		Interior 1 Story Interior 2 Story 2nd/Same Stack Two Sided Exterior 1 Story Exterior 2 Story Prefab 1 Story Prefab 2 Story Heat Circulator Raised Hearth Wood Stove Direct-Vented Gas	Area 160	Type WGEP (1 Story)	Year Built: Car Capacity: Class: Exterior: Brick Ven.: Stone Ven.: Common Wall: Foundation: Finished ?: Auto. Doors: Mech. Doors: Area: % Good: Storage Area: No Conc. Floor:
X	Wood Frame		Drywall Paneled	X	Plaster Wood T&G											
Building Style: 1 STY		Trim & Decoration		Forced Air w/o Ducts Forced Air w/ Ducts Forced Hot Water Electric Baseboard Elec. Ceil. Radiant Radiant (in-floor) Electric Wall Heat Space Heater Wall/Floor Furnace Forced Heat & Cool Heat Pump No Heating/Cooling												
Yr Built 1915	Remodeled 0	Ex	X	Ord		Min	Size of Closets			Class: D Effec. Age: 57 Floor Area: 836 Total Base Cost: 46,098 Total Base New : 64,076 Total Depr Cost: 21,626 Estimated T.C.V: 10,878						
Condition for Age: Average		Lg	X	Ord		Small	Central Air Wood Furnace			CnlyMult X 1.390 E.C.F. X 0.503						
Room List		(5) Floors		Kitchen: Softwood Other: Carpeted Other: Tile			(12) Electric 100 Amps Service			Stories Exterior Foundation Rate Bsmnt-Adj Heat-Adj Size Cost 1 Story Siding Mich Bsmnt. 50.52 -4.42 0.66 836 39,091 Other Additions/Adjustments Rate Size Cost (14) Water/Sewer Public Water 912.00 1 912 Public Sewer 912.00 1 912 (16) Porches WGEP (1 Story), Standard 32.39 160 5,182 Phy/Ab.Phy/Func/Econ/Comb.%Good= 45/ 75/100/100/33.8, Depr.Cost = 21,626 ECF (NORTHEAST) 0.503 => TCV of Bldg: 1 = 10,878						
	Basement 1st Floor 2nd Floor 2 Bedrooms	Kitchen: Softwood Other: Carpeted Other: Tile		(12) Electric 100 Amps Service			No./Qual. of Fixtures Ex. X Ord. Min			Rate Bsmnt-Adj Heat-Adj Size Cost 50.52 -4.42 0.66 836 39,091						
(1) Exterior	X	Plaster					No. of Elec. Outlets Many X Ave. Few			Rate Bsmnt-Adj Heat-Adj Size Cost 912.00 1 912 912.00 1 912						
X	Wood/Shingle Aluminum/Vinyl Brick	(7) Excavation		(13) Plumbing			Average Fixture(s) 1 3 Fixture Bath 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan			Rate Bsmnt-Adj Heat-Adj Size Cost 32.39 160 5,182						
	Insulation	Basement: 836 S.F. Crawl: 0 S.F. Slab: 0 S.F. Height to Joists: 0.0		Average Fixture(s) 1 3 Fixture Bath 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan			Rate Bsmnt-Adj Heat-Adj Size Cost 32.39 160 5,182			Phy/Ab.Phy/Func/Econ/Comb.%Good= 45/ 75/100/100/33.8, Depr.Cost = 21,626 ECF (NORTHEAST) 0.503 => TCV of Bldg: 1 = 10,878						
(2) Windows	Many Avg. Few	X	Large Avg. Small	(8) Basement			Average Fixture(s) 1 3 Fixture Bath 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan			Rate Bsmnt-Adj Heat-Adj Size Cost 32.39 160 5,182						
X	Wood Sash Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement Double Glass Patio Doors Storms & Screens	Conc. Block Poured Conc. Stone Treated Wood Concrete Floor		(9) Basement Finish			Average Fixture(s) 1 3 Fixture Bath 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan			Rate Bsmnt-Adj Heat-Adj Size Cost 32.39 160 5,182						
		Recreation SF Living SF Walkout Doors No Floor SF		(14) Water/Sewer			Average Fixture(s) 1 3 Fixture Bath 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan			Rate Bsmnt-Adj Heat-Adj Size Cost 32.39 160 5,182						
(3) Roof	X	Gable Hip Flat	Gambrel Mansard Shed	(10) Floor Support			Average Fixture(s) 1 3 Fixture Bath 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan			Rate Bsmnt-Adj Heat-Adj Size Cost 32.39 160 5,182						
X	Asphalt Shingle	Joists: Unsupported Len: Cntr.Sup:		(14) Water/Sewer			Average Fixture(s) 1 3 Fixture Bath 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan			Rate Bsmnt-Adj Heat-Adj Size Cost 32.39 160 5,182						
	Chimney: Brick			Lump Sum Items:			Average Fixture(s) 1 3 Fixture Bath 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan			Rate Bsmnt-Adj Heat-Adj Size Cost 32.39 160 5,182						

\*\*\* Information herein deemed reliable but not guaranteed\*\*\*

Grantor	Grantee	Sale Price	Sale Date	Inst. Type	Terms of Sale	Liber & Page	Verified By	Prcnt. Trans.
WILLIAMS SABRINA	COUNTY OF MUSKEGON TREASURER	0	03/31/2015	QC	QUIT- CLAIM	4053/899	DEED	0.0
JONES JUANITA ET AL	WILLIAMS SABRINA	55,000	05/24/2006	WD	WARRANTY DEED	3704/744	DEED	100.0
JONES, JUANITA	JONES, JUANITA ET AL	0	03/13/1998	LC	QUIT-CLAIM	2076/94	DEED	0.0
		0	05/07/1996	DC	COURT ORDER	1900:0609	DEED	0.0

Property Address	Class: 703.EXEMPT COUNTY	Zoning: R1-RES	Building Permit(s)	Date	Number	Status
2332 HOYT ST	School: MUSKEGON HEIGHTS SCHOOLS					
Owner's Name/Address	P.R.E. 0%					
COUNTY OF MUSKEGON TREASURER 173 E APPLE AVE STE 104 MUSKEGON MI 49442	MAP #: 26-000-099-160					
	2017 Est TCV 0 TCV/TFA: 0.00					

Tax Description	Improved	Vacant	Land Value Estimates for Land Table 00001.NORTHEAST							
HT1182 BLK 99 LOT 16	X		* Factors *							
Comments/Influences			Description	Frontage	Depth	Front	Depth	Rate %Adj.	Reason	Value
			NORTHEAST	50.00	125.00	1.0000	1.0000	80	100	4,000
			50 Actual Front Feet, 0.14 Total Acres Total Est. Land Value = 4,000							

- X Improved
- X Public Improvements
- X Dirt Road
- X Gravel Road
- X Paved Road
- X Storm Sewer
- X Sidewalk
- X Water
- X Sewer
- X Electric
- X Gas
- X Curb
- X Street Lights
- X Standard Utilities
- X Underground Utils.



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Topography of Site	Year	Land Value	Building Value	Assessed Value	Board of Review	Tribunal/Other	Taxable Value
X Level	2017	EXEMPT	EXEMPT	EXEMPT			EXEMPT
X Rolling	2016	EXEMPT	EXEMPT	EXEMPT	EXEMPTM		EXEMPT
X Low	2015	2,000	11,300	13,300			13,300S
X High	2014	2,000	12,100	14,100			14,100S
X Landscaped							
X Swamp							
X Wooded							
X Pond							
X Waterfront							
X Ravine							
X Wetland							
X Flood Plain							
Who	When	What					
CEJ	06/30/1999	REVIEWED					

\*\*\* Information herein deemed reliable but not guaranteed\*\*\*





Grantor	Grantee	Sale Price	Sale Date	Inst. Type	Terms of Sale	Liber & Page	Verified By	Prcnt. Trans.
SMITH RAYMOND	COUNTY OF MUSKEGON TREASURER	0	03/31/2015	QC	QUIT- CLAIM	4053/910	DEED	0.0
SMITH RAYMOND/WIFE	SMITH RAYMOND	0	02/07/2014	DC	DEATH CERTIFICATE	4010/697	DEED	0.0

Property Address	Class: 703.EXEMPT COUNTY	Zoning: R1-RES	Building Permit(s)	Date	Number	Status
2405 HOWDEN ST	School: MUSKEGON HEIGHTS SCHOOLS			07/20/2009	B-170-09	
Owner's Name/Address	P.R.E. 0%					
COUNTY OF MUSKEGON TREASURER 173 E APPLE AVE STE 104 MUSKEGON MI 49442	MAP #: 26-000-115-020					
	2017 Est TCV 0 TCV/TFA: 0.00					

Tax Description	Improved	Vacant	Land Value Estimates for Land Table 00001.NORTHEAST						Value	
HT1538 BLK 115 LOT 2			* Factors *							
Comments/Influences			Description	Frontage	Depth	Front	Depth	Rate %Adj.	Reason	Value
PO ADD CHNG, 7/12 OWNERS DECEASED/DEFERRED MAINTENANCE			NORTHEAST	50.00	125.00	1.0000	1.0000	80 100		4,000
			50 Actual Front Feet, 0.14 Total Acres Total Est. Land Value = 4,000							

X	Improved		
X	Dirt Road		
X	Gravel Road		
X	Paved Road		
X	Storm Sewer		
X	Sidewalk		
X	Water		
X	Sewer		
X	Electric		
X	Gas		
X	Curb		
	Street Lights		
	Standard Utilities		
	Underground Utils.		



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Topography of Site	Year	Land Value	Building Value	Assessed Value	Board of Review	Tribunal/Other	Taxable Value
X Level	2017	EXEMPT	EXEMPT	EXEMPT			EXEMPT
Rolling	2016	EXEMPT	EXEMPT	EXEMPT	EXEMPTM		EXEMPT
Low	2015	2,000	7,000	9,000			9,000S
High	2014	2,000	9,700	11,700			11,700S
Landscaped							
Swamp							
Wooded							
Pond							
Waterfront							
Ravine							
Wetland							
Flood Plain							
Who When What							
CED 08/30/1999 REVIEWED							

\*\*\* Information herein deemed reliable but not guaranteed\*\*\*

Building Type		(3) Roof (cont.)		(11) Heating/Cooling			(15) Built-ins			(15) Fireplaces			(16) Porches/Decks		(17) Garage	
X	Single Family Mobile Home Town Home Duplex A-Frame		Eavestrough Insulation 0 Front Overhang 0 Other Overhang	X	Gas Wood		Oil Coal		Elec. Steam		Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi repl.Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum Security System		Interior 1 Story Interior 2 Story 2nd/Same Stack Two Sided Exterior 1 Story Exterior 2 Story Prefab 1 Story Prefab 2 Story Heat Circulator Raised Hearth Wood Stove Direct-Vented Gas	Area 212	Type WGEP (1 Story)	Year Built: 1925 Car Capacity: Class: D Exterior: Siding Brick Ven.: 0 Stone Ven.: 0 Common Wall: Detache Foundation: 18 Inch Finished?: Auto. Doors: 0 Mech. Doors: 0 Area: 400 % Good: 10 Storage Area: 0 No Conc. Floor: 0
X	Wood Frame		Drywall Paneled	X	Plaster Wood T&G											
Building Style: 2 STY		Trim & Decoration		Forced Air w/o Ducts Forced Air w/ Ducts Forced Hot Water Electric Baseboard Elec. Ceil. Radiant Radiant (in-floor) Electric Wall Heat Space Heater Wall/Floor Furnace Forced Heat & Cool Heat Pump No Heating/Cooling			Central Air Wood Furnace			Class: D Effec. Age: 55 Floor Area: 2028 Total Base Cost: 92,285 Total Base New : 128,276 Total Depr Cost: 27,028 Estimated T.C.V: 13,595			CntyMult X 1.390 E.C.F. X 0.503		Bsmnt Garage:	
Yr Built 1925	Remodeled 0	Size of Closets		No. Heating/Cooling			100 Amps Service								Carport Area: Roof:	
Condition for Age: Poor		Lg	X	Ord		Small										
Room List		(5) Floors		Kitchen: Hardwood Other: Carpeted Other: Tile			(12) Electric			Stories Exterior Foundation Rate Bsmnt-Adj Heat-Adj			Size Cost			
	Basement						No./Qual. of Fixtures			2 Story Siding Mich Bsmnt. 77.02 -4.19 1.31			1014 75,178			
	1st Floor						Ex. X Ord. Min			Other Additions/Adjustments Rate			Size Cost			
	2nd Floor						No. of Elec. Outlets			(13) Plumbing			1650.00 1 1,650			
	3 Bedrooms						Many X Ave. Few			(14) Water/Sewer			912.00 1 912			
(1) Exterior		X Plaster		Basement: 1014 S.F. Crawl: 0 S.F. Slab: 0 S.F. Height to Joists: 0.0			(13) Plumbing			(16) Porches			912.00 1 912			
X	Wood/Shingle Aluminum/Vinyl Brick			Average Fixture(s) 2 3 Fixture Bath 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan						WGEP (1 Story), Standard 28.74 Phy/Ab.Phy/Func/Econ/Comb.%Good= 45/ 50/100/100/22.5, Depr.Cost = 26,504			212 6,093			
(2) Windows		X Avg. Few		X Avg. Small						Separately Depreciated Items: (17) Garages Class:D Exterior: Siding Foundation: 18 Inch (Unfinished) Base Cost 18.85 400 7,540 County Multiplier = 1.39 => Cost New = 10,481 Phy/Ab.Phy/Func/Econ/Comb.%Good= 10/ 50/100/100/5.0, Depr.Cost = 524 Total Depreciated Cost = 27,028 ECF (NORTHEAST) 0.503 => TCV of Bldg: 1 = 13,595						
X	Wood Sash Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement			Conc. Block Poured Conc. Stone Treated Wood Concrete Floor												
X	Double Glass Patio Doors Storms & Screens			(9) Basement Finish												
(3) Roof				Recreation SF Living SF Walkout Doors No Floor SF												
X	Gable Hip Flat	Gambrel Mansard Shed		(10) Floor Support												
X	Asphalt Shingle			Joists: Unsupported Len: Cntr.Sup:			1 Public Water 1 Public Sewer Water Well 1000 Gal Septic 2000 Gal Septic									
Chimney: Brick							Lump Sum Items:									

\*\*\* Information herein deemed reliable but not guaranteed\*\*\*

Grantor	Grantee	Sale Price	Sale Date	Inst. Type	Terms of Sale	Liber & Page	Verified By	Prcnt. Trans.
ANDERSON DONALD SR	COUNTY OF MUSKEGON TREASURER	0	03/31/2015	QC	QUIT- CLAIM	4053/913	DEED	0.0
ROWAN JAMES/ANDERSON DONALD	MATTOX LARRY B/JAMES ROWAN	0	11/02/2011	QC	QUIT- CLAIM	3895/126	DEED	0.0
MATTOX LARRY B/JAMES ROWAN	ANDERSON DONALD SR	0	11/02/2011	QC	QUIT- CLAIM	3895/126	DEED	0.0
ROWAN JAMES	ROWAN JAMES/DONALD ANDERSON	0	01/09/2003	QC	QUIT-CLAIM	3519/301	DEED	0.0

Property Address	Class: 703.EXEMPT COUNTY	Zoning: R1-RES	Building Permit(s)	Date	Number	Status
2408 HOYT ST	School: MUSKEGON HEIGHTS SCHOOLS					
Owner's Name/Address	P.R.E. 0%					
COUNTY OF MUSKEGON TREASURER 173 E APPLE STE 104 MUSKEGON MI 49442	MAP #: 26-000-116-220					
	2017 Est TCV 0 TCV/TFA: 0.00					

Tax Description	Improved	Vacant	Land Value Estimates for Land Table 00001.NORTHEAST							
HT1582 BLK 116 LOT 22	X		* Factors *							
Comments/Influences			Description	Frontage	Depth	Front	Depth	Rate %Adj.	Reason	Value
			NORTHEAST	50.00	125.00	1.0000	1.0000	80	100	4,000
			50 Actual Front Feet, 0.14 Total Acres Total Est. Land Value = 4,000							

Public Improvements

- X Dirt Road
- X Gravel Road
- X Paved Road
- X Storm Sewer
- X Sidewalk
- X Water
- X Sewer
- X Electric
- X Gas
- X Curb
- Street Lights
- Standard Utilities
- Underground Utils.



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Topography of Site	Year	Land Value	Building Value	Assessed Value	Board of Review	Tribunal/Other	Taxable Value
X Level	2017	EXEMPT	EXEMPT	EXEMPT			EXEMPT
Rolling	2016	EXEMPT	EXEMPT	EXEMPT	EXEMPTM		EXEMPT
Low	2015	2,000	9,400	11,400			11,400S
High	2014	2,000	12,600	14,600			12,852C
Landscaped							
Swamp							
Wooded							
Pond							
Waterfront							
Ravine							
Wetland							
Flood Plain							
Who	When	What					
CEJ	08/30/1999	REVIEWED					

Building Type		(3) Roof (cont.)		(11) Heating/Cooling			(15) Built-ins			(15) Fireplaces			(16) Porches/Decks		(17) Garage	
X	Single Family Mobile Home Town Home Duplex A-Frame		Eavestrough Insulation 0 Front Overhang 0 Other Overhang	X	Gas Wood		Oil Coal		Elec. Steam		Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi repl.Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum Security System		Interior 1 Story Interior 2 Story 2nd/Same Stack Two Sided Exterior 1 Story Exterior 2 Story Prefab 1 Story Prefab 2 Story Heat Circulator Raised Hearth Wood Stove Direct-Vented Gas	Area 126 18	Type WSEP (1 Story) CPP	Year Built: Car Capacity: Class: D Exterior: Siding Brick Ven.: 0 Stone Ven.: 0 Common Wall: Detache Foundation: 18 Inch Finished ?: Auto. Doors: 0 Mech. Doors: 0 Area: 192 % Good: 20 Storage Area: 0 No Conc. Floor: 0
X	Wood Frame		Drywall Paneled	X	Plaster Wood T&G											
Building Style: 1 STY		Trim & Decoration		Central Air Wood Furnace												
Yr Built 1915	Remodeled 0	Ex	X	Ord		Min	(12) Electric									
Condition for Age: Average		Lg	X	Ord		Small	100 Amps Service									
Room List		(5) Floors		Kitchen: Vinyl Other: Hardwood Other: Carpeted			No./Qual. of Fixtures									
	Basement 1st Floor 2nd Floor Bedrooms						Ex. X Ord. Min									
(1) Exterior		X	Plaster				No. of Elec. Outlets									
X	Wood/Shingle Aluminum/Vinyl Brick						Many X Ave. Few									
Insulation		(7) Excavation		Basement: 816 S.F. Crawl: 288 S.F. Slab: 0 S.F. Height to Joists: 0.0			(13) Plumbing									
(2) Windows							Average Fixture(s) 1 3 Fixture Bath 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan									
X	Many Avg. Few	X	Large Avg. Small	(8) Basement			(14) Water/Sewer									
Wood Sash Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement Double Glass Patio Doors Storms & Screens				Conc. Block Poured Conc. Stone Treated Wood X Concrete Floor			1 Public Water 1 Public Sewer Water Well 1000 Gal Septic 2000 Gal Septic									
(3) Roof				(9) Basement Finish			Lump Sum Items:									
X	Gable Hip Flat	Gambrel Mansard Shed		(10) Floor Support												
X	Asphalt Shingle			Joists: Unsupported Len: Cntr.Sup:												
Chimney: Brick																

\*\*\* Information herein deemed reliable but not guaranteed\*\*\*

Grantor	Grantee	Sale Price	Sale Date	Inst. Type	Terms of Sale	Liber & Page	Verified By	Prcnt. Trans.
SCOTT MAVIS	MUSKEGON COUNTY TREASURER	0	03/31/2015	QC	QUIT- CLAIM	4053/919	DEED	0.0

Property Address	Class: 401 RESIDENTIAL	Zoning:	Building Permit(s)	Date	Number	Status
2420 7TH ST	School: MUSKEGON HEIGHTS SCHOOLS			11/02/2011	H-143-11	
	P.R.E. 0%					
Owner's Name/Address	MAP #: 26-000-125-170					
MUSKEGON COUNTY TREASURER 173 E APPLE AVE STE 104 MUSKEGON MI 49442	2017 Est TCV 0 TCV/TFA: 0.00					

Tax Description	Improved	Vacant	Land Value Estimates for Land Table 00013.ORANGE								
HT1749 BLK 125 LOT 17 & S 1/2 OF LOT 18			* Factors *								
			Description	Frontage	Depth	Front	Depth	Rate	%Adj.	Reason	Value
			NEIGHBORHOOD	13	75.00	125.00	1.0000	1.0000	80	100	6,000
			75 Actual Front Feet, 0.22 Total Acres Total Est. Land Value =							6,000	

Comments/Influences

X Storm Sewer  
Sidewalk  
X Water  
X Sewer  
X Electric  
X Gas  
Curb  
X Street Lights  
Standard Utilities  
Underground Utils.



