### 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

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 <a href="www.cityofmuskegoheights.org">www.cityofmuskegoheights.org</a> 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 <a href="mailto:BurgessTi@co.muskegon.mi.us">BurgessTi@co.muskegon.mi.us</a>

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

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 Ab	atement Total:	
Demolition 1	Гotal:	 
Disposal Tot	al:	 
Fill:		 
Landscaping	Total:	 
Total Bid Amount:	<u> </u>	

### **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)	
FIRM NAME:			
BY (PRINTED):		_	
BY (SIGNATURE): TITLE:			
ADDRESS: PHONE NO.		_	

# 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 ordefault. **Bidder Signature** Date Typed or Printed **Company Name** 

### 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

- 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 <a href="mailto:BurgessTi@co.muskegon.mi.us">BurgessTi@co.muskegon.mi.us</a>

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.

### 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 I Omissions I 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.

#### 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.

# 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.

#### 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 I general 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.

### 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:

- 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.

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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### Section IV Work Elements

### A. Work Site / Structure Addresses

Muskegon Heights	Muskegon Heights
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	Muskegon
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	
	Dalton
	Both are 49457
	6622 Poppy Way
	6085 Main St

See attached asbestos surveys for more detailed information

#### 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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### 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 prebid 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 or 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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### 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 7:	Copy of bid bond  Copies of asbestos abatement contractor license(s).

### Blight Elimination Audit Sheet

### **Eligibility Requirements**

Part	Partiler, Contractor.				
Aud	ited By:				
Date	9:				
YES / NO	Requirements	Notes			
The first of the second	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)				
¥¥ку уласшацыяµуроў щА ∰турул	Automobile Liability (must be > than a million)				
	Current Certificates must be on file in partners office at all	+ 2			
	times.				
F-6000000-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-	Evidence of Legal Standing (Certificate from LARA or	Manager 1 and 1 an			
	Articles of organization)				
	A complete list of all contractors' board/officers				
The second second second	Any operation agreements (current copies)				
and from the first transmission of the state	Evidence of Experience (contractors must have min. 5				
	years licensed experience.)				
	Bid and Performance Bond (Bond = to 100% of total	40-41-41-41-41-41-41-41-41-41-41-41-41-41-			
	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	•			
The same of the sa	State and Local Licenses and permits for all workers	A de la constantina del constantina del constantina de la constantina del constantina			
	(Partners must ensure that all Contractors and Sub	)			
	Contractors meet all state and local ordinances through				
	documentation.)				
afficiella descripción de consequencia (con	Communities proposing demolition outside the city limits	The second secon			
	must submit documentation showing that local officials				
	agree in demolition.				

2228 Riordan St 2529 Ray St 2529 Ray St 2140 McGlwrath St 2145 Sanford St 2145 Sanford St 2146 Ferrior St 2150 Gendale St 2225 Gendale St 2227 Marfett St 2237 Marfett St 2333 Reynolds St 2331 Reynolds St 2340 Ray St 2340 R	Muskegon Heights	Asbestos / Environmental	Demolition	Backfill / Landscape	Other	Total
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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.

Muskegon County Land Bank Parcel ID: 61-26-635-270-0005-00

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.

Muskegon County Land Bank Parcel ID: 61-26-635-270-0005-00

### **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.

Muskegon County Land Bank Parcel ID: 61-26-635-270-0005-00

#### 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.

Muskegon County Land Bank Parcel ID: 61-26-635-270-0005-00

### 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.

Muskegon County Land Bank Parcel ID: 61-26-635-270-0005-00

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) (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).

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



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

Lab ID #: 69724 - 02

Cust. #: CA-HM-01B

Material: Shingle Siding

Location:

Appearance: black, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 69724 - 03

Cust. #: CA-HM-02A

Material: Roofing Material

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 4

Asbestos Present: NO

Cellulose - 65%

No Asbestos Observed

Other - 35%

Asbestos Present: **NO** No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Cellulose - 65%

Other - 35%

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.



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 - 03a

Cust. #: CA-HM-02A

Material: Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 2 of 4

Lab ID #: 69724 - 03b

Cust. #: CA-HM-02A

Material: Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 3 of 4

Cust. #: CA-HM-02A

Material: Shingle

Location:

Appearance: black,fibrous,homogenous

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

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 30%

Cellulose - 30% Other - 70%

Cellulose - 30% Other - 70%

Other - 70%

Lab ID #: 69724 - 03c Asbestos Present: NO No Asbestos Observed

Layer: 4 of 4

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.



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

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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 30%

Other - 70%

Lab ID #: 69724 - 04

Cust. #: CA-HM-02B

Material: Roofing Material

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 4

Asbestos Present: NO

No Asbestos Observed

Cellulose - 30%

Other - 70%

Material: Shingle

Location:

Appearance: black, fibrous, homogenous

Lab ID #: 69724 - 04b

Cust. #: CA-HM-02B

Lab ID #: 69724 - 04a

Cust. #: CA-HM-02B

Layer: 2 of 4

Asbestos Present: NO

Cellulose - 30%

No Asbestos Observed

Other - 70%

Material: Shingle

. . . . .