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Topography of Site	Year	Land Value	Building Value	Assessed Value	Board of Review	Tribunal/Other	Taxable Value
Level Rolling Low High Landscaped Swamp Wooded Pond Waterfront Ravine Wetland Flood Plain	2017	EXEMPT	EXEMPT	EXEMPT			EXEMPT
	2016	EXEMPT	EXEMPT	EXEMPT	EXEMPTM		EXEMPT
	2015	3,000	12,400	15,400			15,400S
	2014	3,000	12,600	15,600			15,600S

\*\*\* Information herein deemed reliable but not guaranteed\*\*\*

Building Type		(3) Roof (cont.)		(11) Heating/Cooling			(15) Built-ins			(15) Fireplaces			(16) Porches/Decks		(17) Garage	
X	Single Family Mobile Home Town Home Duplex A-Frame		Eavestrough Insulation 0 Front Overhang 0 Other Overhang	X	Gas Wood		Oil Coal		Elec. Steam		Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi repl.Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum Security System		Interior 1 Story Interior 2 Story 2nd/Same Stack Two Sided Exterior 1 Story Exterior 2 Story Prefab 1 Story Prefab 2 Story Heat Circulator Raised Hearth Wood Stove Direct-Vented Gas	Area 120	Type WSEP (1 Story)	Year Built: Car Capacity: Class: CD Exterior: Siding Brick Ven.: 0 Stone Ven.: 0 Common Wall: Detache Foundation: 18 Inch Finished ?: Auto. Doors: 0 Mech. Doors: 0 Area: 400 % Good: 0 Storage Area: 0 No Conc. Floor: 0
X	Wood Frame		Drywall Paneled				Plaster Wood T&G									
Building Style: 2 STY		Trim & Decoration		Forced Air w/o Ducts Forced Air w/ Ducts Forced Hot Water Electric Baseboard Elec. Ceil. Radiant Radiant (in-floor) Electric Wall Heat Space Heater Wall/Floor Furnace Forced Heat & Cool Heat Pump No Heating/Cooling			Central Air Wood Furnace			Class: CD Effec. Age: 57 Floor Area: 1728 Total Base Cost: 104,229 Total Base New : 144,879 Total Depr Cost: 42,377 Estimated T.C.V: 20,129			CntyMult X 1.390 E.C.F. X 0.475		Bsmnt Garage:	
Yr Built 1935	Remodeled 0	Ex	X	Ord		Min	Size of Closets		Lg		X	Ord		Small	Doors: Solid X H.C.	
Condition for Age: Average		(5) Floors		Kitchen: Other: Other:			(12) Electric 100 Amps Service			Stories Exterior Foundation Rate Bsmnt-Adj Heat-Adj 2 Story Siding Mich Bsmnt. 95.93 -4.56 0.00 Other Additions/Adjustments Rate (9) Basement Finish Basement Recreation Finish 11.25 (13) Plumbing 3 Fixture Bath 1975.00 (14) Water/Sewer Public Water 1025.00 Public Sewer 1025.00 (16) Porches WSEP (1 Story), Standard 30.34 (17) Garages Class:CD Exterior: Siding Foundation: 18 Inch (Unfinished) Base Cost 19.75 Phy/Ab.Phy/Func/Econ/Comb.%Good= 45/ 65/100/100/29.3, Depr.Cost = ECF (ORANGE) 0.475 => TCV of Bldg: 1 =			Size Cost 864 78,944 Size Cost 864 9,720 1 1,975 1 1,025 1 1,025 120 3,641 400 7,900 42,377 20,129			
Room List		(6) Ceilings		No./Qual. of Fixtures Ex. X Ord. Min			No. of Elec. Outlets Many X Ave. Few			Average Fixture(s) 2 3 Fixture Bath 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan			Carpport Area: Roof:			
(1) Exterior		(7) Excavation		Basement: 864 S.F. Crawl: 0 S.F. Slab: 0 S.F. Height to Joists: 0.0			(13) Plumbing			Rate Bsmnt-Adj Heat-Adj 95.93 -4.56 0.00			Carpport Area: Roof:			
X	Wood/Shingle Aluminum/Vinyl Brick	Insulation		(8) Basement			(14) Water/Sewer			Rate Bsmnt-Adj Heat-Adj 11.25 1975.00 1025.00 1025.00 30.34			Carpport Area: Roof:			
(2) Windows		Many Avg. Few		X Avg. Small		(9) Basement Finish			Rate Bsmnt-Adj Heat-Adj 11.25 1975.00 1025.00 1025.00 30.34			Carpport Area: Roof:				
Wood Sash Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement Double Glass Patio Doors Storms & Screens		Conc. Block Poured Conc. Stone Treated Wood Concrete Floor		(9) Basement Finish			(14) Water/Sewer			Rate Bsmnt-Adj Heat-Adj 11.25 1975.00 1025.00 1025.00 30.34			Carpport Area: Roof:			
(3) Roof		864 Recreation SF Living SF Walkout Doors No Floor SF		(10) Floor Support			(14) Water/Sewer			Rate Bsmnt-Adj Heat-Adj 11.25 1975.00 1025.00 1025.00 30.34			Carpport Area: Roof:			
X	Gable Hip Flat	Gambrel Mansard Shed		Joists: Unsupported Len: Cntr.Sup:			1 Public Water 1 Public Sewer Water Well 1000 Gal Septic 2000 Gal Septic			Rate Bsmnt-Adj Heat-Adj 11.25 1975.00 1025.00 1025.00 30.34			Carpport Area: Roof:			
X	Asphalt Shingle						Lump Sum Items:			Rate Bsmnt-Adj Heat-Adj 11.25 1975.00 1025.00 1025.00 30.34			Carpport Area: Roof:			
Chimney: Brick										Rate Bsmnt-Adj Heat-Adj 11.25 1975.00 1025.00 1025.00 30.34			Carpport Area: Roof:			

\*\*\* Information herein deemed reliable but not guaranteed\*\*\*

Grantor	Grantee	Sale Price	Sale Date	Inst. Type	Terms of Sale	Liber & Page	Verified By	Prcnt. Trans.						
PAYNE INVESTMENTS LLC	COUNTY OF MUSKEGON TREASURER	0	04/29/2015	WD	TAX REVERTED	4053/965	DEED	0.0						
MUSKEGON COUNTY TREASURER	PAYNE INVESTMENTS LLC	300	10/13/2011	QC	QUIT- CLAIM	3892/738	DEED	100.0						
SANDER ANTHONY R	MUSKEGON COUNTY TREASURER	0	04/01/2011	QC	QUIT- CLAIM	3880/758	DEED	0.0						
BLOCK DEVELOPMENT L L C	SANDER ANTHONY R	47,849	01/31/2007	LC	LAND CONTRACT		DEED	100.0						
Property Address		Class: 703.EXEMPT COUNTY		Zoning: R1-RES	Building Permit(s)	Date	Number	Status						
2529 RAY ST		School: MUSKEGON HEIGHTS SCHOOLS				10/01/1999	B-346-99							
Owner's Name/Address		P.R.E. 0%												
COUNTY OF MUSKEGON TREASURER 173 E APPLE AVE STE 104 MUSKEGON MI 49442		MAP #: 26-000-159-080												
Tax Description		2017 Est TCV 0 TCV/TFA: 0.00		Land Value Estimates for Land Table 00001.NORTHEAST										
HT2543 BLK 159 LOTS 8 & 9		X Improved		Vacant		* Factors *								
Comments/Influences		X Dirt Road		Public Improvements		Description	Frontage	Depth	Front	Depth	Rate	%Adj.	Reason	Value
WATER OFF 6/09 CONDEMNED: 9/20/2011		X Gravel Road				NORTHEAST	100.00	125.00	1.0000	1.0000	80	100		8,000
		X Paved Road				100 Actual Front Feet, 0.29 Total Acres Total Est. Land Value = 8,000								
		X Storm Sewer												
		X Sidewalk												
		X Water												
		X Sewer												
		X Electric												
		X Gas												
		X Curb												
		Street Lights												
		Standard Utilities												
		Underground Utils.												
		Topography of Site												
		X Level												
		Rolling												
		Low												
		High												
		Landscaped												
		Swamp												
		Wooded												
		Pond												
		Waterfront												
		Ravine												
		Wetland												
		Flood Plain												
		Year	Land Value	Building Value	Assessed Value	Board of Review	Tribunal/Other	Taxable Value						
Who		When	What	2017	EXEMPT	EXEMPT	EXEMPT	EXEMPT						
CEJ 08/30/1999 REVIEWED				2016	EXEMPT	EXEMPT	EXEMPT	EXEMPT						
RJ 06/08/2009 REVIEWED				2015	4,000	6,400	10,400	10,400S						
				2014	4,000	6,800	10,800	10,800S						



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Building Type		(3) Roof (cont.)		(11) Heating/Cooling			(15) Built-ins			(15) Fireplaces			(16) Porches/Decks		(17) Garage	
X	Single Family Mobile Home Town Home Duplex A-Frame		Eavestrough Insulation 0 Front Overhang 0 Other Overhang	X	Gas Wood		Oil Coal		Elec. Steam		Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi repl.Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum Security System		Interior 1 Story Interior 2 Story 2nd/Same Stack Two Sided Exterior 1 Story Exterior 2 Story Prefab 1 Story Prefab 2 Story Heat Circulator Raised Hearth Wood Stove Direct-Vented Gas	Area 343	Type WGEP (1 Story)	Year Built: Car Capacity: Class: Exterior: Brick Ven.: Stone Ven.: Common Wall: Foundation: Finished ?: Auto. Doors: Mech. Doors: Area: % Good: Storage Area: No Conc. Floor:
X	Wood Frame	X	Drywall Paneled				Plaster Wood T&G									
Building Style: 1 STY		Trim & Decoration		Forced Air w/o Ducts Forced Air w/ Ducts Forced Hot Water Electric Baseboard Elec. Ceil. Radiant Radiant (in-floor) Electric Wall Heat Space Heater Wall/Floor Furnace Forced Heat & Cool Heat Pump No Heating/Cooling			Central Air Wood Furnace			Class: D -10 Effec. Age: 55 Floor Area: 784 Total Base Cost: 43,740 Total Base New : 60,798 Total Depr Cost: 24,623 Estimated T.C.V: 12,385			CntyMult X 1.390 E.C.F. X 0.503		Bsmnt Garage: Carport Area: Roof:	
Yr Built 1925	Remodeled 0	Ex	X	Ord		Min										
Condition for Age: Average		Lg	X	Ord		Small										
Room List		(5) Floors		Kitchen: Vinyl Other: Softwood Other:			(12) Electric 100 Amps Service			Stories Exterior Foundation Rate Bsmnt-Adj Heat-Adj Size Cost 1 Story Siding Mich Bsmnt. 46.24 -4.05 0.59 784 33,540 Other Additions/Adjustments Rate Size Cost (14) Water/Sewer Public Water 912.00 1 912 Public Sewer 912.00 1 912 (16) Porches WGEP (1 Story), Standard 24.42 343 8,376 Phy/Ab.Phy/Func/Econ/Comb.%Good= 45/100/100/ 90/40.5, Depr.Cost = 24,623 Economic Depreciation because of: OBSERVATION ECF (NORTHEAST) 0.503 => TCV of Bldg: 1 = 12,385						
	Basement 1st Floor 2nd Floor Bedrooms	Kitchen: Vinyl Other: Softwood Other:		No./Qual. of Fixtures Ex. X Ord. Min			No. of Elec. Outlets Many X Ave. Few			(13) Plumbing Average Fixture(s) 1 3 Fixture Bath 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan						
(1) Exterior	X	Drywall														
X	Wood/Shingle Aluminum/Vinyl Brick Insulation	Basement: 784 S.F. Crawl: 0 S.F. Slab: 0 S.F. Height to Joists: 0.0		(14) Water/Sewer												
(2) Windows	Many Avg. Few	X	Large Avg. Small	(8) Basement			(14) Water/Sewer									
X	Wood Sash Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement Double Glass Patio Doors Storms & Screens		Conc. Block Poured Conc. Stone Treated Wood X Concrete Floor	(9) Basement Finish												
(3) Roof	X	Gable Hip Flat	Gambrel Mansard Shed	Recreation SF Living SF Walkout Doors No Floor SF												
X	Asphalt Shingle	(10) Floor Support		1 Public Water 1 Public Sewer Water Well 1000 Gal Septic 2000 Gal Septic												
Chimney: Brick				Lump Sum Items:												

\*\*\* Information herein deemed reliable but not guaranteed\*\*\*

Grantor	Grantee	Sale Price	Sale Date	Inst. Type	Terms of Sale	Liber & Page	Verified By	Prcnt. Trans.			
TATRY ZACHODNIE LLC	COUNTY OF MUSKEGON TREASURER	0	03/31/2015	QC	QUIT- CLAIM	4053/932	DEED	0.0			
MUSKEGON COUNTY TREASURER	TATRY ZACHODNIE LLC	1,400	10/17/2012	QC	QUIT- CLAIM	3928/265	DEED	0.0			
CROSS JASPER R/ RAMONA MCE	MUSKEGON COUNTY TREASURER	0	04/02/2012		FORECLOSURE	3914/5	DEED	0.0			
CROSS JR JASPER	CROSS JASPER R/ RAMONA MCE	0	09/04/2000	QC	QUIT-CLAIM	3082/592	DEED	0.0			
Property Address		Class: 703.EXEMPT COUNTY		Zoning: R1-RES	Building Permit(s)		Date	Number	Status		
2533 REYNOLDS ST		School: MUSKEGON HEIGHTS SCHOOLS					07/22/1999	H-61-99			
Owner's Name/Address		P.R.E. 0%		MAP #: 26-000-149-090		2017 Est TCV 0 TCV/TFA: 0.00					
COUNTY OF MUSKEGON TREASURER 173 E APPLE AVE STE 104 MUSKEGON MI 49442		X Improved		Vacant		Land Value Estimates for Land Table 00001.NORTHEAST					
Tax Description		Public Improvements		* Factors *							
HT2299 BLK 149 LOT 9		Dirt Road		Description	Frontage	Depth	Front	Depth	Rate %Adj.	Reason	Value
Comments/Influences		Gravel Road		NORTHEAST	50.00	125.00	1.0000	1.0000	80	100	4,000
HOUSE IN DISREPAIR, DEFERRED MAINTENANCE WATER OFF 9/2009		X Paved Road		50 Actual Front Feet, 0.14 Total Acres Total Est. Land Value = 4,000							
		X Storm Sewer									
		X Sidewalk									
		X Water									
		X Sewer									
		X Electric									
		X Gas									
		X Curb									
		Street Lights									
		Standard Utilities									
		Underground Utils.									
		Topography of Site									
		X Level									
		Rolling									
		Low									
		High									
		Landscaped									
		Swamp									
		Wooded									
		Pond									
		Waterfront									
		Ravine									
		Wetland									
		Flood Plain		Year	Land Value	Building Value	Assessed Value	Board of Review	Tribunal/ Other	Taxable Value	
		Who	When	What	2017	EXEMPT	EXEMPT	EXEMPT		EXEMPT	
		CEJ 08/30/1999 REVIEWED			2016	EXEMPT	EXEMPT	EXEMPT	EXEMPTM	EXEMPT	
					2015	2,000	12,500	14,500		14,500S	
					2014	2,000	14,300	16,300		16,300S	



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Building Type		(3) Roof (cont.)		(11) Heating/Cooling			(15) Built-ins			(15) Fireplaces			(16) Porches/Decks		(17) Garage						
X	Single Family Mobile Home Town Home Duplex A-Frame		Eavestrough Insulation 0 Front Overhang 0 Other Overhang	X	Gas Wood		Oil Coal		Elec. Steam		Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi repl.Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum Security System		Interior 1 Story Interior 2 Story 2nd/Same Stack Two Sided Exterior 1 Story Exterior 2 Story Prefab 1 Story Prefab 2 Story Heat Circulator Raised Hearth Wood Stove Direct-Vented Gas	Area	Type	Year Built: Car Capacity: Class: Exterior: Brick Ven.: Stone Ven.: Common Wall: Foundation: Finished ?: Auto. Doors: Mech. Doors: Area: % Good: Storage Area: No Conc. Floor:					
X	Wood Frame		Drywall Paneled				Plaster Wood T&G														
Building Style: 2 STY		Trim & Decoration		Forced Air w/o Ducts Forced Air w/ Ducts Forced Hot Water Electric Baseboard Elec. Ceil. Radiant Radiant (in-floor) Electric Wall Heat Space Heater Wall/Floor Furnace Forced Heat & Cool Heat Pump No Heating/Cooling																	
Yr Built 1920	Remodeled 0	Ex	X	Ord		Min	Size of Closets		Lg		X	Ord		Small	Doors: Solid X H.C.						
Condition for Age: Average		(5) Floors		Central Air Wood Furnace			(12) Electric			100 Amps Service			Class: CD Effec. Age: 56 Floor Area: 2502 Total Base Cost: 110,510 Total Base New : 153,609 Total Depr Cost: 48,387 Estimated T.C.V: 24,339		CntyMult X 1.390 E.C.F. X 0.503	Bsmnt Garage: Carport Area: Roof:					
Room List		Basement 1st Floor 2nd Floor Bedrooms		Kitchen: Other: Other:			No./Qual. of Fixtures			Stories Exterior 2 Story Siding			Foundation	Rate	Bsmnt-Adj	Heat-Adj	Size	Cost			
(1) Exterior				Ex.			X	Ord.		Min	Other Additions/Adjustments			Rate							
X	Wood/Shingle Aluminum/Vinyl Brick			No. of Elec. Outlets			Many			X	Ave.		Few	(13) Plumbing			3 Fixture Bath 1975.00				
Insulation		(7) Excavation		Basement: 1251 S.F. Crawl: 0 S.F. Slab: 0 S.F. Height to Joists: 0.0			(13) Plumbing			Average Fixture(s) 2 3 Fixture Bath 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan			(14) Water/Sewer			Public Water 1025.00			Public Sewer 1025.00		
(2) Windows		Many Avg. Few		X		Large Avg. Small		(8) Basement			Conc. Block Poured Conc. Stone Treated Wood Concrete Floor			(9) Basement Finish			Recreation SF Living SF Walkout Doors No Floor SF				
Wood Sash Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement Double Glass Patio Doors Storms & Screens																					
(3) Roof		X		Gable Hip Flat		Gambrel Mansard Shed		(10) Floor Support			Joists: Unsupported Len: Cntr.Sup:			1 Public Water 1 Public Sewer Water Well 1000 Gal Septic 2000 Gal Septic			Lump Sum Items:				
Chimney: Brick																					

\*\*\* Information herein deemed reliable but not guaranteed\*\*\*

Grantor	Grantee	Sale Price	Sale Date	Inst. Type	Terms of Sale	Liber & Page	Verified By	Prcnt. Trans.
LOERA ROBERT JR	COUNTY OF MUSKEGON TREASURER	0	02/09/2015	JUD	FORECLOSURE	4053/999	DEED	0.0
LARABEE JEFF	LOERA ROBERT JR	12,500	03/23/2012	WD	WARRANTY DEED	3907/816	AFFIDAVIT	100.0
		9,000	10/01/1991		WARRANTY DEED	1588:0057	DEED	0.0

Property Address	Class: 703.EXEMPT COUNTY	Zoning:	Building Permit(s)	Date	Number	Status			
2633 WOOD ST	School: MUSKEGON HEIGHTS SCHOOLS			10/06/2009	B-236-09				
	P.R.E. 0%								
Owner's Name/Address	MAP #: 26-037-006-130								
COUNTY OF MUSKEGON TREASURER 173 E APPLE AVE STE 104 MUSKEGON MI 49442	2017 Est TCV 0 TCV/TFA: 0.00								
Tax Description	X Improved	Vacant	Land Value Estimates for Land Table 00001.NORTHEAST						
HT5395 LAWSON PARK BLK 6 LOT 13	Public Improvements		* Factors *						
Comments/Influences	Dirt Road		Description	Frontage	Depth	Front Depth	Rate %Adj.	Reason	Value
FIRE DAMAGE 2014	Gravel Road		NORTHEAST	50.00	125.00	1.0000	1.0000	80 100	4,000
	Paved Road		50 Actual Front Feet, 0.14 Total Acres Total Est. Land Value = 4,000						
	Storm Sewer								
	Sidewalk								
	Water								
	Sewer								
	Electric								
	Gas								
	Curb								
	Street Lights								
	Standard Utilities								
	Underground Utils.								
Topography of Site									
	Level		Year	Land Value	Building Value	Assessed Value	Board of Review	Tribunal/Other	Taxable Value
	Rolling		2017	EXEMPT	EXEMPT	EXEMPT			EXEMPT
	Low		2016	EXEMPT	EXEMPT	EXEMPT			EXEMPT
	High		2015	2,000	6,800	8,800			8,800S
	Landscaped		2014	2,000	8,200	10,200			10,200S
	Swamp								
	Wooded								
	Pond								
	Waterfront								
	Ravine								
	Wetland								
	Flood Plain								
Who	When	What							
RLJ	07/30/1990	REVIEWED							
ROB	04/29/2014	FIELD REVI							



10/14/2013 11:22:44

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Building Type		(3) Roof (cont.)		(11) Heating/Cooling			(15) Built-ins			(15) Fireplaces			(16) Porches/Decks		(17) Garage																																																															
X	Single Family Mobile Home Town Home Duplex A-Frame		Eavestrough Insulation 0 Front Overhang 0 Other Overhang	X	Gas Wood		Oil Coal		Elec. Steam		Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi repl.Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum Security System		Interior 1 Story Interior 2 Story 2nd/Same Stack Two Sided Exterior 1 Story Exterior 2 Story Prefab 1 Story Prefab 2 Story Heat Circulator Raised Hearth Wood Stove Direct-Vented Gas	Area	Type	Year Built: Car Capacity: Class: Exterior: Brick Ven.: Stone Ven.: Common Wall: Foundation: Finished ?: Auto. Doors: Mech. Doors: Area: % Good: Storage Area: No Conc. Floor:																																																														
X	Wood Frame		Drywall Paneled				Plaster Wood T&G																																																																							
Building Style: 1 STY		Trim & Decoration		Forced Air w/o Ducts Forced Air w/ Ducts Forced Hot Water Electric Baseboard Elec. Ceil. Radiant Radiant (in-floor) Electric Wall Heat Space Heater Wall/Floor Furnace Forced Heat & Cool Heat Pump No Heating/Cooling																																																																										
Yr Built 1930	Remodeled 0	Ex	X	Ord		Min	Size of Closets																																																																							
Condition for Age: Average		Lg	X	Ord		Small	Doors: Solid X H.C.																																																																							
Room List		(5) Floors		Central Air Wood Furnace																																																																										
	Basement 1st Floor 2nd Floor Bedrooms	Kitchen: Other: Other:		(12) Electric 100 Amps Service																																																																										
(1) Exterior		(6) Ceilings		No./Qual. of Fixtures Ex. X Ord. Min																																																																										
X	Wood/Shingle Aluminum/Vinyl Brick			No. of Elec. Outlets Many X Ave. Few																																																																										
	Insulation	(7) Excavation		(13) Plumbing																																																																										
(2) Windows		Basement: 864 S.F. Crawl: 0 S.F. Slab: 0 S.F. Height to Joists: 0.0		Average Fixture(s) 1 3 Fixture Bath 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan																																																																										
X	Many Avg. Few	X	Large Avg. Small	(8) Basement		(14) Water/Sewer																																																																								
	Wood Sash Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement Double Glass Patio Doors Storms & Screens	Conc. Block Poured Conc. Stone Treated Wood Concrete Floor																																																																												
(3) Roof		(9) Basement Finish																																																																												
X	Gable Hip Flat	Gambrel Mansard Shed	Recreation SF Living SF Walkout Doors No Floor SF		1 Public Water 1 Public Sewer Water Well 1000 Gal Septic 2000 Gal Septic																																																																									
X	Asphalt Shingle	Joists: Unsupported Len: Cntr.Sup:		Lump Sum Items:																																																																										
Chimney: Brick																																																																														
<table border="0"> <tr> <td>Stories</td> <td>Exterior</td> <td>Foundation</td> <td>Rate</td> <td>Bsmnt-Adj</td> <td>Heat-Adj</td> <td>Size</td> <td>Cost</td> </tr> <tr> <td>1</td> <td>Story Siding</td> <td>Mich Bsmnt.</td> <td>50.11</td> <td>-4.39</td> <td>0.66</td> <td>864</td> <td>40,072</td> </tr> <tr> <td colspan="4">Other Additions/Adjustments</td> <td>Rate</td> <td></td> <td>Size</td> <td>Cost</td> </tr> <tr> <td colspan="4">(14) Water/Sewer</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="4">Public Water</td> <td>912.00</td> <td></td> <td>1</td> <td>912</td> </tr> <tr> <td colspan="4">Public Sewer</td> <td>912.00</td> <td></td> <td>1</td> <td>912</td> </tr> <tr> <td colspan="4">Phy/Ab.Phy/Func/Econ/Comb.%Good= 45/100/100/100/45.0,</td> <td>Depr.Cost =</td> <td></td> <td></td> <td>26,206</td> </tr> <tr> <td colspan="4">ECF (NORTHEAST)</td> <td>0.503 =&gt; TCV of Bldg:</td> <td>1 =</td> <td></td> <td>13,182</td> </tr> </table>															Stories	Exterior	Foundation	Rate	Bsmnt-Adj	Heat-Adj	Size	Cost	1	Story Siding	Mich Bsmnt.	50.11	-4.39	0.66	864	40,072	Other Additions/Adjustments				Rate		Size	Cost	(14) Water/Sewer								Public Water				912.00		1	912	Public Sewer				912.00		1	912	Phy/Ab.Phy/Func/Econ/Comb.%Good= 45/100/100/100/45.0,				Depr.Cost =			26,206	ECF (NORTHEAST)				0.503 => TCV of Bldg:	1 =		13,182
Stories	Exterior	Foundation	Rate	Bsmnt-Adj	Heat-Adj	Size	Cost																																																																							
1	Story Siding	Mich Bsmnt.	50.11	-4.39	0.66	864	40,072																																																																							
Other Additions/Adjustments				Rate		Size	Cost																																																																							
(14) Water/Sewer																																																																														
Public Water				912.00		1	912																																																																							
Public Sewer				912.00		1	912																																																																							
Phy/Ab.Phy/Func/Econ/Comb.%Good= 45/100/100/100/45.0,				Depr.Cost =			26,206																																																																							
ECF (NORTHEAST)				0.503 => TCV of Bldg:	1 =		13,182																																																																							

\*\*\* Information herein deemed reliable but not guaranteed\*\*\*



Building Type		(3) Roof (cont.)		(11) Heating/Cooling			(15) Built-ins			(15) Fireplaces			(16) Porches/Decks			(17) Garage	
X	Single Family Mobile Home Town Home Duplex A-Frame		Eavestrough Insulation 0 Front Overhang 0 Other Overhang	X	Gas Wood		Oil Coal		Elec. Steam		Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi repl.Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum Security System		Interior 1 Story Interior 2 Story 2nd/Same Stack Two Sided Exterior 1 Story Exterior 2 Story Prefab 1 Story Prefab 2 Story Heat Circulator Raised Hearth Wood Stove Direct-Vented Gas	Area	Type	Year Built: Car Capacity: Class: Exterior: Brick Ven.: Stone Ven.: Common Wall: Foundation: Finished ?: Auto. Doors: Mech. Doors: Area: % Good: Storage Area: No Conc. Floor:	
X	Wood Frame		Drywall Paneled				Plaster Wood T&G							66	CCP (1 Story)		
Building Style: 1 STY		Trim & Decoration		Forced Air w/o Ducts Forced Air w/ Ducts Forced Hot Water Electric Baseboard Elec. Ceil. Radiant Radiant (in-floor) Electric Wall Heat Space Heater Wall/Floor Furnace Forced Heat & Cool Heat Pump No Heating/Cooling													
Yr Built 1925	Remodeled 0	Ex	X	Ord		Min	Size of Closets			Class: CD -10 Effec. Age: 55 Floor Area: 1386 Total Base Cost: 67,583 Total Base New : 93,940 Total Depr Cost: 42,273 Estimated T.C.V: 21,263			CntyMult X 1.390 E.C.F. X 0.503			Bsmnt Garage:	
Condition for Age: Average		Lg	X	Ord		Small	Doors: Solid X H.C.			Total Base Cost: 67,583 Total Base New : 93,940 Total Depr Cost: 42,273 Estimated T.C.V: 21,263			CntyMult X 1.390 E.C.F. X 0.503			Roof:	
Room List		(5) Floors		Kitchen: Other: Other:			(12) Electric 100 Amps Service			Stories Exterior Foundation Rate Bsmnt-Adj Heat-Adj Size Cost							
	Basement 1st Floor 2nd Floor Bedrooms						No./Qual. of Fixtures Ex. X Ord. Min			1 Story Siding Mich Bsmnt. 50.34 -3.62 0.00 1038 48,495							
(1) Exterior							No. of Elec. Outlets Many X Ave. Few			1 Story Siding Crawl Space 50.34 -7.24 0.00 336 14,482							
X	Wood/Shingle Aluminum/Vinyl Brick						(13) Plumbing Average Fixture(s) 1 3 Fixture Bath 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan			Other Additions/Adjustments (14) Water/Sewer Public Water 1025.00 1 1,025 Public Sewer 1025.00 1 1,025							
	Insulation			Basement: 1038 S.F. Crawl: 336 S.F. Slab: 0 S.F. Height to Joists: 0.0						CCP (1 Story), Standard 32.95 66 2,175 Phy/Ab.Phy/Func/Econ/Comb.%Good= 45/100/100/100/45.0, Depr.Cost = 42,273 ECF (NORTHEAST) 0.503 => TCV of Bldg: 1 = 21,263							
(2) Windows				(8) Basement Conc. Block Poured Conc. Stone Treated Wood Concrete Floor													
X	Many Avg. Few	X	Large Avg. Small				(9) Basement Finish Recreation SF Living SF Walkout Doors No Floor SF										
(3) Roof							(14) Water/Sewer 1 Public Water 1 Public Sewer Water Well 1000 Gal Septic 2000 Gal Septic										
	Wood Sash Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement Double Glass Patio Doors Storms & Screens																
	Gable Hip Flat	X	Gambrel Mansard Shed	(10) Floor Support Joists: Unsupported Len: Cntr.Sup:			Lump Sum Items:										
X	Asphalt Shingle																
Chimney: Brick																	

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Grantor	Grantee	Sale Price	Sale Date	Inst. Type	Terms of Sale	Liber & Page	Verified By	Prcnt. Trans.					
BLACK LION PROPERTIES	COUNTY OF MUSKEGON TREASURER	0	02/09/2015	JUD	FORECLOSURE	4053/998	DEED	0.0					
GOINS CREIGHTON	BLACK LION PROPERTIES	0	11/24/2010	WD	WARRANTY DEED	3863/468	DEED	0.0					
ALGER JERALD/LYNDA	GOINS CREIGHTON	56,000	03/22/2007	WD	WARRANTY DEED	3735/630	DEED	100.0					
SHAFER, CHARLES & NELLIE	ALGER, JERALD & LYNDA	9,000	07/18/1997	WD	WARRANTY DEED	2011/992	DEED	0.0					
Property Address		Class: 703.EXEMPT COUNTY		Zoning:		Building Permit(s)		Date	Number	Status			
2648 RIORDAN ST		School: MUSKEGON HEIGHTS SCHOOLS											
Owner's Name/Address		P.R.E. 0%											
COUNTY OF MUSKEGON TREASURER 173 E APPLE AVE STE 104 MUSKEGON MI 49442		MAP #: 26-037-006-060		2017 Est TCV 0 TCV/TFA: 0.00									
Tax Description		X Improved		Vacant		Land Value Estimates for Land Table 00001.NORTHEAST							
HT5388 LAWSON PARK BLK 6 S 42 FT OF LOT 6		Public Improvements				* Factors *							
Comments/Influences		Dirt Road		Description		Frontage	Depth	Front	Depth	Rate %Adj.	Reason	Value	
		Gravel Road		NORTHEAST		42.00	125.00	1.0000	1.0000	80	100	3,360	
		Paved Road		42 Actual Front Feet, 0.12 Total Acres						Total Est. Land Value =		3,360	
		Storm Sewer											
		Sidewalk											
		Water											
		Sewer											
		Electric											
		Gas											
		Curb											
		Street Lights											
		Standard Utilities											
		Underground Utils.											
		Topography of Site											
		Level											
		Rolling											
		Low											
		High											
		Landscaped											
		Swamp											
		Wooded											
		Pond											
		Waterfront											
		Ravine											
		Wetland											
		Flood Plain											
		Year		Land Value		Building Value		Assessed Value		Board of Review		Tribunal/Other	Taxable Value
		Who		When		What		2017		EXEMPT			EXEMPT
		RLJ		07/30/1990		REVIEWED		2016		EXEMPT			EXEMPT
		RJ		02/07/2007		REVIEWED		2015		1,700			9,300
								2014		1,700			11,000
													13,000S
													13,000S



02/07/2007

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Building Type		(3) Roof (cont.)		(11) Heating/Cooling			(15) Built-ins			(15) Fireplaces			(16) Porches/Decks		(17) Garage			
X	Single Family Mobile Home Town Home Duplex A-Frame		Eavestrough Insulation 0 Front Overhang 0 Other Overhang	X	Gas Wood		Oil Coal		Elec. Steam		Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi repl.Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum Security System		Interior 1 Story Interior 2 Story 2nd/Same Stack Two Sided Exterior 1 Story Exterior 2 Story Prefab 1 Story Prefab 2 Story Heat Circulator Raised Hearth Wood Stove Direct-Vented Gas	Area	Type	Year Built: 1945 Car Capacity: Class: CD Exterior: Siding Brick Ven.: 0 Stone Ven.: 0 Common Wall: Detache Foundation: 18 Inch Finished?: Auto. Doors: 0 Mech. Doors: 0 Area: 180 % Good: 0 Storage Area: 0 No Conc. Floor: 0		
X	Wood Frame		Drywall Paneled				Plaster Wood T&G											
Building Style: 1 STY		Trim & Decoration		Forced Air w/o Ducts Forced Air w/ Ducts Forced Hot Water Electric Baseboard Elec. Ceil. Radiant Radiant (in-floor) Electric Wall Heat Space Heater Wall/Floor Furnace Forced Heat & Cool Heat Pump No Heating/Cooling														
Yr Built 1925	Remodeled 0	Ex	X	Ord		Min	Size of Closets											
Condition for Age: Average		Lg	X	Ord		Small	Doors:											
Room List		(5) Floors		Central Air Wood Furnace														
	Basement 1st Floor 2nd Floor Bedrooms	Kitchen: Other: Other:		(12) Electric 100 Amps Service														
(1) Exterior		(6) Ceilings		No./Qual. of Fixtures			Stories Exterior			Foundation Rate			Bsmnt-Adj Heat-Adj		Size Cost			
X	Wood/Shingle Aluminum/Vinyl Brick				Ex.	X	Ord.		Min	1 Story Siding Mich Bsmnt.			60.49	-4.49	0.00	912	51,072	
	Insulation	(7) Excavation		No. of Elec. Outlets			Other Additions/Adjustments			Rate					Size Cost			
(2) Windows		Basement: 912 S.F. Crawl: 0 S.F. Slab: 0 S.F. Height to Joists: 0.0		Many			X	Ave.		Few	(14) Water/Sewer Public Water Public Sewer			1025.00 1025.00			1 1,025 1 1,025	
X	Many Avg. Few	X	Large Avg. Small	(13) Plumbing														
	Wood Sash Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement Double Glass Patio Doors Storms & Screens	Conc. Block Poured Conc. Stone Treated Wood Concrete Floor		Average Fixture(s) 1 3 Fixture Bath 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan			(17) Garages			Class:CD Exterior: Siding Foundation: 18 Inch (Unfinished) Base Cost 24.80			180		4,464			
(3) Roof		(9) Basement Finish		Recreation SF Living SF Walkout Doors No Floor SF			(14) Water/Sewer			Phy/Ab.Phy/Func/Econ/Comb.%Good= 45/100/100/45.0, ECF (NORTHEAST)			0.503 => TCV of Bldg: 1 =			36,020 18,118		
X	Gable Hip Flat		Gambrel Mansard Shed	(10) Floor Support			1 Public Water 1 Public Sewer Water Well 1000 Gal Septic 2000 Gal Septic											
X	Asphalt Shingle	Joists: Unsupported Len: Cntr.Sup:		Lump Sum Items:														
Chimney: Brick																		

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Grantor	Grantee	Sale Price	Sale Date	Inst. Type	Terms of Sale	Liber & Page	Verified By	Prcnt. Trans.
PICKERING MYRON	COUNTY OF MUSKEGON TREASURER	0	04/29/2015	WD	TAX REVERTED	4053/976	DEED	0.0
KIANROKH HAMIDREZA	PICKERING MYRON	0	08/05/2014	QC	QUIT- CLAIM	4029/77	DEED	100.0
PONIROS EQUITIES LLC	KIANROKH HAMIDREZA	0	11/18/2013	QC	QUIT- CLAIM	4008/917	DEED	100.0
MUSKEGON COUNTY TREASURER	PONIROS EQUITIES LLC	100	10/17/2012	QC	QUIT- CLAIM	3928/275	DEED	0.0

Property Address	Class: 703.EXEMPT COUNTY	Zoning: R1-RES	Building Permit(s)	Date	Number	Status				
2809 8TH ST	School: MUSKEGON HEIGHTS SCHOOLS			01/05/2005	B-07-05					
	P.R.E. 0%									
Owner's Name/Address	MAP #: 26-000-218-030									
COUNTY OF MUSKEGON TREASURER 173 E APPLE AVE STE 104 MUSKEGON MI 49442	2017 Est TCV 0 TCV/TFA: 0.00									
	X Improved	Vacant	Land Value Estimates for Land Table 00011.DK GREEN							
	Public Improvements		* Factors *							
			Description	Frontage	Depth	Front Depth	Rate %Adj.	Reason	Value	
			NEIGHBORHOOD	11	50.00	125.00	1.0000	1.0000	60 100	3,000
			50 Actual Front Feet, 0.14 Total Acres Total Est. Land Value = 3,000							
Tax Description	HT3280 BLK 218 LOT 3 Comments/Influences CONDEMNED SUB-STANDARD 5/11/09 BOARD UP NOTICE 10/25/10									
	Dirt Road Gravel Road Paved Road Storm Sewer Sidewalk Water Sewer Electric Gas Curb Street Lights Standard Utilities Underground Utils.									
	Topography of Site									
	Level Rolling Low High Landscaped Swamp Wooded Pond Waterfront Ravine Wetland Flood Plain									
			Year	Land Value	Building Value	Assessed Value	Board of Review	Tribunal/Other	Taxable Value	
	Who	When	What	2017	EXEMPT	EXEMPT	EXEMPT		EXEMPT	
	CEJ 12/31/1997 REVIEWED			2016	EXEMPT	EXEMPT	EXEMPT		EXEMPT	
				2015	1,500	8,200	9,700		9,700S	
				2014	1,500	9,900	11,400		11,400S	

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Building Type		(3) Roof (cont.)		(11) Heating/Cooling			(15) Built-ins			(15) Fireplaces			(16) Porches/Decks		(17) Garage										
X	Single Family Mobile Home Town Home Duplex A-Frame		Eavestrough Insulation 0 Front Overhang 0 Other Overhang	X	Gas Wood		Oil Coal		Elec. Steam		Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi repl.Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum Security System		Interior 1 Story Interior 2 Story 2nd/Same Stack Two Sided Exterior 1 Story Exterior 2 Story Prefab 1 Story Prefab 2 Story Heat Circulator Raised Hearth Wood Stove Direct-Vented Gas	Area	Type	Year Built: Car Capacity: Class: Exterior: Brick Ven.: Stone Ven.: Common Wall: Foundation: Finished ?: Auto. Doors: Mech. Doors: Area: % Good: Storage Area: No Conc. Floor:									
X	Wood Frame		Drywall Paneled				Plaster Wood T&G																		
Building Style: 1 STY		Trim & Decoration		Forced Air w/o Ducts Forced Air w/ Ducts Forced Hot Water Electric Baseboard Elec. Ceil. Radiant Radiant (in-floor) Electric Wall Heat Space Heater Wall/Floor Furnace Forced Heat & Cool Heat Pump No Heating/Cooling																					
Yr Built 1945	Remodeled 0	Ex	X	Ord		Min	Size of Closets		Lg		X	Ord		Small	Doors: Solid X H.C.										
Condition for Age: Average		(5) Floors		Central Air Wood Furnace			(12) Electric			Class: D Effec. Age: 57 Floor Area: 1488 Total Base Cost: 71,252 Total Base New : 99,041 Total Depr Cost: 31,198 Estimated T.C.V: 14,913			CntyMult X 1.390 E.C.F. X 0.478		Bsmnt Garage:										
Room List		Basement 1st Floor 2nd Floor Bedrooms		Kitchen: Other: Other:			100 Amps Service			Total Base Cost: 71,252 Total Base New : 99,041 Total Depr Cost: 31,198 Estimated T.C.V: 14,913			Carpport Area: Roof:												
(1) Exterior		(6) Ceilings		No./Qual. of Fixtures			Stories Exterior			Foundation			Rate		Bsmnt-Adj		Heat-Adj		Size		Cost				
X	Wood/Shingle Aluminum/Vinyl Brick				Ex.	X	Ord.		Min	1 Story Siding			Basement			44.89		0.00		0.66		1488		67,778	
Insulation		(7) Excavation		No. of Elec. Outlets			Other Additions/Adjustments			Rate									Size		Cost				
(2) Windows		Basement: 1488 S.F. Crawl: 0 S.F. Slab: 0 S.F. Height to Joists: 0.0		Many			X	Ave.		Few	(13) Plumbing			3 Fixture Bath			1650.00			1		1,650			
X	Many Avg. Few	X	Large Avg. Small	(8) Basement			Average Fixture(s)			Public Water			912.00			1		912							
Wood Sash Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement Double Glass Patio Doors Storms & Screens		Conc. Block Poured Conc. Stone Treated Wood Concrete Floor		2 3 Fixture Bath 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan			Phy/Ab.Phy/Func/Econ/Comb.%Good= 45/100/100/ 70/31.5, Economic Depreciation because of: CODE-REHAB ECF (DK GREEN)			Public Sewer			912.00			1		912		Depr.Cost =		31,198			
(3) Roof		(9) Basement Finish		(13) Plumbing			Public Water			0.478 => TCv of Bldg: 1 =									14,913						
X	Gable Hip Flat		Gambrel Mansard Shed	(10) Floor Support			1 Public Water 1 Public Sewer Water Well 1000 Gal Septic 2000 Gal Septic																		
X	Asphalt Shingle	Recreation SF Living SF Walkout Doors No Floor SF		(14) Water/Sewer			Lump Sum Items:																		
Chimney: Brick																									

\*\*\* Information herein deemed reliable but not guaranteed\*\*\*

Grantor	Grantee	Sale Price	Sale Date	Inst. Type	Terms of Sale	Liber & Page	Verified By	Prcnt. Trans.			
HSBC BANK	COUNTY OF MUSKEGON TREASURER	0	02/09/2015	JUD	FORECLOSURE	4054/6	DEED	0.0			
UGANSKI KELLY	CRABTREE LORINE	52,000	02/04/2005	WD	WARRANTY DEED	3645/183	DEED	100.0			
WEIHL RICKY A/LEANNE R	UGANSKI KELLY	27,000	07/01/2004	WD	WARRANTY DEED	3616/42	DEED	100.0			
WEIHL RANDY	WEIHL RICKY A/LEANNE R	25,000	11/26/2003	QC	QUIT-CLAIM	3579/784	DEED	100.0			
Property Address		Class: 703.EXEMPT COUNTY		Zoning: R1-RES	Building Permit(s)	Date	Number	Status			
2827 RIORDAN ST		School: MUSKEGON HEIGHTS SCHOOLS									
Owner's Name/Address		P.R.E. 0%									
COUNTY OF MUSKEGON TREASURER 173 E APPLE AVE STE 104 MUSKEGON MI 49442		MAP #: 26-000-249-200									
Tax Description		2017 Est TCV 0 TCV/TFA: 0.00									
HT3859 BLK 249 LOT 20 MUSKEGON IMPROVEMENT CO'S ANNEX #1		X	Improved		Vacant	Land Value Estimates for Land Table 00007. SKY BLUE					
Comments/Influences		Public Improvements		* Factors *							
		Dirt Road		Description	Frontage	Depth	Front	Depth	Rate %Adj.	Reason	Value
		Gravel Road		NEIGHBORHOOD #7	40.00	125.00	1.0000	1.0000	70	100	2,800
		X Paved Road		40 Actual Front Feet, 0.12 Total Acres				Total Est. Land Value =		2,800	
		X Storm Sewer									
		X Sidewalk									
		X Water									
		X Sewer									
		X Electric									
		X Gas									
		X Curb									
		X Street Lights									
		Standard Utilities									
		Underground Utils.									
		Topography of Site									
		X	Level	Year	Land Value	Building Value	Assessed Value	Board of Review	Tribunal/Other	Taxable Value	
			Rolling	2017	EXEMPT	EXEMPT	EXEMPT			EXEMPT	
			Low	2016	EXEMPT	EXEMPT	EXEMPT			EXEMPT	
			High	2015	1,400	11,200	12,600			11,147C	
			Landscaped	2014	1,400	11,600	13,000			10,972C	
			Swamp								
			Wooded								
			Pond								
			Waterfront								
			Ravine								
			Wetland								
			Flood Plain								
		Who	When	What							
		CEJ	12/31/1998	REVIEWED							
		ROB	12/31/2012	REVIEWED							



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\*\*\* Information herein deemed reliable but not guaranteed\*\*\*

Building Type		(3) Roof (cont.)		(11) Heating/Cooling			(15) Built-ins			(15) Fireplaces			(16) Porches/Decks			(17) Garage																																																																
X	Single Family	Eavestrough Insulation	0	X	Gas	Oil	Elec.	Appliance Allow.	Cook Top	Interior 1 Story	Interior 2 Story	Area	Type	32	WGEP (1 Story)	Year Built: 1930																																																																
	Town Home																0	Front Overhang	0	Other Overhang	Forced Air w/o Ducts	Forced Air w/ Ducts	Forced Hot Water	Dishwasher	2nd/Same Stack	Two Sided	WGEP (1 Story)	Car Capacity:																																																				
X	Duplex	(4) Interior	0	X	Forced Air w/o Ducts	Forced Air w/ Ducts	Forced Hot Water	Bath Heater	Vent Fan	Exterior 1 Story	Exterior 2 Story	32	WGEP (1 Story)	150	Treated Wood	Class: CD																																																																
A-Frame	Drywall Paneled																Plaster Wood T&G	Electric Baseboard	Unvented Hood	Vented Hood	Heat Circulator	Raised Hearth	Wood Stove	Direct-Vented Gas	Class: CD	Effec. Age: 55	Floor Area: 800	CntyMult	X 1.390	Storage Area: 0																																																		
X		Wood Frame	Trim & Decoration	Ex	X	Ord	Min	Space Heater	Wall/Floor Furnace	Forced Heat & Cool	Heat Pump	No Heating/Cooling	Microwave	Standard Range	Self Clean Range	Sauna															Trash Compactor	Central Vacuum	Security System	Total Base Cost: 106,252	Total Base New : 147,690	Total Depr Cost: 51,331	Estimated T.C.V: 24,587	No Conc. Floor: 0																																										
Building Style:	2 STY	Ex															X	Ord	Min	Space Heater	Wall/Floor Furnace	Forced Heat & Cool	Heat Pump	No Heating/Cooling	Microwave	Standard Range	Self Clean Range	Sauna	Trash Compactor	Central Vacuum									Security System	Total Base Cost: 106,252	Total Base New : 147,690	Total Depr Cost: 51,331	Estimated T.C.V: 24,587	No Conc. Floor: 0																																				
Yr Built	Remodeled	Size of Closets		Lg	X	Ord	Small	Central Air		Wood Furnace		100		Amps Service		(12) Electric		No./Qual. of Fixtures		Ex.		X	Ord.	Min	No. of Elec. Outlets		Many	X	Ave.	Few	(13) Plumbing		Average Fixture(s)		1		3 Fixture Bath		2 Fixture Bath		Softener, Auto		Softener, Manual		Solar Water Heat		No Plumbing		Extra Toilet		Extra Sink		Separate Shower		Ceramic Tile Floor		Ceramic Tile Wains		Ceramic Tub Alcove		Vent Fan		(14) Water/Sewer		1		Public Water		1		Public Sewer		Water Well		1000 Gal Septic		2000 Gal Septic		Lump Sum Items:	
Condition for Age:	Average	Doors:		Solid	X	H.C.	(5) Floors		Kitchen:		Other:		Other:		(6) Ceilings		No./Qual. of Fixtures		Ex.		X	Ord.	Min	No. of Elec. Outlets		Many	X	Ave.	Few	(13) Plumbing		Average Fixture(s)		1		3 Fixture Bath		2 Fixture Bath		Softener, Auto		Softener, Manual		Solar Water Heat		No Plumbing		Extra Toilet		Extra Sink		Separate Shower		Ceramic Tile Floor		Ceramic Tile Wains		Ceramic Tub Alcove		Vent Fan		(14) Water/Sewer		1		Public Water		1		Public Sewer		Water Well		1000 Gal Septic		2000 Gal Septic		Lump Sum Items:		
Room List	Basement	1st Floor		2nd Floor		Bedrooms		Kitchen:		Other:		Other:		(6) Ceilings		No./Qual. of Fixtures		Ex.		X	Ord.	Min	No. of Elec. Outlets		Many	X	Ave.	Few	(13) Plumbing		Average Fixture(s)		1		3 Fixture Bath		2 Fixture Bath		Softener, Auto		Softener, Manual		Solar Water Heat		No Plumbing		Extra Toilet		Extra Sink		Separate Shower		Ceramic Tile Floor		Ceramic Tile Wains		Ceramic Tub Alcove		Vent Fan		(14) Water/Sewer		1		Public Water		1		Public Sewer		Water Well		1000 Gal Septic		2000 Gal Septic		Lump Sum Items:			
(1) Exterior	Wood/Shingle	Aluminum/Vinyl		Brick		Insulation		(7) Excavation		Basement: 364 S.F.		Crawl: 0 S.F.		Slab: 36 S.F.		Height to Joists: 0.0		(8) Basement		Conc. Block		Poured Conc.		Stone		Treated Wood		Concrete Floor		(9) Basement Finish		Recreation SF		Living SF		Walkout Doors		No Floor SF		(10) Floor Support		Joists:		Unsupported Len:		Cntr.Sup:		Chimney: Brick																																
X	Wood/Shingle	Aluminum/Vinyl		Brick		Insulation		(7) Excavation		Basement: 364 S.F.		Crawl: 0 S.F.		Slab: 36 S.F.		Height to Joists: 0.0		(8) Basement		Conc. Block		Poured Conc.		Stone		Treated Wood		Concrete Floor		(9) Basement Finish		Recreation SF		Living SF		Walkout Doors		No Floor SF		(10) Floor Support		Joists:		Unsupported Len:		Cntr.Sup:		Chimney: Brick																																
(2) Windows	Many	X	Large	Avg.	X	Avg.	Small	(8) Basement		Conc. Block		Poured Conc.		Stone		Treated Wood		Concrete Floor		(9) Basement Finish		Recreation SF		Living SF		Walkout Doors		No Floor SF		(10) Floor Support		Joists:		Unsupported Len:		Cntr.Sup:		Chimney: Brick																																										
X	Wood Sash	Metal Sash		Vinyl Sash		Double Hung		Horiz. Slide		Casement		Double Glass		Patio Doors		Storms & Screens		(8) Basement		Conc. Block		Poured Conc.		Stone		Treated Wood		Concrete Floor		(9) Basement Finish		Recreation SF		Living SF		Walkout Doors		No Floor SF		(10) Floor Support		Joists:		Unsupported Len:		Cntr.Sup:		Chimney: Brick																																
(3) Roof	X	Gable	Gambrel	Hip	Mansard	Flat	Shed	(8) Basement		Conc. Block		Poured Conc.		Stone		Treated Wood		Concrete Floor		(9) Basement Finish		Recreation SF		Living SF		Walkout Doors		No Floor SF		(10) Floor Support		Joists:		Unsupported Len:		Cntr.Sup:		Chimney: Brick																																										
X	Asphalt Shingle	Gambrel		Mansard		Shed		(8) Basement		Conc. Block		Poured Conc.		Stone		Treated Wood		Concrete Floor		(9) Basement Finish		Recreation SF		Living SF		Walkout Doors		No Floor SF		(10) Floor Support		Joists:		Unsupported Len:		Cntr.Sup:		Chimney: Brick																																										
Chimney: Brick		Gambrel		Mansard		Shed		(8) Basement		Conc. Block		Poured Conc.		Stone		Treated Wood		Concrete Floor		(9) Basement Finish		Recreation SF		Living SF		Walkout Doors		No Floor SF		(10) Floor Support		Joists:		Unsupported Len:		Cntr.Sup:		Chimney: Brick																																										
Chimney: Brick		Gambrel		Mansard		Shed		(8) Basement		Conc. Block		Poured Conc.		Stone		Treated Wood		Concrete Floor		(9) Basement Finish		Recreation SF		Living SF		Walkout Doors		No Floor SF		(10) Floor Support		Joists:		Unsupported Len:		Cntr.Sup:		Chimney: Brick																																										
Chimney: Brick		Gambrel		Mansard		Shed		(8) Basement		Conc. Block		Poured Conc.		Stone		Treated Wood		Concrete Floor		(9) Basement Finish		Recreation SF		Living SF		Walkout Doors		No Floor SF		(10) Floor Support		Joists:		Unsupported Len:		Cntr.Sup:		Chimney: Brick																																										
Chimney: Brick		Gambrel		Mansard		Shed		(8) Basement		Conc. Block		Poured Conc.		Stone		Treated Wood		Concrete Floor		(9) Basement Finish		Recreation SF		Living SF		Walkout Doors		No Floor SF		(10) Floor Support		Joists:		Unsupported Len:		Cntr.Sup:		Chimney: Brick																																										
Chimney: Brick		Gambrel		Mansard		Shed		(8) Basement		Conc. Block		Poured Conc.		Stone		Treated Wood		Concrete Floor		(9) Basement Finish		Recreation SF		Living SF		Walkout Doors		No Floor SF		(10) Floor Support		Joists:		Unsupported Len:		Cntr.Sup:		Chimney: Brick																																										
Chimney: Brick		Gambrel		Mansard		Shed		(8) Basement		Conc. Block		Poured Conc.		Stone		Treated Wood		Concrete Floor		(9) Basement Finish		Recreation SF		Living SF		Walkout Doors		No Floor SF		(10) Floor Support		Joists:		Unsupported Len:		Cntr.Sup:		Chimney: Brick																																										
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Chimney: Brick		Gambrel		Mansard		Shed		(8) Basement		Conc. Block		Poured Conc.		Stone		Treated Wood		Concrete Floor		(9) Basement Finish		Recreation SF		Living SF		Walkout Doors		No Floor SF		(10) Floor Support		Joists:		Unsupported Len:		Cntr.Sup:		Chimney: Brick																																										
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Chimney: Brick		Gambrel		Mansard		Shed		(8) Basement		Conc. Block		Poured Conc.		Stone		Treated Wood		Concrete Floor		(9) Basement Finish		Recreation SF		Living SF		Walkout Doors		No Floor SF		(10) Floor Support		Joists:		Unsupported Len:		Cntr.Sup:		Chimney: Brick																																										
Chimney: Brick		Gambrel		Mansard		Shed		(8) Basement		Conc. Block		Poured Conc.		Stone		Treated Wood		Concrete Floor		(9) Basement Finish		Recreation SF		Living SF		Walkout Doors																																																						

Grantor	Grantee	Sale Price	Sale Date	Inst. Type	Terms of Sale	Liber & Page	Verified By	Prcnt. Trans.			
BROWN FARRIEL	COUNTY OF MUSKEGON TREASURER	0	04/29/2015	WD	TAX REVERTED	4053/978	DEED	0.0			
BROWER JOSHUA	MUSKEGON COUNTY TREASURER	0	04/02/2012		FORECLOSURE	3914/133	DEED	0.0			
MUSKEGON COUNTY TREASURER	BROWER JOSHUA	1	09/24/2009	QC	TAX DEEDS	3827/378	DEED	100.0			
PHILLIPS DEBORAH HEGGOOD	MUSKEGON COUNTY TREASURER	0	04/02/2009	CD	ASSIGNMENT	3808/499	DEED	0.0			
Property Address		Class: 703.EXEMPT COUNTY		Zoning: R1-RES	Building Permit(s)	Date	Number	Status			
2930 6TH ST		School: MUSKEGON HEIGHTS SCHOOLS				04/23/2004	B-95-04				
Owner's Name/Address		P.R.E. 0%									
COUNTY OF MUSKEGON TREASURER 173 E APPLE AVE STE 104 MUSKEGON MI 49442		MAP #: 26-000-224-130									
Tax Description		2017 Est TCV 0 TCV/TFA: 0.00									
HT3413 BLK 224 S 36 FT OF LOT 13		X	Improved	Vacant	Land Value Estimates for Land Table 00011.DK GREEN						
Comments/Influences		Public Improvements		* Factors *							
CONDEMNED SUB-STANDARD 5/11/09 7/31/2013: VACANT/DISREPAIR		Dirt Road		Description	Frontage	Depth	Front	Depth	Rate %Adj.	Reason	Value
		Gravel Road		NEIGHBORHOOD	11	36.00	125.00	1.0000	1.0000	60 100	2,160
		Paved Road		36 Actual Front Feet, 0.10 Total Acres Total Est. Land Value = 2,160							
		Storm Sewer									
		Sidewalk									
		Water									
		Sewer									
		Electric									
		Gas									
		Curb									
		Street Lights									
		Standard Utilities									
		Underground Utils.									
		Topography of Site									
		Level									
		Rolling									
		Low									
		High									
		Landscaped									
		Swamp									
		Wooded									
		Pond									
		Waterfront									
		Ravine									
		Wetland									
		Flood Plain									
		Year	Land Value	Building Value	Assessed Value	Board of Review	Tribunal/Other	Taxable Value			
Who		When	What	2017	EXEMPT	EXEMPT	EXEMPT	EXEMPT			
CEJ 12/31/1997 REVIEWED		2016	EXEMPT	EXEMPT	EXEMPT			EXEMPT			
ROB 07/31/2013 FIELD REVI		2015	1,100	5,100	6,200			6,200S			
		2014	1,100	6,200	7,300			7,300S			



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Building Type		(3) Roof (cont.)		(11) Heating/Cooling			(15) Built-ins			(15) Fireplaces			(16) Porches/Decks		(17) Garage	
X	Single Family Mobile Home Town Home Duplex A-Frame		Eavestrough Insulation 0 Front Overhang 0 Other Overhang	X	Gas Wood		Oil Coal		Elec. Steam		Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi repl.Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum Security System		Interior 1 Story Interior 2 Story 2nd/Same Stack Two Sided Exterior 1 Story Exterior 2 Story Prefab 1 Story Prefab 2 Story Heat Circulator Raised Hearth Wood Stove Direct-Vented Gas	Area	Type	Year Built: Car Capacity: Class: D Exterior: Siding Brick Ven.: 0 Stone Ven.: 0 Common Wall: Detache Foundation: 18 Inch Finished?: Auto. Doors: 0 Mech. Doors: 0 Area: 280 % Good: 10 Storage Area: 0 No Conc. Floor: 0
X	Wood Frame		Drywall Paneled				Plaster Wood T&G									
Building Style: 1 1/4 STY		Trim & Decoration		Forced Air w/o Ducts Forced Air w/ Ducts Forced Hot Water Electric Baseboard Elec. Ceil. Radiant Radiant (in-floor) Electric Wall Heat Space Heater Wall/Floor Furnace Forced Heat & Cool Heat Pump No Heating/Cooling												
Yr Built 1939	Remodeled 0	Ex	X	Ord		Min	Size of Closets		Lg		X	Ord		Small	Doors: Solid X H.C.	
Condition for Age: Average		(5) Floors		Central Air Wood Furnace												
Room List		Basement 1st Floor 2nd Floor Bedrooms		Kitchen: Other: Other:			(12) Electric 100 Amps Service									
(1) Exterior		(6) Ceilings		No./Qual. of Fixtures			Ex. X Ord. Min			Stories Exterior Foundation Rate Bsmnt-Adj Heat-Adj Size Cost						
X	Wood/Shingle Aluminum/Vinyl Brick			No. of Elec. Outlets			Many X Ave. Few			1.25 Story Siding Basement 60.65 0.00 0.83 728 44,757						
Insulation		(7) Excavation		(13) Plumbing			Average Fixture(s) 1 3 Fixture Bath 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan			Other Additions/Adjustments (14) Water/Sewer Public Water 912.00 1 912 Public Sewer 912.00 1 912 Phy/Ab.Phy/Func/Econ/Comb.%Good= 45/100/100/ 65/29.3, Depr.Cost = 18,939 Economic Depreciation because of: OBSERVED Separately Depreciated Items: (17) Garages Class:D Exterior: Siding Foundation: 18 Inch (Unfinished) Base Cost 22.22 280 6,222 County Multiplier = 1.39 => Cost New = 8,648 Phy/Ab.Phy/Func/Econ/Comb.%Good= 10/100/100/ 65/6.5, Depr.Cost = 562 Total Depreciated Cost = 19,501 ECF (DK GREEN) 0.478 => TCV of Bldg: 1 = 9,321						
(2) Windows		Basement: 728 S.F. Crawl: 0 S.F. Slab: 0 S.F. Height to Joists: 0.0														
X	Many Avg. Few	X	Large Avg. Small	(8) Basement												
Wood Sash Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement Double Glass Patio Doors Storms & Screens		Conc. Block Poured Conc. Stone Treated Wood Concrete Floor		(9) Basement Finish			Recreation SF Living SF Walkout Doors No Floor SF									
(3) Roof		(10) Floor Support		1 Public Water 1 Public Sewer Water Well 1000 Gal Septic 2000 Gal Septic												
X	Gable Hip Flat		Gambrel Mansard Shed	Joists: Unsupported Len: Cntr.Sup:			Lump Sum Items:									
X	Asphalt Shingle															
Chimney: Brick																

\*\*\* Information herein deemed reliable but not guaranteed\*\*\*

Grantor	Grantee	Sale Price	Sale Date	Inst. Type	Terms of Sale	Liber & Page	Verified By	Prcnt. Trans.					
WINDELER CHRIS/ANGELA	COUNTY OF MUSKEGON TREASURER	0	04/29/2015	WD	TAX REVERTED	4053/979	DEED	0.0					
MUSKEGON COUNTY TREASURER	WINDELER CHRIS/ANGELA	650	10/13/2011	QC	QUIT- CLAIM	3892/786	DEED	100.0					
HULKA WILLIAM	MUSKEGON COUNTY TREASURER	0	04/01/2011	QC	QUIT- CLAIM	3880/780	DEED	0.0					
HARRIS WILLIAM	HULKA WILLIAM	29,900	03/29/2007	WD	WARRANTY DEED	3740/95	DEED	100.0					
Property Address		Class: 703.EXEMPT COUNTY		Zoning: R1-RES	Building Permit(s)		Date	Number	Status				
2933 JEFFERSON ST		School: MUSKEGON HEIGHTS SCHOOLS					12/20/2006	B-361-06					
Owner's Name/Address		P.R.E. 0%					09/22/1999	H-94-99					
COUNTY OF MUSKEGON TREASURER 173 E APPLE AVE STE 104 MUSKEGON MI 49442		MAP #: 26-000-225-090					09/08/1999	B-295-99					
Tax Description		2017 Est TCV 0 TCV/TFA: 0.00					08/15/1999	B-269-99					
HT3430 BLK 225 LOT 9		X Improved		Vacant	Land Value Estimates for Land Table 00011.DK GREEN								
Comments/Influences		Public Improvements			* Factors *								
REMODELING IN PROGRESS 10/99		Dirt Road			Description	Frontage	Depth	Front	Depth	Rate	%Adj.	Reason	Value
		Gravel Road			NEIGHBORHOOD	11	50.00	125.00	1.0000	1.0000	60	100	3,000
		X Paved Road			50 Actual Front Feet, 0.14 Total Acres Total Est. Land Value = 3,000								
		X Storm Sewer											
		X Sidewalk											
		X Water											
		X Sewer											
		X Electric											
		X Gas											
		X Curb											
		X Street Lights											
		Standard Utilities											
		Underground Utils.											
		Topography of Site											
		X Level											
		Rolling											
		Low											
		High											
		Landscaped											
		Swamp											
		Wooded											
		Pond											
		Waterfront											
		Ravine											
		Wetland											
		Flood Plain											
		Year	Land Value	Building Value	Assessed Value	Board of Review	Tribunal/Other	Taxable Value					
Who	When	What	2017	EXEMPT	EXEMPT	EXEMPT		EXEMPT					
RJ	10/25/1999	REVIEWED	2016	EXEMPT	EXEMPT	EXEMPT		EXEMPT					
CED	11/28/2001	REVIEWED	2015	1,500	9,300	10,800		10,800S					
ROB	01/02/2014	FIELD REVI	2014	1,500	11,400	12,900		12,900S					




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Building Type		(3) Roof (cont.)		(11) Heating/Cooling			(15) Built-ins			(15) Fireplaces			(16) Porches/Decks			(17) Garage	
X	Single Family Mobile Home Town Home Duplex A-Frame	X	Eavestrough Insulation 0 Front Overhang 0 Other Overhang	X	Gas Wood	Oil Coal	Elec. Steam		Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi repl.Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum Security System		Interior 1 Story Interior 2 Story 2nd/Same Stack Two Sided Exterior 1 Story Exterior 2 Story Prefab 1 Story Prefab 2 Story Heat Circulator Raised Hearth Wood Stove Direct-Vented Gas	Area	Type	232	WCP (1 Story)	Year Built: Car Capacity: Class: Exterior: Brick Ven.: Stone Ven.: Common Wall: Foundation: Finished ?: Auto. Doors: Mech. Doors: Area: % Good: Storage Area: No Conc. Floor:	
X	Wood Frame	X	Drywall Paneled	X	Plaster Wood T&G												
Building Style: 1 1/2 STY		Trim & Decoration		Forced Air w/o Ducts Forced Air w/ Ducts Forced Hot Water Electric Baseboard Elec. Ceil. Radiant Radiant (in-floor) Electric Wall Heat Space Heater Wall/Floor Furnace Forced Heat & Cool Heat Pump No Heating/Cooling													
Yr Built 1920	Remodeled 1999	Ex	X	Ord		Min											
Condition for Age: Average		Lg	X	Ord		Small											
Room List		(5) Floors		Central Air Wood Furnace													
	Basement 1st Floor 2nd Floor 3 Bedrooms	Kitchen: Vinyl Other: Carpeted Other:		(12) Electric 100 Amps Service													
(1) Exterior		(6) Ceilings		No./Qual. of Fixtures			Stories Exterior			Foundation			Rate	Bsmnt-Adj	Heat-Adj	Size	Cost
X	Wood/Shingle Aluminum/Vinyl Brick X Stucco X Insulation	X	Drywall Plaster		Ex.	X	Ord.		Min	1.5	Story Siding	Basement	91.53	0.00	0.00	728	66,634
				No. of Elec. Outlets			Other Additions/Adjustments			Rate							
		(7) Excavation		Many			X	Ave.		Few	(14) Water/Sewer						
		Basement: 728 S.F. Crawl: 0 S.F. Slab: 0 S.F. Height to Joists: 0.0		(13) Plumbing			Average Fixture(s)			(16) Porches							
(2) Windows		(8) Basement		1			3 Fixture Bath			WCP (1 Story), Standard			20.59			232	4,777
X	Many Avg. Few	X	Large Avg. Small	Basement: 728 S.F. Crawl: 0 S.F. Slab: 0 S.F. Height to Joists: 0.0			2			Phy/Ab.Phy/Func/Econ/Comb.%Good= 45/ 75/100/100/33.8,			Depr.Cost =				35,693
				(9) Basement Finish			Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan			ECF (DK GREEN)			0.478 => TCV of Bldg: 1 =				17,061
X	Wood Sash Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement Double Glass Patio Doors X Storms & Screens	Conc. Block Poured Conc. Stone Treated Wood X Concrete Floor		(14) Water/Sewer			1			Public Water							
(3) Roof		(10) Floor Support		1			Public Sewer										
X	Gable Hip Flat	Gambrel Mansard Shed	Joists: Unsupported Len: Cntr.Sup:		1			Water Well 1000 Gal Septic 2000 Gal Septic									
X	Asphalt Shingle			Lump Sum Items:													
Chimney: Brick																	

\*\*\* Information herein deemed reliable but not guaranteed\*\*\*

Grantor	Grantee	Sale Price	Sale Date	Inst. Type	Terms of Sale	Liber & Page	Verified By	Prcnt. Trans.			
DELAPAZ ROGELIO/DAWN	COUNTY OF MUSKEGON TREASURER	0	04/29/2015	WD	TAX REVERTED	4054/40	DEED	0.0			
BRININSTOOL JERRY	DELAPAZ ROGELIO/DAWN	0	03/23/2011	QC	QUIT-CLAIM	3872/923	DEED	0.0			
BRININSTOOL JERRY D/MARIA	DELAPAZ DAWN C/ROGELIO	34,500	01/02/2004	WD	LAND CONTRACT	9999/99	DEED	100.0			
BRININSTOOL JERRY	BRININSTOOL JERRY D/MARIA	0	03/26/2003	QC	QUIT-CLAIM	3534/489	DEED	0.0			
Property Address		Class: 703.EXEMPT COUNTY		Zoning: R1-RES	Building Permit(s)		Date	Number	Status		
3019 PECK ST		School: MUSKEGON HEIGHTS SCHOOLS					10/25/2011	B-174-11			
Owner's Name/Address		P.R.E. 0%		MAP #: 26-061-001-100		2017 Est TCV 0 TCV/TFA: 0.00					
COUNTY OF MUSKEGON TREASURER 173 E APPLE AVE STE 104 MUSKEGON MI 49442		X Improved		Vacant		Land Value Estimates for Land Table 00010.SOUTHWEST					
Tax Description		Public Improvements		* Factors *							
HT6638 CHAS M STEELE'S SUB'D BLK 1 LOTS 10 & 11		Dirt Road		Description	Frontage	Depth	Front	Depth	Rate %Adj.	Reason	Value
Comments/Influences		Gravel Road		SOUTHWEST	50.00	104.00	1.0000	1.0000	70	100	3,500
		X Paved Road		50 Actual Front Feet, 0.12 Total Acres Total Est. Land Value = 3,500							
		X Storm Sewer									
		X Sidewalk									
		X Water									
		X Sewer									
		X Electric									
		X Gas									
		X Curb									
		Street Lights									
		Standard Utilities									
		Underground Utils.									
		Topography of Site									
		X Level		Year	Land Value	Building Value	Assessed Value	Board of Review	Tribunal/Other	Taxable Value	
		Rolling		2017	EXEMPT	EXEMPT	EXEMPT			EXEMPT	
		Low		2016	EXEMPT	EXEMPT	EXEMPT			EXEMPT	
		High		2015	1,800	11,500	13,300			13,300S	
		Landscaped		2014	1,800	13,600	15,400			15,400S	
		Swamp									
		Wooded									
		Pond									
		Waterfront									
		Ravine									
		Wetland									
		Flood Plain									
The Equalizer. Copyright (c) 1999 - 2009. Licensed To: County of Muskegon, Michigan		Who	When	What							
		CEJ	10/31/1998	REVIEWED							
		RJ	08/24/2009	REVIEWED							
		ROB	02/18/2016	FIELD REVI							

\*\*\* Information herein deemed reliable but not guaranteed\*\*\*

Building Type		(3) Roof (cont.)		(11) Heating/Cooling			(15) Built-ins			(15) Fireplaces			(16) Porches/Decks		(17) Garage	
X	Single Family Mobile Home Town Home Duplex A-Frame		Eavestrough Insulation 0 Front Overhang 0 Other Overhang	X	Gas Wood		Oil Coal		Elec. Steam		Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi repl.Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum Security System		Interior 1 Story Interior 2 Story 2nd/Same Stack Two Sided Exterior 1 Story Exterior 2 Story Prefab 1 Story Prefab 2 Story Heat Circulator Raised Hearth Wood Stove Direct-Vented Gas	Area	Type	Year Built: 1935 Car Capacity: Class: CD Exterior: Siding Brick Ven.: 0 Stone Ven.: 0 Common Wall: Detache Foundation: 18 Inch Finished ?: Auto. Doors: 0 Mech. Doors: 0 Area: 288 % Good: 0 Storage Area: 0 No Conc. Floor: 0
X	Wood Frame		Drywall Paneled	X	Plaster Wood T&G								98 36	WGEP (1 Story) WCP (1 Story)		
Building Style: 1 STY		Trim & Decoration		Central Air Wood Furnace			(12) Electric			Stories Exterior Foundation			Rate Bsmnt-Adj Heat-Adj		Size Cost	
Yr Built 1935	Remodeled 1987	Ex	X	Ord		Min	100 Amps Service			1 Story Siding			58.89 0.00 0.00		1040 61,246	
Condition for Age: Average		Lg	X	Ord		Small	No./Qual. of Fixtures			Other Additions/Adjustments			Rate		Size Cost	
Room List		(5) Floors		Kitchen: Softwood Other: Tile Other: Carpeted			Ex. X Ord. Min			(14) Water/Sewer			1025.00		1 1,025	
	Basement 1 1st Floor 1 2nd Floor 2 Bedrooms	Basement: 1040 S.F. Crawl: 0 S.F. Slab: 0 S.F. Height to Joists: 0.0		(6) Ceilings			No. of Elec. Outlets			(14) Water/Sewer			1025.00		1 1,025	
(1) Exterior		X	Plaster				Average Fixture(s)			(16) Porches			43.09		98 4,223	
X	Wood/Shingle Aluminum/Vinyl Brick						1 3 Fixture Bath 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan			WGEP (1 Story), Standard WCP (1 Story), Standard			43.88		36 1,580	
(2) Windows		(7) Excavation		(8) Basement			(13) Plumbing			(17) Garages			22.93		288 6,604	
X	Many Avg. Few		Large Avg. Small	Conc. Block Poured Conc. Stone Treated Wood Concrete Floor			1 Public Water 1 Public Sewer Water Well 1000 Gal Septic 2000 Gal Septic			Class:CD Exterior: Siding Foundation: 18 Inch (Unfinished) Base Cost			22.93		288 6,604	
X	Wood Sash Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement Double Glass Patio Doors Storms & Screens	(9) Basement Finish		Recreation SF Living SF Walkout Doors No Floor SF			(14) Water/Sewer			Phy/Ab.Phy/Func/Econ/Comb.%Good= 45/100/100/100/45.0, Depr.Cost = ECF (SOUTHWEST)			0.473 => TCV of Bldg: 1 =		22,397	
(3) Roof		(10) Floor Support		Lump Sum Items:												
X	Gable Hip Flat		Gambrel Mansard Shed	Joists: Unsupported Len: Cntr.Sup:												
X	Asphalt Shingle															
Chimney: Brick																

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Grantor	Grantee	Sale Price	Sale Date	Inst. Type	Terms of Sale	Liber & Page	Verified By	Prcnt. Trans.
KISNER DOUGLAS	COUNTY OF MUSKEGON TREASURER	0	04/29/2015	WD	TAX REVERTED	4054/42	DEED	0.0
EH POOLED 412 P	KISNER DOUGLAS	2,500	04/18/2013	QC	QUIT- CLAIM	3949/569	DEED	100.0
HARBOUR PORTFOLIO VI LP	EH POOLED 412 P	2,640	05/16/2012	QC	QUIT- CLAIM	3915/63	DEED	100.0
FANNIE MAE	HARBOUR PORTFOLIO VI LP	4,255	05/10/2011		WARRANTY DEED	3884/134	DEED	0.0

Property Address	Class: 703.EXEMPT COUNTY	Zoning: R1-RES	Building Permit(s)	Date	Number	Status
3122 SANFORD ST	School: MUSKEGON HEIGHTS SCHOOLS			09/09/2008	B-220-08	
	P.R.E. 0%			05/31/2006	B-152-06	
Owner's Name/Address	MAP #: 26-061-002-290			04/27/2006	E-43-06	
COUNTY OF MUSKEGON TREASURER 173 E APPLE AVE STE 104 MUSKEGON MI 49442	2017 Est TCV 0 TCV/TFA: 0.00			10/19/2005	B-277-05	

Tax Description	Improved	Vacant	Land Value Estimates for Land Table 00010.SOUTHWEST							
HT6695A CHAS M STEELE'S SUB'D BLK 2 N 1/2 OF LOT 28 & ENTIRE LOT 29 & S 1/2 OF LOT 30	X		* Factors *							
Comments/Influences			Description	Frontage	Depth	Front	Depth	Rate %Adj.	Reason	Value
			SOUTHWEST	50.00	104.00	1.0000	1.0000	70	100	3,500
			50 Actual Front Feet, 0.12 Total Acres Total Est. Land Value = 3,500							
			Public Improvements							
			Dirt Road							
			Gravel Road							
	X		Paved Road							
	X		Storm Sewer							
	X		Sidewalk							
	X		Water							
	X		Sewer							
	X		Electric							
	X		Gas							
	X		Curb							
			Street Lights							
			Standard Utilities							
			Underground Utils.							
			Topography of Site							
	X		Level							
			Rolling							
			Low							
			High							
			Landscaped							
			Swamp							
			Wooded							
			Pond							
			Waterfront							
			Ravine							
			Wetland							
			Flood Plain							

Year	Land Value	Building Value	Assessed Value	Board of Review	Tribunal/Other	Taxable Value
2017	EXEMPT	EXEMPT	EXEMPT			EXEMPT
2016	EXEMPT	EXEMPT	EXEMPT			EXEMPT
2015	1,800	7,700	9,500			9,500S
2014	1,800	9,100	10,900			10,900S

Who	When	What
CEJ	10/30/1998	REVIEWED
ROB	09/18/2012	REVIEWED

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\*\*\* Information herein deemed reliable but not guaranteed\*\*\*

Building Type		(3) Roof (cont.)		(11) Heating/Cooling			(15) Built-ins			(15) Fireplaces			(16) Porches/Decks		(17) Garage	
X	Single Family Mobile Home Town Home Duplex A-Frame		Eavestrough Insulation 0 Front Overhang 0 Other Overhang	X	Gas Wood		Oil Coal		Elec. Steam		Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi repl.Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum Security System		Interior 1 Story Interior 2 Story 2nd/Same Stack Two Sided Exterior 1 Story Exterior 2 Story Prefab 1 Story Prefab 2 Story Heat Circulator Raised Hearth Wood Stove Direct-Vented Gas	Area 176	Type WGEP (1 Story)	Year Built: Car Capacity: Class: Exterior: Brick Ven.: Stone Ven.: Common Wall: Foundation: Finished ?: Auto. Doors: Mech. Doors: Area: % Good: Storage Area: No Conc. Floor:
X	Wood Frame		Drywall Paneled	X	Plaster Wood T&G											
Building Style: 2 STY		Trim & Decoration		Central Air Wood Furnace			(12) Electric			Stories Exterior Foundation Rate Bsmnt-Adj Heat-Adj Size Cost			CnlyMult		Bsmnt Garage:	
Yr Built 1940	Remodeled 0	Ex	X	Ord		Min	100 Amps Service			Rate 101.72			0.00	0.00	676	68,763
Condition for Age: Average		Lg	X	Ord		Small	No./Qual. of Fixtures			Other Additions/Adjustments			Rate		Size Cost	
Room List		(5) Floors		Kitchen: Hardwood Other: Tile Other: Carpeted			No. of Elec. Outlets			(13) Plumbing			Rate		Size Cost	
	Basement 1 1st Floor 2 2nd Floor 3 Bedrooms	Basement: 676 S.F. Crawl: 0 S.F. Slab: 0 S.F. Height to Joists: 0.0		Average Fixture(s) 1 3 Fixture Bath 1 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan			Many			X	Ave.		Few	2 Fixture Bath 1325.00 1 1,325		
(1) Exterior		X	Plaster	(7) Excavation			(13) Plumbing			Public Water 1025.00 1 1,025			Public Sewer 1025.00 1 1,025			
	Wood/Shingle X Aluminum/Vinyl Brick	Basement: 676 S.F. Crawl: 0 S.F. Slab: 0 S.F. Height to Joists: 0.0		Average Fixture(s) 1 3 Fixture Bath 1 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan			Many			X	Ave.		Few	2 Fixture Bath 1325.00 1 1,325		
(2) Windows		Basement: 676 S.F. Crawl: 0 S.F. Slab: 0 S.F. Height to Joists: 0.0		Average Fixture(s) 1 3 Fixture Bath 1 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan			Many			X	Ave.		Few	2 Fixture Bath 1325.00 1 1,325		
	Many Avg. Few		Large Avg. Small	Average Fixture(s) 1 3 Fixture Bath 1 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan			Many			X	Ave.		Few	2 Fixture Bath 1325.00 1 1,325		
X	Wood Sash Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement Double Glass Patio Doors Storms & Screens	Basement: 676 S.F. Crawl: 0 S.F. Slab: 0 S.F. Height to Joists: 0.0		Average Fixture(s) 1 3 Fixture Bath 1 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan			Many			X	Ave.		Few	2 Fixture Bath 1325.00 1 1,325		
(3) Roof		Basement: 676 S.F. Crawl: 0 S.F. Slab: 0 S.F. Height to Joists: 0.0		Average Fixture(s) 1 3 Fixture Bath 1 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan			Many			X	Ave.		Few	2 Fixture Bath 1325.00 1 1,325		
	Gable X Hip Flat		Gambrel Mansard Shed	Average Fixture(s) 1 3 Fixture Bath 1 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan			Many			X	Ave.		Few	2 Fixture Bath 1325.00 1 1,325		
X	Asphalt Shingle	Basement: 676 S.F. Crawl: 0 S.F. Slab: 0 S.F. Height to Joists: 0.0		Average Fixture(s) 1 3 Fixture Bath 1 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan			Many			X	Ave.		Few	2 Fixture Bath 1325.00 1 1,325		
Chimney: Brick		Basement: 676 S.F. Crawl: 0 S.F. Slab: 0 S.F. Height to Joists: 0.0		Average Fixture(s) 1 3 Fixture Bath 1 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan			Many			X	Ave.		Few	2 Fixture Bath 1325.00 1 1,325		

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Grantor	Grantee	Sale Price	Sale Date	Inst. Type	Terms of Sale	Liber & Page	Verified By	Prcnt. Trans.				
EARTH SMART PROPERTIES LLC	COUNTY OF MUSKEGON TREASURER	0	04/29/2015	WD	TAX REVERTED	4054/49	DEED	0.0				
3128 GLENDALE TRUST	EARTH SMART PROPERTIES LLC	0	08/11/2012	QC	QUIT- CLAIM	3922/162	DEED	100.0				
PONIROS EQUITIES LLC	3128 GLENDALE TRUST	0	11/15/2011	QC	QUIT- CLAIM	3895/531	DEED	100.0				
MUSKEGON COUNTY TREASURER	PAYNE INVESTMENTS LLC	250	10/13/2011	QC	QUIT- CLAIM	3892/835	DEED	100.0				
Property Address		Class: 703.EXEMPT COUNTY		Zoning: R1-RES	Building Permit(s)		Date	Number	Status			
3128 GLENDALE ST		School: MUSKEGON HEIGHTS SCHOOLS					06/18/2008	B-126-08				
Owner's Name/Address		P.R.E. 0%					06/24/2004	B-199-04				
COUNTY OF MUSKEGON TREASURER 173 E APPLE AVE STE 104 MUSKEGON MI 49442		MAP #: 26-061-012-260					03/23/2004	B-48-04				
Tax Description		2017 Est TCV 0 TCV/TFA: 0.00		Land Value Estimates for Land Table 00010.SOUTHWEST								
HT7078 CHAS M STEELE'S SUB'D BLK 12 LOTS 26 & 27		X Improved		Vacant		* Factors *						
Comments/Influences		X Water		X Sewer		X Electric		X Gas		X Curb		
HOUSE REHABILITATED AND BROUGHT UP TO CODE		X Street Lights		X Standard Utilities		X Underground Utils.						
Topography of Site		X Level		Rolling		Low		High		Landscaped		
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Who		When		What		Year	Land Value	Building Value	Assessed Value	Board of Review	Tribunal/Other	Taxable Value
CEJ 12/31/1998 REVIEWED						2017	EXEMPT	EXEMPT	EXEMPT			EXEMPT
						2016	EXEMPT	EXEMPT	EXEMPT			EXEMPT
						2015	1,800	10,200	12,000			12,000S
						2014	1,800	12,000	13,800			13,800S



\*\*\* Information herein deemed reliable but not guaranteed\*\*\*

Building Type		(3) Roof (cont.)		(11) Heating/Cooling			(15) Built-ins			(15) Fireplaces			(16) Porches/Decks		(17) Garage					
X	Single Family Mobile Home Town Home Duplex A-Frame		Eavestrough Insulation 0 Front Overhang 0 Other Overhang	X	Gas Wood		Oil Coal		Elec. Steam		Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi repl.Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum Security System	1	Interior 1 Story Interior 2 Story 2nd/Same Stack Two Sided Exterior 1 Story Exterior 2 Story Prefab 1 Story Prefab 2 Story Heat Circulator Raised Hearth Wood Stove Direct-Vented Gas	Area 120	Type WSEP (1 Story)	Year Built: Car Capacity: Class: Exterior: Brick Ven.: Stone Ven.: Common Wall: Foundation: Finished ?: Auto. Doors: Mech. Doors: Area: % Good: Storage Area: No Conc. Floor:				
X	Wood Frame		Drywall Paneled				Plaster Wood T&G													
Building Style: 2 STY		Trim & Decoration		Forced Air w/o Ducts Forced Air w/ Ducts Forced Hot Water Electric Baseboard Elec. Ceil. Radiant Radiant (in-floor) Electric Wall Heat Space Heater Wall/Floor Furnace Forced Heat & Cool Heat Pump No Heating/Cooling			Central Air Wood Furnace			(12) Electric 100 Amps Service			Class: C Effec. Age: 55 Floor Area: 1348 Total Base Cost: 89,289 Total Base New : 124,111 Total Depr Cost: 41,887 Estimated T.C.V: 19,813		CntyMult X 1.390 E.C.F. X 0.473		Bsmnt Garage: Carport Area: Roof:			
Yr Built 1930	Remodeled 0	Ex	X	Ord		Min	Size of Closets		Lg	X	Ord		Small	Doors:	Solid	X	H.C.			
Condition for Age: Average		(5) Floors		Kitchen: Other: Other:			(6) Ceilings			No./Qual. of Fixtures			Stories Exterior Foundation Rate Bsmnt-Adj Heat-Adj			Size Cost				
Room List		Basement 1st Floor 2nd Floor Bedrooms		Ex. X Ord. Min			No. of Elec. Outlets			Many X Ave. Few			(13) Plumbing			Average Fixture(s)				
(1) Exterior		Wood/Shingle Aluminum/Vinyl Brick		Basement: 624 S.F. Crawl: 0 S.F. Slab: 100 S.F. Height to Joists: 0.0			2 3 Fixture Bath 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan			1 2 Story Siding 1 1 Story Siding			Basement Slab			113.79 0.00 0.00 72.04 -12.65 0.00			624 71,005 100 5,939	
(2) Windows		Many Avg. Few		X Avg. Small		(8) Basement			(9) Basement Finish			(14) Water/Sewer			(15) Built-Ins & Fireplaces			Rate		
(3) Roof		Wood Sash Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement Double Glass Patio Doors Storms & Screens		Conc. Block Poured Conc. Stone Treated Wood Concrete Floor			Recreation SF Living SF Walkout Doors No Floor SF			1 Public Water 1 Public Sewer Water Well 1000 Gal Septic 2000 Gal Septic			Other Additions/Adjustments			Rate			Size Cost	
Chimney: Brick		Gable Hip Flat		Gambrel Mansard Shed		Lump Sum Items:			3 Fixture Bath Public Water Public Sewer			Fireplace: Interior 2 Story			3825.00			1 3,825		
X Asphalt Shingle		X Asphalt Shingle		WSEP (1 Story), Standard Phy/Ab.Phy/Func/Econ/Comb.%Good= 45/100/100/ 75/33.8, Economic Depreciation because of: OBSERVATION ECF (SOUTHWEST)			31.63 Depr.Cost =			120 19,813			0.473 => TCv of Bldg: 1 =			19,813				

\*\*\* Information herein deemed reliable but not guaranteed\*\*\*

Grantor	Grantee	Sale Price	Sale Date	Inst. Type	Terms of Sale	Liber & Page	Verified By	Prcnt. Trans.			
COOK MARSHALL/SONYA	COUNTY OF MUSKEGON TREASURER	0	04/29/2015	WD	TAX REVERTED	4054/68	DEED	0.0			
MUSKEGON COUNTY TREASURER	COOK MARSHALL/SONYA	20	10/13/2011	QC	QUIT- CLAIM	3892/843	DEED	100.0			
HUTCHISON JAMES H	MUSKEGON COUNTY TREASURER	0	04/01/2011	QC	QUIT- CLAIM	3880/874	DEED	0.0			
WEST MI POSTAL SVC CREDIT	HUTCHISON JAMES H	500	07/03/2009	QC	FORECLOSURE PURCHASE	3823/348	DEED	100.0			
Property Address		Class: 703.EXEMPT COUNTY		Zoning: R1-RES	Building Permit(s)	Date	Number	Status			
3135 7TH ST		School: MUSKEGON HEIGHTS SCHOOLS									
Owner's Name/Address		P.R.E. 0%									
COUNTY OF MUSKEGON TREASURER 173 E APPLE AVE STE 104 MUSKEGON MI 49442		MAP #: 26-061-032-160		2017 Est TCV 0 TCV/TFA: 0.00							
Tax Description		X Improved	Vacant	Land Value Estimates for Land Table 00010.SOUTHWEST							
HT7788 CHAS M STEELE'S SUB'D BLK 32 LOTS 16 17 & 18		Public Improvements		* Factors *							
Comments/Influences		Dirt Road		Description	Frontage	Depth	Front	Depth	Rate %Adj.	Reason	Value
7/31/2013:VACANT/DISREPAIR		Gravel Road		SOUTHWEST	75.00	104.00	1.0000	1.0000	70	100	5,250
		Paved Road		75 Actual Front Feet, 0.18 Total Acres Total Est. Land Value = 5,250							
		Storm Sewer		Land Improvement Cost Estimates							
		Sidewalk		Description	Rate	CountyMult.	Size	%Good	Cash Value		
		Water		Shed: Metal Prefab	7.34	1.37	120	43	519		
		Sewer		Total Estimated Land Improvements True Cash Value = 519							
		Electric									
		Gas									
		Curb									
		Street Lights									
		Standard Utilities									
		Underground Utils.									
		Topography of Site									
		X Level	Rolling	Year	Land Value	Building Value	Assessed Value	Board of Review	Tribunal/Other	Taxable Value	
		Low		2017	EXEMPT	EXEMPT	EXEMPT			EXEMPT	
		High		2016	EXEMPT	EXEMPT	EXEMPT			EXEMPT	
		Landscaped		2015	2,600	5,100	7,700			7,700S	
		Swamp		2014	2,600	5,900	8,500			8,500S	
		Wooded									
		Pond									
		Waterfront									
		Ravine									
		Wetland									
		Flood Plain									
		Who	When	What							
		CEJ	12/31/1998	REVIEWED							
		DG	01/07/1999	DATA ENTER							
		RJ	04/22/2009	REVIEWED							



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Building Type		(3) Roof (cont.)		(11) Heating/Cooling			(15) Built-ins			(15) Fireplaces			(16) Porches/Decks		(17) Garage	
X	Single Family Mobile Home Town Home Duplex A-Frame		Eavestrough Insulation 0 Front Overhang 0 Other Overhang	X	Gas Wood		Oil Coal		Elec. Steam		Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi repl.Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum Security System		Interior 1 Story Interior 2 Story 2nd/Same Stack Two Sided Exterior 1 Story Exterior 2 Story Prefab 1 Story Prefab 2 Story Heat Circulator Raised Hearth Wood Stove Direct-Vented Gas	Area 112 128	Type WSEP (1 Story) Treated Wood	Year Built: Car Capacity: Class: Exterior: Brick Ven.: Stone Ven.: Common Wall: Foundation: Finished ?: Auto. Doors: Mech. Doors: Area: % Good: Storage Area: No Conc. Floor:
X	Wood Frame		Drywall Paneled		Plaster Wood T&G		Trim & Decoration Ex X Ord Min		Size of Closets Lg X Ord Small		Doors: Solid X H.C.		(4) Interior			
Building Style: 1 STY		Trim & Decoration		Central Air Wood Furnace			(12) Electric			Stories Exterior Foundation			Rate Bsmnt-Adj Heat-Adj		Size Cost	
Yr Built 1930	Remodeled 0	Size of Closets		100 Amps Service			1			Story Siding			53.90 0.00 0.66		652 35,573	
Condition for Age: Average		Doors: Solid X H.C.		No./Qual. of Fixtures Ex. X Ord. Min			Other Additions/Adjustments			Rate			Bsmnt-Adj		Heat-Adj	
Room List		(5) Floors		No. of Elec. Outlets Many X Ave. Few			(14) Water/Sewer			Public Water			912.00		1 912	
	Basement 1st Floor 2nd Floor Bedrooms	Kitchen: Other: Other:		(13) Plumbing			(16) Porches			WSEP (1 Story), Standard			30.23		112 3,386	
(1) Exterior	Wood/Shingle X Aluminum/Vinyl Brick	(6) Ceilings		Average Fixture(s) 1 3 Fixture Bath 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan			(16) Deck/Balcony			Treated Wood,Standard			7.11		128 910	
	Insulation	Basement: 652 S.F. Crawl: 0 S.F. Slab: 0 S.F. Height to Joists: 0.0		Public Water			County Multiplier = 1.39 =>			Phy/Ab.Phy/Func/Econ/Comb.%Good= 45/ 75/100/100/33.8,			Depr.Cost =		19,132	
(2) Windows	Many Avg. Few	X Large Avg. Small		(8) Basement			(16) Deck/Balcony			Treated Wood,Standard			7.11		128 910	
	Wood Sash Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement Double Glass Patio Doors Storms & Screens	Conc. Block Poured Conc. Stone Treated Wood Concrete Floor		(9) Basement Finish			Public Sewer			Phy/Ab.Phy/Func/Econ/Comb.%Good= 48/ 75/100/100/36.0,			Total Depreciated Cost =		19,588	
	Chimney: Brick	Recreation SF Living SF Walkout Doors No Floor SF		(14) Water/Sewer			ECF (SOUTHWEST)			0.473 => TCV of Bldg: 1 =					9,265	
(3) Roof	X Gable Hip Flat	Gambrel Mansard Shed		(10) Floor Support			Lump Sum Items:									
	X Asphalt Shingle	Joists: Unsupported Len: Cntr.Sup:		1 Public Water 1 Public Sewer Water Well 1000 Gal Septic 2000 Gal Septic												

\*\*\* Information herein deemed reliable but not guaranteed\*\*\*

Grantor	Grantee	Sale Price	Sale Date	Inst. Type	Terms of Sale	Liber & Page	Verified By	Prcnt. Trans.					
PROGRESSIVE HOLDING CO LLC	COUNTY OF MUSKEGON TREASURER	0	04/29/2015	WD	TAX REVERTED	4054/51	DEED	0.0					
MUSKEGON COUNTY TREASURER	PROGRESSIVE HOLDING CO LLC	0	10/17/2012	QC	QUIT- CLAIM		DEED	0.0					
LAMB LURAINÉ	MUSKEGON COUNTY TREASURER	0	04/02/2012		FORECLOSURE	3914/259	DEED	0.0					
		9,000	05/18/1992	LC	QUIT-CLAIM	1786:0383	DEED	0.0					
Property Address		Class: 703.EXEMPT COUNTY		Zoning: R1-RES	Building Permit(s)	Date	Number	Status					
3200 GLENDALE ST		School: MUSKEGON HEIGHTS SCHOOLS											
Owner's Name/Address		P.R.E. 0%											
COUNTY OF MUSKEGON TREASURER 173 E APPLE AVE STE 104 MUSKEGON MI 49442		MAP #: 26-061-013-390											
Tax Description		2017 Est TCV 0 TCV/TFA: 0.00											
HT7131 CHAS M STEELE'S SUB'D BLK 13 LOTS 39 & 40		X Improved		Vacant	Land Value Estimates for Land Table 00010.SOUTHWEST								
Comments/Influences		X Sidewalk			* Factors *								
ABOVE GROUND POOL, MINIMUM DEPRECIATION		X Water			Description	Frontage	Depth	Front	Depth	Rate	%Adj.	Reason	Value
		X Sewer			SOUTHWEST	50.00	104.00	1.0000	1.0000	70	100		3,500
		X Electric			50 Actual Front Feet, 0.12 Total Acres Total Est. Land Value = 3,500								
		X Gas			Land Improvement Cost Estimates								
		X Curb			Description	Rate	CountyMult.	Size	%Good	Cash Value			
		Street Lights			Pool: Fiberglass	56.75	1.37	100	35	2,721			
		Standard Utilities			Total Estimated Land Improvements True Cash Value = 2,721								
		Underground Utils.											
		Topography of Site											
		X Level			Year	Land Value	Building Value	Assessed Value	Board of Review	Tribunal/Other	Taxable Value		
		Rolling			2017	EXEMPT	EXEMPT	EXEMPT			EXEMPT		
		Low			2016	EXEMPT	EXEMPT	EXEMPT			EXEMPT		
		High			2015	1,800	9,700	11,500			11,500S		
		Landscaped			2014	1,800	11,300	13,100			13,100S		
		Swamp											
		Wooded											
		Pond											
		Waterfront											
		Ravine											
		Wetland											
		Flood Plain											
		Who	When	What									
		CEJ	12/30/1998	REVIEWED									
		RJ	09/22/2009	REVIEWED									
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Building Type		(3) Roof (cont.)		(11) Heating/Cooling			(15) Built-ins			(15) Fireplaces			(16) Porches/Decks		(17) Garage	
X	Single Family Mobile Home Town Home Duplex A-Frame		Eavestrough Insulation 0 Front Overhang 0 Other Overhang	X	Gas Wood		Oil Coal		Elec. Steam		Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi repl.Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum Security System		Interior 1 Story Interior 2 Story 2nd/Same Stack Two Sided Exterior 1 Story Exterior 2 Story Prefab 1 Story Prefab 2 Story Heat Circulator Raised Hearth Wood Stove Direct-Vented Gas	Area 154 100	Type WGEP (1 Story) Treated Wood	Year Built: Car Capacity: Class: Exterior: Brick Ven.: Stone Ven.: Common Wall: Foundation: Finished ?: Auto. Doors: Mech. Doors: Area: % Good: Storage Area: No Conc. Floor:
X	Wood Frame		Drywall Paneled	X	Plaster Wood T&G											
Building Style: 1+ STY		Trim & Decoration		Forced Air w/o Ducts Forced Air w/ Ducts Forced Hot Water Electric Baseboard Elec. Ceil. Radiant Radiant (in-floor) Electric Wall Heat Space Heater Wall/Floor Furnace Forced Heat & Cool Heat Pump No Heating/Cooling												
Yr Built 1920	Remodeled 1997	Ex	X	Ord		Min	Size of Closets			Class: D Effec. Age: 55 Floor Area: 912 Total Base Cost: 55,286 Total Base New : 76,847 Total Depr Cost: 34,581 Estimated T.C.V: 16,357						
Condition for Age: Average		Lg	X	Ord		Small	Central Air Wood Furnace			CnlyMult X 1.390 E.C.F. X 0.473						
Room List		(5) Floors		Kitchen: Softwood Other: Carpeted Other: Tile			(12) Electric 100 Amps Service			Stories Exterior Foundation Rate Bsmnt-Adj Heat-Adj Size Cost 1+ Story Siding Basement 51.58 0.00 0.66 912 47,643 Other Additions/Adjustments Rate Size Cost (14) Water/Sewer Public Water 912.00 1 912 Public Sewer 912.00 1 912 (16) Porches WGEP (1 Story), Standard 32.85 154 5,059 (16) Deck/Balcony Treated Wood,Standard 7.60 100 760 Phy/Ab.Phy/Func/Econ/Comb.%Good= 45/100/100/100/45.0, Depr.Cost = 34,581 ECF (SOUTHWEST) 0.473 => TCV of Bldg: 1 = 16,357			Bsmnt Garage: Carport Area: Roof:			
(1) Exterior		X	Plaster				No./Qual. of Fixtures Ex. X Ord. Min									
X	Wood/Shingle Aluminum/Vinyl Brick						No. of Elec. Outlets Many X Ave. Few									
(2) Windows		(7) Excavation		Basement: 912 S.F. Crawl: 0 S.F. Slab: 0 S.F. Height to Joists: 0.0			(13) Plumbing Average Fixture(s) 1 3 Fixture Bath 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan									
X	Many Avg. Few	X	Large Avg. Small	(8) Basement		Conc. Block Poured Conc. Stone Treated Wood Concrete Floor										
X	Wood Sash Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement	(9) Basement Finish		Recreation SF Living SF Walkout Doors No Floor SF			(14) Water/Sewer									
X	Double Glass Patio Doors Storms & Screens	(10) Floor Support		Joists: Unsupported Len: Cntr.Sup:			1 Public Water 1 Public Sewer Water Well 1000 Gal Septic 2000 Gal Septic									
(3) Roof		Lump Sum Items:														
Chimney: Brick																

\*\*\* Information herein deemed reliable but not guaranteed\*\*\*

Grantor	Grantee	Sale Price	Sale Date	Inst. Type	Terms of Sale	Liber & Page	Verified By	Prcnt. Trans.			
ZHU RONGLI	COUNTY OF MUSKEGON TREASURER	0	04/29/2015	WD	TAX REVERTED	4054/45	DEED	0.0			
MUSKEGON COUNTY TREASURER	ZHU RONGLI	600	10/17/2012	QC	QUIT- CLAIM	3928/326	DEED	0.0			
BERGHUIS JUANITA/RYAN CORP	MUSKEGON COUNTY TREASURER	0	04/02/2012		FORECLOSURE	3914/256	DEED	0.0			
BERGHUIS JUANITA	BURGHUIS JUANITA/RYAN CORP	0	07/07/2009	QC	QUIT-CLAIM	3819/197	DEED	0.0			
Property Address		Class: 703.EXEMPT COUNTY		Zoning: R1-RES	Building Permit(s)	Date	Number	Status			
3205 SANFORD ST		School: MUSKEGON HEIGHTS SCHOOLS									
Owner's Name/Address		P.R.E. 0%									
COUNTY OF MUSKEGON TREASURER 173 E APPLE AVE STE 104 MUSKEGON MI 49442		MAP #: 26-061-008-030									
Tax Description		2017 Est TCV 0 TCV/TFA: 0.00									
HT6895 CHAS M STEELE'S SUB'D BLK 8 LOTS 3 & 4		X	Improved		Vacant	Land Value Estimates for Land Table 00010.SOUTHWEST					
Comments/Influences		Public Improvements		* Factors *					Value		
		Dirt Road		Description	Frontage	Depth	Front	Depth	Rate %Adj.	Reason	Value
		Gravel Road		SOUTHWEST	50.00	104.00	1.0000	1.0000	70	100	3,500
		Paved Road		50 Actual Front Feet, 0.12 Total Acres Total Est. Land Value = 3,500							
		Storm Sewer									
		Sidewalk									
		Water									
		Sewer									
		Electric									
		Gas									
		Curb									
		Street Lights									
		Standard Utilities									
		Underground Utils.									
		Topography of Site									
		X	Level								
		Rolling									
		Low									
		High									
		Landscaped									
		Swamp									
		Wooded									
		Pond									
		Waterfront									
		Ravine									
		Wetland									
		Flood Plain		Year	Land Value	Building Value	Assessed Value	Board of Review	Tribunal/Other	Taxable Value	
		Who	When	What	2017	EXEMPT	EXEMPT	EXEMPT		EXEMPT	
		CEJ	12/31/1998	REVIEWED	2016	EXEMPT	EXEMPT	EXEMPT		EXEMPT	
		DG	12/09/1998	DATA ENTER	2015	1,800	3,900	5,700		5,700S	
					2014	1,800	11,700	13,500		12,912C	



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Building Type		(3) Roof (cont.)		(11) Heating/Cooling			(15) Built-ins			(15) Fireplaces			(16) Porches/Decks			(17) Garage	
X	Single Family Mobile Home Town Home Duplex A-Frame		Eavestrough Insulation 0 Front Overhang 0 Other Overhang	X	Gas Wood		Oil Coal		Elec. Steam		Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi repl.Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum Security System		Interior 1 Story Interior 2 Story 2nd/Same Stack Two Sided Exterior 1 Story Exterior 2 Story Prefab 1 Story Prefab 2 Story Heat Circulator Raised Hearth Wood Stove Direct-Vented Gas	Area 119 32	Type CPP WSEP (1 Story)	Year Built: Car Capacity: Class: C Exterior: Siding Brick Ven.: 0 Stone Ven.: 0 Common Wall: Detache Foundation: 18 Inch Finished ?: Auto. Doors: 0 Mech. Doors: 0 Area: 240 % Good: 20 Storage Area: 0 No Conc. Floor: 0	
X	Wood Frame		Drywall Paneled				Plaster Wood T&G										
Building Style: 1+ STY		Trim & Decoration		Forced Air w/o Ducts Forced Air w/ Ducts Forced Hot Water Electric Baseboard Elec. Ceil. Radiant Radiant (in-floor) Electric Wall Heat Space Heater Wall/Floor Furnace Forced Heat & Cool Heat Pump No Heating/Cooling			Central Air Wood Furnace			Class: D Effec. Age: 55 Floor Area: 832 Total Base Cost: 55,721 Total Base New : 77,452 Total Depr Cost: 16,349 Estimated T.C.V: 7,733			CntyMult X 1.390 E.C.F. X 0.473		Bsmnt Garage:		
Yr Built 1935	Remodeled 0	Ex	X	Ord		Min	Size of Closets		No./Qual. of Fixtures			Stories Exterior Foundation Rate Bsmnt-Adj Heat-Adj			Size Cost		
Condition for Age: Average		Lg	X	Ord		Small	Doors: Solid X H.C.		Ex. X Ord. Min			Rate			Size Cost		
Room List		(5) Floors		Kitchen: Other: Other:			(12) Electric			Other Additions/Adjustments			Rate			Size Cost	
	Basement 1st Floor 2nd Floor Bedrooms	Kitchen: Other: Other:		100 Amps Service			No. of Elec. Outlets			(14) Water/Sewer			Rate			Size Cost	
(1) Exterior		(6) Ceilings		Basement: 832 S.F. Crawl: 0 S.F. Slab: 0 S.F. Height to Joists: 0.0			Average Fixture(s) 1 3 Fixture Bath 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan			(16) Porches			Rate			Size Cost	
X	Wood/Shingle Aluminum/Vinyl Brick	(7) Excavation		Basement: 832 S.F. Crawl: 0 S.F. Slab: 0 S.F. Height to Joists: 0.0			Average Fixture(s) 1 3 Fixture Bath 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan			(16) Porches			Rate			Size Cost	
(2) Windows		(8) Basement		Basement: 832 S.F. Crawl: 0 S.F. Slab: 0 S.F. Height to Joists: 0.0			Average Fixture(s) 1 3 Fixture Bath 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan			(16) Porches			Rate			Size Cost	
X	Many Avg. Few	X	Large Avg. Small	Basement: 832 S.F. Crawl: 0 S.F. Slab: 0 S.F. Height to Joists: 0.0			Average Fixture(s) 1 3 Fixture Bath 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan			(16) Porches			Rate			Size Cost	
Wood Sash Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement Double Glass Patio Doors Storms & Screens		(9) Basement Finish		Basement: 832 S.F. Crawl: 0 S.F. Slab: 0 S.F. Height to Joists: 0.0			Average Fixture(s) 1 3 Fixture Bath 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan			(16) Porches			Rate			Size Cost	
(3) Roof		Recreation SF Living SF Walkout Doors No Floor SF		Basement: 832 S.F. Crawl: 0 S.F. Slab: 0 S.F. Height to Joists: 0.0			Average Fixture(s) 1 3 Fixture Bath 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan			(16) Porches			Rate			Size Cost	
X	Gable Hip Flat	Gambrel Mansard Shed	(10) Floor Support		Basement: 832 S.F. Crawl: 0 S.F. Slab: 0 S.F. Height to Joists: 0.0			Average Fixture(s) 1 3 Fixture Bath 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan			(16) Porches			Rate			Size Cost
X	Asphalt Shingle	Joists: Unsupported Len: Cntr.Sup:		Basement: 832 S.F. Crawl: 0 S.F. Slab: 0 S.F. Height to Joists: 0.0			Average Fixture(s) 1 3 Fixture Bath 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan			(16) Porches			Rate			Size Cost	
Chimney: Brick		Lump Sum Items:		Basement: 832 S.F. Crawl: 0 S.F. Slab: 0 S.F. Height to Joists: 0.0			Average Fixture(s) 1 3 Fixture Bath 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan			(16) Porches			Rate			Size Cost	

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Grantor	Grantee	Sale Price	Sale Date	Inst. Type	Terms of Sale	Liber & Page	Verified By	Prcnt. Trans.			
COOK MARSHALL D	COUNTY OF MUSKEGON TREASURER	0	04/29/2015	WD	TAX REVERTED	4054/64	DEED	0.0			
HOLMES CAROLYN J	BEANE MARILYN	0	10/17/2007	QC	QUIT-CLAIM	3758/526	DEED	0.0			
CULP MARILYN D	COOK MARSHALL	4,000	10/17/2007	QC	QUIT-CLAIM	3758/581	DEED	100.0			
CULP MARILYN D	HOLMES CAROLYN J	0	10/15/2007	QC	QUIT-CLAIM	3758/324	DEED	0.0			
Property Address		Class: 703.EXEMPT COUNTY		Zoning: R1-RES	Building Permit(s)	Date	Number	Status			
3213 6TH ST		School: MUSKEGON HEIGHTS SCHOOLS				08/01/2000	B-233-00				
Owner's Name/Address		P.R.E. 0%									
COUNTY OF MUSKEGON TREASURER 173 E APPLE AVE STE 104 MUSKEGON MI 49442		MAP #: 26-061-028-060									
Tax Description		2017 Est TCV 0 TCV/TFA: 0.00		Land Value Estimates for Land Table 00010.SOUTHWEST							
HT7629 CHAS M STEELE'S SUB'D BLK 28, LOTS 6 & 7		X Improved	Vacant	* Factors *							
Comments/Influences		Public Improvements		Description	Frontage	Depth	Front	Depth	Rate %Adj.	Reason	Value
		Dirt Road		SOUTHWEST	50.00	104.00	1.0000	1.0000	70	100	3,500
		Gravel Road		50 Actual Front Feet, 0.12 Total Acres Total Est. Land Value = 3,500							
		X	Paved Road								
		X	Storm Sewer								
		X	Sidewalk								
		X	Water								
		X	Sewer								
		X	Electric								
		X	Gas								
		X	Curb								
		Street Lights									
		Standard Utilities									
		Underground Utils.									
		Topography of Site									
		X	Level	Year	Land Value	Building Value	Assessed Value	Board of Review	Tribunal/Other	Taxable Value	
			Rolling	2017	EXEMPT	EXEMPT	EXEMPT			EXEMPT	
			Low	2016	EXEMPT	EXEMPT	EXEMPT			EXEMPT	
			High	2015	1,800	5,700	7,500			7,500S	
			Landscaped	2014	1,800	6,700	8,500			8,500S	
			Swamp								
			Wooded								
			Pond								
			Waterfront								
			Ravine								
			Wetland								
			Flood Plain								
		Who	When	What							
		CEJ	12/31/1998	REVIEWED							
		DG	01/04/1999	DATA ENTER							
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Building Type		(3) Roof (cont.)		(11) Heating/Cooling			(15) Built-ins			(15) Fireplaces			(16) Porches/Decks		(17) Garage		
X	Single Family Mobile Home Town Home Duplex A-Frame		Eavestrough Insulation 0 Front Overhang 0 Other Overhang	X	Gas Wood		Oil Coal		Elec. Steam		Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi repl.Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum Security System		Interior 1 Story Interior 2 Story 2nd/Same Stack Two Sided Exterior 1 Story Exterior 2 Story Prefab 1 Story Prefab 2 Story Heat Circulator Raised Hearth Wood Stove Direct-Vented Gas	Area	Type	Year Built: Car Capacity: Class: Exterior: Brick Ven.: Stone Ven.: Common Wall: Foundation: Finished ?: Auto. Doors: Mech. Doors: Area: % Good: Storage Area: No Conc. Floor:	
X	Wood Frame		Drywall Paneled	X	Plaster Wood T&G												
Building Style: 1 STY		Trim & Decoration		Forced Air w/o Ducts Forced Air w/ Ducts Forced Hot Water Electric Baseboard Elec. Ceil. Radiant Radiant (in-floor) Electric Wall Heat Space Heater Wall/Floor Furnace Forced Heat & Cool Heat Pump No Heating/Cooling													
Yr Built 1940	Remodeled 0	Ex	X	Ord		Min	Size of Closets			Class: D Effec. Age: 57 Floor Area: 844 Total Base Cost: 37,458 Total Base New : 52,066 Total Depr Cost: 23,430 Estimated T.C.V: 11,082							
Condition for Age: Average		Lg	X	Ord		Small	Central Air Wood Furnace			CnlyMult X 1.390							
Room List		(5) Floors		Kitchen: Linoleum Other: Hardwood Other:			(12) Electric 100 Amps Service			Stories Exterior 1 Story Siding			Rate	Bsmnt-Adj	Heat-Adj	Size	Cost
	Basement 1st Floor 2nd Floor Bedrooms	Kitchen: Linoleum Other: Hardwood Other:		No./Qual. of Fixtures			Ex. X Ord. Min			Foundation Crawl Space			50.39	-8.83	0.66	844	35,634
(1) Exterior	X	Drywall					No. of Elec. Outlets			Other Additions/Adjustments (14) Water/Sewer			Rate		Size		Cost
X	Wood/Shingle Aluminum/Vinyl Brick	(7) Excavation		Many X Ave. Few			Public Water Public Sewer			912.00 912.00			1 1		912 912		
	Insulation	Basement: 0 S.F. Crawl: 844 S.F. Slab: 0 S.F. Height to Joists: 0.0		(13) Plumbing			Average Fixture(s) 1 3 Fixture Bath 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan			Phy/Ab.Phy/Func/Econ/Comb.%Good= 45/100/100/100/45.0, ECF (SOUTHWEST)			Depr.Cost = 0.473 => TCV of Bldg:		23,430 1 = 11,082		
(2) Windows	Many Avg. Few		Large Avg. Small	(8) Basement			Conc. Block Poured Conc. Stone Treated Wood Concrete Floor										
X	Wood Sash Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement Double Glass Patio Doors Storms & Screens	Recreation SF Living SF Walkout Doors No Floor SF		(9) Basement Finish			Average Fixture(s) 1 3 Fixture Bath 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan										
(3) Roof		Recreation SF Living SF Walkout Doors No Floor SF		(14) Water/Sewer			1 Public Water 1 Public Sewer Water Well 1000 Gal Septic 2000 Gal Septic										
X	Gable Hip Flat		Gambrel Mansard Shed	(10) Floor Support			Lump Sum Items:										
X	Asphalt Shingle	Joists: Unsupported Len: Cntr.Sup:															
Chimney: Brick																	

\*\*\* Information herein deemed reliable but not guaranteed\*\*\*

Grantor	Grantee	Sale Price	Sale Date	Inst. Type	Terms of Sale	Liber & Page	Verified By	Prcnt. Trans.						
THE LANGLOIS GROUP LLC	COUNTY OF MUSKEGON TREASURER	0	04/29/2015	WD	TAX REVERTED	4054/54	DEED	0.0						
MUSKEGON COUNTY TREASURER	THE LANGLOIS GROUP LLC	800	10/17/2012	QC	QUIT- CLAIM	3928/329	DEED	0.0						
DREAM ANGEL INVESTMENTS LLC	MUSKEGON COUNTY TREASURER	0	04/02/2012		FORECLOSURE	3914/260	DEED	0.0						
STONECREST INVESTMENTS LLC	DREAM ANGEL INVESTMENTS LLC	4,000	11/21/2008	QC	QUIT-CLAIM	3798/884	DEED	100.0						
Property Address		Class: 703.EXEMPT COUNTY		Zoning: R1-RES		Building Permit(s)		Date	Number	Status				
3225 GLENDALE ST		School: MUSKEGON HEIGHTS SCHOOLS						05/14/2003	B-104-03					
Owner's Name/Address		P.R.E. 0%						06/15/2000	B-170-00					
COUNTY OF MUSKEGON TREASURER 173 E APPLE AVE STE 104 MUSKEGON MI 49442		MAP #: 26-061-018-110						03/21/2000	B-74-00					
Tax Description		2017 Est TCV 0 TCV/TFA: 0.00												
HT7287 CHAS M STEELE'S SUB'D BLK 18 LOTS 11 12 & 13		X Improved		Vacant		Land Value Estimates for Land Table 00010.SOUTHWEST								
Comments/Influences		Public Improvements				* Factors *								
		Dirt Road				Description Frontage Depth Front Depth Rate %Adj. Reason		Value						
		Gravel Road				SOUTHWEST 75.00 104.00 1.0000 1.0000 70 100		5,250						
		X Paved Road				75 Actual Front Feet, 0.18 Total Acres Total Est. Land Value =		5,250						
		X Storm Sewer												
		X Sidewalk												
		X Water												
		X Sewer												
		X Electric												
		X Gas												
		X Curb												
		Street Lights												
		Standard Utilities												
		Underground Utils.												
		Topography of Site												
		X Level												
		Rolling												
		Low												
		High												
		Landscaped												
		Swamp												
		Wooded												
		Pond												
		Waterfront												
		Ravine												
		Wetland												
		Flood Plain												
		Who		When		What		Year	Land Value	Building Value	Assessed Value	Board of Review	Tribunal/Other	Taxable Value
		RLJ		12/31/1998		REVIEWED		2017	EXEMPT	EXEMPT	EXEMPT			EXEMPT
		DG		12/18/1998		DATA ENTER		2016	EXEMPT	EXEMPT	EXEMPT			EXEMPT
								2015	2,600	12,500	15,100			15,100S
								2014	2,600	14,800	17,400			17,400S



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Building Type		(3) Roof (cont.)		(11) Heating/Cooling			(15) Built-ins			(15) Fireplaces			(16) Porches/Decks			(17) Garage		
X	Single Family Mobile Home Town Home Duplex A-Frame		Eavestrough Insulation 0 Front Overhang 0 Other Overhang	X	Gas Wood		Oil Coal		Elec. Steam		Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi repl.Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum Security System		Interior 1 Story Interior 2 Story 2nd/Same Stack Two Sided Exterior 1 Story Exterior 2 Story Prefab 1 Story Prefab 2 Story Heat Circulator Raised Hearth Wood Stove Direct-Vented Gas	Area 312	Type Treated Wood	Year Built: Car Capacity: Class: Exterior: Brick Ven.: Stone Ven.: Common Wall: Foundation: Finished ?: Auto. Doors: Mech. Doors: Area: % Good: Storage Area: No Conc. Floor:		
X	Wood Frame		Drywall Paneled				Plaster Wood T&G											
Building Style: 1 3/4 STY		Trim & Decoration		Forced Air w/o Ducts Forced Air w/ Ducts Forced Hot Water Electric Baseboard Elec. Ceil. Radiant Radiant (in-floor) Electric Wall Heat Space Heater Wall/Floor Furnace Forced Heat & Cool Heat Pump No Heating/Cooling														
Yr Built 1940	Remodeled 0	Ex	X	Ord		Min												
Condition for Age: Average		Lg	X	Ord		Small												
Room List		(5) Floors		Central Air Wood Furnace														
	Basement 1st Floor 2nd Floor Bedrooms	Kitchen: Other: Other:		(12) Electric 100 Amps Service														
(1) Exterior		(6) Ceilings		No./Qual. of Fixtures			Stories Exterior			Foundation			Rate Bsmnt-Adj		Heat-Adj		Size Cost	
X	Wood/Shingle Aluminum/Vinyl Brick				Ex.	X	Ord.		Min	1.75	Story Siding	Basement	83.58	0.00	0.00	572	47,808	
	Insulation	Basement: 770 S.F. Crawl: 0 S.F. Slab: 308 S.F. Height to Joists: 0.0		No. of Elec. Outlets			1 Story Siding			Slab			58.50 -10.27		0.00		308 14,855	
(2) Windows		(7) Excavation		Many			X	Ave.		Few	1	Story Siding	Basement	58.50	0.00	0.00	198	11,583
X	Many Avg. Few	X	Large Avg. Small	(13) Plumbing			Other Additions/Adjustments			Rate			Size Cost					
	Wood Sash Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement Double Glass Patio Doors Storms & Screens	Basement: 770 S.F. Crawl: 0 S.F. Slab: 308 S.F. Height to Joists: 0.0		Average Fixture(s)			2 Fixture Bath			1325.00			1		1,325			
(3) Roof		(8) Basement		1 3 Fixture Bath			(14) Water/Sewer			Public Water			1025.00		1		1,025	
X	Gable Hip Flat	Gambrel Mansard Shed	Conc. Block Poured Conc. Stone Treated Wood Concrete Floor	1 2 Fixture Bath			Public Sewer			1025.00			1		1,025			
	Asphalt Shingle	Recreation SF Living SF Walkout Doors No Floor SF		Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan			Phy/Ab.Phy/Func/Econ/Comb.%Good= 45/100/100/100/45.0,			Depr.Cost =			48,552					
Chimney: Brick		(9) Basement Finish		Lump Sum Items:			(16) Deck/Balcony			Treated Wood,Standard			6.31		312		1,969	
		Joists: Unsupported Len: Cntr.Sup:		1 Public Water 1 Public Sewer Water Well 1000 Gal Septic 2000 Gal Septic			County Multiplier = 1.39 =>			Cost New =			2,737					
							Phy/Ab.Phy/Func/Econ/Comb.%Good= 96/100/100/100/96.0,			Depr.Cost =			2,627					
							ECF (SOUTHWEST)			Total Depreciated Cost =			51,179					
							0.473 => TCV of Bldg: 1 =			24,208								

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Grantor	Grantee	Sale Price	Sale Date	Inst. Type	Terms of Sale	Liber & Page	Verified By	Prcnt. Trans.						
HOPE LIGHTHOUSE CHURCH	COUNTY OF MUSKEGON TREASURER	0	04/29/2015	WD	TAX REVERTED	4054/63	DEED	0.0						
RT REAL ESTATE DEVELOPMENT	HOPE LIGHTHOUSE CHURCH	17,000	03/22/2005	WD	WARRANTY DEED	3643/603	DEED	100.0						
GREEN MOUNTAIN PROPERTIES	RT REAL ESTATE DEVELOPMENT	0	10/18/2002	QC	QUIT-CLAIM	3505/189	DEED	0.0						
LIBERTY SAVINGS BANK	GREEN MOUNTAIN PROPERTIES	15,000	05/22/2001	TA	AFFIDAVIT		DEED	0.0						
Property Address		Class: 703.EXEMPT COUNTY		Zoning: R1-RES	Building Permit(s)		Date	Number	Status					
3301 6TH ST		School: MUSKEGON HEIGHTS SCHOOLS					08/30/2006	B-281-06						
Owner's Name/Address		P.R.E. 0%					05/22/2006	B-140-06						
COUNTY OF MUSKEGON TREASURER 173 E APPLE AVE STE 104 MUSKEGON MI 49442		MAP #: 26-061-027-010		2017 Est TCV 0 TCV/TFA: 0.00										
Tax Description		X Improved		Vacant		Land Value Estimates for Land Table 00010.SOUTHWEST								
HT7604 CHAS M STEELE'S SUB'D BLK 27 LOTS 1 & 2		X		Public Improvements		* Factors *								
Comments/Influences		X		Dirt Road		Description	Frontage	Depth	Front	Depth	Rate	%Adj.	Reason	Value
		X		Gravel Road		SOUTHWEST	50.00	110.00	1.0000	1.0000	70	100		3,500
		X		Paved Road		50 Actual Front Feet, 0.13 Total Acres Total Est. Land Value = 3,500								
		X		Storm Sewer										
		X		Sidewalk										
		X		Water										
		X		Sewer										
		X		Electric										
		X		Gas										
		X		Curb										
				Street Lights										
				Standard Utilities										
				Underground Utils.										
				Topography of Site										
		X		Level		Year	Land Value	Building Value	Assessed Value	Board of Review	Tribunal/Other	Taxable Value		
				Rolling		2017	EXEMPT	EXEMPT	EXEMPT			EXEMPT		
				Low		2016	EXEMPT	EXEMPT	EXEMPT			EXEMPT		
				High		2015	1,800	7,500	9,300			9,300S		
				Landscaped		2014	1,800	8,900	10,700			10,700S		
				Swamp										
				Wooded										
				Pond										
				Waterfront										
				Ravine										
				Wetland										
				Flood Plain										
		Who		When		What								
		CEJ		08/31/1998		REVIEWED								
		RJ		10/27/2009		REVIEWED								
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Building Type		(3) Roof (cont.)		(11) Heating/Cooling			(15) Built-ins			(15) Fireplaces			(16) Porches/Decks		(17) Garage	
X	Single Family Mobile Home Town Home Duplex A-Frame		Eavestrough Insulation 0 Front Overhang 0 Other Overhang	X	Gas Wood		Oil Coal		Elec. Steam		Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi repl.Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum Security System		Interior 1 Story Interior 2 Story 2nd/Same Stack Two Sided Exterior 1 Story Exterior 2 Story Prefab 1 Story Prefab 2 Story Heat Circulator Raised Hearth Wood Stove Direct-Vented Gas	Area 280	Type WGEP (1 Story)	Year Built: Car Capacity: Class: Exterior: Brick Ven.: Stone Ven.: Common Wall: Foundation: Finished?: Auto. Doors: Mech. Doors: Area: % Good: Storage Area: No Conc. Floor:
X	Wood Frame		Drywall Paneled	X	Plaster Wood T&G											
Building Style: 1 1/4 STY		Trim & Decoration		Forced Air w/o Ducts Forced Air w/ Ducts Forced Hot Water Electric Baseboard Elec. Ceil. Radiant Radiant (in-floor) Electric Wall Heat Space Heater Wall/Floor Furnace Forced Heat & Cool Heat Pump No Heating/Cooling												
Yr Built 1935	Remodeled 1997	Ex	X	Ord		Min	Size of Closets			Class: CD Effec. Age: 57 Floor Area: 1078 Total Base Cost: 65,839 Total Base New : 91,516 Total Depr Cost: 30,887 Estimated T.C.V: 14,609						
Condition for Age: Average		Lg	X	Ord		Small	Central Air Wood Furnace			CnlyMult X 1.390 E.C.F. X 0.473			Bsmnt Garage:			
Room List		(5) Floors		Kitchen: Hardwood Other: Carpeted Other: Tile			(12) Electric 100 Amps Service			Stories Exterior Foundation Rate Bsmnt-Adj Heat-Adj Size Cost 1.25 Story Siding Crawl Space 69.97 -8.95 0.00 616 37,588 1 Story Siding Basement 60.33 0.00 0.00 308 18,582 Other Additions/Adjustments Rate Size Cost (14) Water/Sewer Public Water 1025.00 1 1,025 Public Sewer 1025.00 1 1,025 (16) Porches WGEP (1 Story), Standard 27.21 280 7,619 Phy/Ab.Phy/Func/Econ/Comb.%Good= 45/100/100/ 75/33.8, Depr.Cost = 30,887 Economic Depreciation because of: OBSERVATION ECF (SOUTHWEST) 0.473 => TCV of Bldg: 1 = 14,609			Carport Area: Roof:			
(1) Exterior		X	Plaster				No./Qual. of Fixtures Ex. X Ord. Min									
X	Wood/Shingle Aluminum/Vinyl Brick Insulation						No. of Elec. Outlets Many X Ave. Few									
(2) Windows		(7) Excavation		Basement: 308 S.F. Crawl: 616 S.F. Slab: 0 S.F. Height to Joists: 0.0			(13) Plumbing Average Fixture(s) 1 3 Fixture Bath 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan									
X	Many Avg. Few	X	Large Avg. Small	(8) Basement		(9) Basement Finish Recreation SF Living SF Walkout Doors No Floor SF			(14) Water/Sewer 1 Public Water 1 Public Sewer Water Well 1000 Gal Septic 2000 Gal Septic Lump Sum Items:							
X	Wood Sash Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement Double Glass Patio Doors Storms & Screens		Conc. Block Poured Conc. Stone Treated Wood Concrete Floor													
(3) Roof		(10) Floor Support		Joists: Unsupported Len: Cntr.Sup:												
X	Gable Hip Flat		Gambrel Mansard Shed													
X	Asphalt Shingle															
Chimney: Brick																

\*\*\* Information herein deemed reliable but not guaranteed\*\*\*

Grantor	Grantee	Sale Price	Sale Date	Inst. Type	Terms of Sale	Liber & Page	Verified By	Prcnt. Trans.
PICKERING MYRON	COUNTY OF MUSKEGON TREASURER	0	02/09/2015	JUD	FORECLOSURE	4053/995	DEED	0.0
KIANROKH HAMIDREZA	PICKERING MYRON	0	08/05/2014	QC	QUIT- CLAIM	4029/78	DEED	100.0
PLNIROS EQUITIES LLC	KIANROKH HAMIDREZA	0	11/18/2013	QC	QUIT- CLAIM	4008/923	DEED	100.0
MUSKEGON COUNTY TREASURER	PLNIROS EQUITIES LLC	400	10/17/2012	QC	QUIT-CLAIM	3928/290	DEED	0.0

Property Address	Class: 703.EXEMPT COUNTY	Zoning:	Building Permit(s)	Date	Number	Status			
3327 7TH ST	School: MUSKEGON HEIGHTS SCHOOLS			01/10/2006	SR-7-06				
	P.R.E. 0%								
Owner's Name/Address	MAP #: 26-031-011-090								
COUNTY OF MUSKEGON TREASURER 173 E APPLE AVE STE 104 MUSKEGON MI 49442	2017 Est TCV 0 TCV/TFA: 0.00								
Tax Description	X Improved	Vacant	Land Value Estimates for Land Table 00010.SOUTHWEST						
HT5092 HOME LAWN ADD'N BLK 11 LOT 9	Public Improvements		* Factors *						
Comments/Influences	Dirt Road Gravel Road Paved Road Storm Sewer Sidewalk Water Sewer Electric Gas Curb Street Lights Standard Utilities Underground Utils.		Description	Frontage	Depth	Front Depth	Rate %Adj.	Reason	Value
			SOUTHWEST	40.00	100.00	1.0000	1.0000	70 100	2,800
			40 Actual Front Feet, 0.09 Total Acres				Total Est. Land Value =	2,800	
	Topography of Site								
	Level Rolling Low High Landscaped Swamp Wooded Pond Waterfront Ravine Wetland Flood Plain		Year	Land Value	Building Value	Assessed Value	Board of Review	Tribunal/ Other	Taxable Value
	Who	When	What	2017	EXEMPT	EXEMPT	EXEMPT		EXEMPT
	BKS	12/31/1989	REVIEWED	2016	EXEMPT	EXEMPT	EXEMPT		EXEMPT
	ROB	10/05/2011	REVIEWED	2015	1,400	6,200	7,600		7,600S
				2014	1,400	7,400	8,800		8,800S



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Building Type		(3) Roof (cont.)		(11) Heating/Cooling			(15) Built-ins			(15) Fireplaces			(16) Porches/Decks		(17) Garage	
X	Single Family Mobile Home Town Home Duplex A-Frame		Eavestrough Insulation 0 Front Overhang 0 Other Overhang	X	Gas Wood		Oil Coal		Elec. Steam		Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi repl.Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum Security System		Interior 1 Story Interior 2 Story 2nd/Same Stack Two Sided Exterior 1 Story Exterior 2 Story Prefab 1 Story Prefab 2 Story Heat Circulator Raised Hearth Wood Stove Direct-Vented Gas	Area	Type	Year Built: Car Capacity: Class: CD Exterior: Siding Brick Ven.: 0 Stone Ven.: 0 Common Wall: Detache Foundation: 18 Inch Finished?: Auto. Doors: 0 Mech. Doors: 0 Area: 352 % Good: 10 Storage Area: 0 No Conc. Floor: 0
X	Wood Frame		Drywall Paneled				Plaster Wood T&G									
Building Style: 1 STY		Trim & Decoration		Forced Air w/o Ducts Forced Air w/ Ducts Forced Hot Water Electric Baseboard Elec. Ceil. Radiant Radiant (in-floor) Electric Wall Heat Space Heater Wall/Floor Furnace Forced Heat & Cool Heat Pump No Heating/Cooling			Central Air Wood Furnace			Class: CD Effec. Age: 55 Floor Area: 816 Total Base Cost: 59,989 Total Base New : 83,385 Total Depr Cost: 25,465 Estimated T.C.V: 12,045			CntyMult X 1.390 E.C.F. X 0.473		Bsmnt Garage:	
Yr Built 1935	Remodeled 0	Ex	X	Ord		Min										
Condition for Age: Average		Size of Closets		No./Qual. of Fixtures			(12) Electric			Stories Exterior Foundation Rate Bsmnt-Adj Heat-Adj Size Cost			Rate		Size Cost	
Room List		(5) Floors		Ex. X Ord. Min			100 Amps Service			1 Story Siding Basement 62.01 0.00 0.00 816 50,600			Rate		Size Cost	
	Basement 1st Floor 2nd Floor Bedrooms	Kitchen: Other: Other:		No. of Elec. Outlets			1			Other Additions/Adjustments			Rate		Size Cost	
(1) Exterior		(6) Ceilings		Many X Ave. Few			(13) Plumbing			(14) Water/Sewer			Rate		Size Cost	
X	Wood/Shingle Aluminum/Vinyl Brick	Basement: 816 S.F. Crawl: 0 S.F. Slab: 0 S.F. Height to Joists: 0.0		Average Fixture(s) 1 3 Fixture Bath 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan			Public Water Public Sewer			Public Water 1025.00 1 1,025 Public Sewer 1025.00 1 1,025 Phy/Ab.Phy/Func/Econ/Comb.%Good= 45/ 75/100/100/33.8, Depr.Cost = 24,700			Rate		Size Cost	
(2) Windows		(7) Excavation		(14) Water/Sewer			Separately Depreciated Items:			(17) Garages			Rate		Size Cost	
X	Many Avg. Few	X	Large Avg. Small	Phy/Ab.Phy/Func/Econ/Comb.%Good= 10/ 75/100/100/7.5, Depr.Cost = 765			Class:CD Exterior: Siding Foundation: 18 Inch (Unfinished) Base Cost 20.85 352 7,339 County Multiplier = 1.39 => Cost New = 10,201 Phy/Ab.Phy/Func/Econ/Comb.%Good= 10/ 75/100/100/7.5, Depr.Cost = 765 Total Depreciated Cost = 25,465			ECF (SOUTHWEST) 0.473 => TCV of Bldg: 1 = 12,045			Rate		Size Cost	
(3) Roof		(8) Basement		(14) Water/Sewer			Total Depreciated Cost = 25,465			Total Depreciated Cost = 25,465			Rate		Size Cost	
X	Gable Hip Flat		Conc. Block Poured Conc. Stone Treated Wood Concrete Floor	1 Public Water 1 Public Sewer Water Well 1000 Gal Septic 2000 Gal Septic			Lump Sum Items:			Total Depreciated Cost = 25,465			Rate		Size Cost	
X	Asphalt Shingle	(9) Basement Finish		Lump Sum Items:			Total Depreciated Cost = 25,465			Total Depreciated Cost = 25,465			Rate		Size Cost	
Chimney: Brick		Recreation SF Living SF Walkout Doors No Floor SF		Lump Sum Items:			Total Depreciated Cost = 25,465			Total Depreciated Cost = 25,465			Rate		Size Cost	
(10) Floor Support		Joists: Unsupported Len: Cntr.Sup:		Lump Sum Items:			Total Depreciated Cost = 25,465			Total Depreciated Cost = 25,465			Rate		Size Cost	

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