Location:

Appearance: black, fibrous, homogenous

Layer: 3 of 4

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: 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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 30%

Other - 70%

Lab ID #: 69724 - 04c

Cust. #: CA-HM-02B

Material: Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 4 of 4

Asbestos Present: **NO** 

No Asbestos Observed

Other - 100%

Other - 100%

Cust. #: CA-HM-03A

Lab ID #: 69724 - 05

Material: 12x12 Tan VFT

Location:

Appearance: beige, nonfibrous, homogenous

Layer: 1 of 4

Lab ID #: 69724 - 05a

Cust. #: CA-HM-03A

Material: Mastic

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 4

Asbestos Present: NO No Asbestos Observed

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Robert T. Letarte Jr., Laboratory Director

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Test Method, Polarized Light Microscopy (PLM)

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

Lab ID #: 69724 - 05b

Cust. #: CA-HM-03A

Material: Flooring

Location:

Appearance: yellow,fibrous,nonhomogenous

Layer: 3 of 4

Lab ID #: 69724 - 05c

Cust. #: CA-HM-03A

Material: Flooring

Location:

Appearance: blue, fibrous, nonhomogenous

Layer: 4 of 4

Lab ID #: 69724 - 06

Material: 12x12 Tan VFT

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 4

Non-Asbestos

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

Asbestos Present: NO

No Asbestos Observed

Cellulose - 35%

Cellulose - 35%

Other - 65%

Other - 100%

Other - 65%

Cust. #: CA-HM-03B No Asbestos Observed

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

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Test Method, Polarized Light Microscopy (PLM)

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 Reported: 04/28/17

Date Analyzed: 04/26/17

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69724 - 06a

Cust. #: CA-HM-03B

Material: Mastic

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 4

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 35%

Other - 65%

Lab ID #: 69724 - 06b Cust. #: CA-HM-03B

Material: Flooring

Location:

Appearance: yellow,fibrous,nonhomogenous

Layer: 3 of 4

Asbestos Present: NO 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

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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

Non-Asbestos

Lab ID #: 69724 - 07

Cust. #: CA-HM-04A

Material: 12x12 Grey VFT

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 2

Lab ID #: 69724 - 07a

Cust. #: CA-HM-04A

Material: Mastic

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 69724 - 08

Cust. #: CA-HM-04B

Material: 12x12 Grey VFT

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 2

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Other - 100%

Other - 100%

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

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: 15 Crescent Ave

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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

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69724 - 08a

Cust. #: CA-HM-04B

Material: Mastic

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 95% Other - 5%

Lab ID #: 69724 - 09 Cust. #: CA-HM-05A

Material: 1x1 White Ceiling Tile, Random Holes

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

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: NO

No Asbestos Observed

Other - 5%

Cellulose - 95%

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: 15 Crescent Ave

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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 - 11

Cust. #: CA-HM-06A

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

Lab ID #: 69724 - 11a

Cust. #: CA-HM-06A

Material: Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Lab ID #: 69724 - 12

Cust. #: CA-HM-06B

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 20%

Other - 100%

Other - 80%

Asbestos Present: NO No Asbestos Observed

Cellulose - 20% Other - 80%

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

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Test Method, Polarized Light Microscopy (PLM)

Project: 15 Crescent Ave

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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

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69724 - 12a

Cust. #: CA-HM-06B

Material: Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 95%

Other - 5%

Lab ID #: 69724 - 13

Cust. #: CA-HM-07A

Material: 1x1 White Textured Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

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: NO

No Asbestos Observed

Cellulose - 95%

Other - 5%

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

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Test Method, Polarized Light Microscopy (PLM)

Project: 15 Crescent Ave

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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

Non-Asbestos

Lab ID #: 69724 - 15

Cust. #: CA-HM-08A

Material: Window Glazing

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69724 - 16

Cust. #: CA-HM-08B

Location:

Material: Window Glazing

Appearance:

Layer:

Lab ID #: 69724 - 17

Cust. #: CA-HM-09A

Material: Gray Marble Linoleum

Location:

Appearance: grey,fibrous,nonhomogenous

Layer: 1 of 1

Asbestos Type/Percent

Asbestos Present: YES

Other - 98.75%

Chrysotile - 1.25%

POINT COUNT RESULT

NOT ANALYZED

Asbestos Present:

Asbestos Present: NO

No Asbestos Observed

Cellulose - 35%

Other - 65%

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

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Test Method, Polarized Light Microscopy (PLM)

Project: 15 Crescent Ave

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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 - 18

Cust. #: CA-HM-09B

Material: Gray Marble Linoleum

Location:

Appearance: grey,fibrous,nonhomogenous

Layer: 1 of 1

Lab ID #: 69724 - 19

Cust. #: CA-HM-10A

Material: 9x9 White Speckle VFT

Location:

Appearance: beige, nonfibrous, homogenous

Layer: 1 of 4

Lab ID #: 69724 - 19a

Material: Mastic

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 2 of 4

Asbestos Present: NO

No Asbestos Observed

Cellulose - 35%

Other - 65%

Other - 100%

Other - 100%

Asbestos Present: **NO** No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Cust. #: CA-HM-10A

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

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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 - 19b

Cust. #: CA-HM-10A

Material: Felt Location:

Appearance: black,fibrous,homogenous

Layer: 3 of 4

Asbestos Present: NO 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

Lab ID #: 69724 - 20

Cust. #: CA-HM-10B

Material: 9x9 White Speckle VFT

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 4

Asbestos Present: **NO** 

Other - 100%

Other - 100%

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

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: 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

Other - 100%

Lab ID #: 69724 - 20a

Cust. #: CA-HM-10B

Material: Mastic

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 2 of 4

Lab ID #: 69724 - 20b

Cust. #: CA-HM-10B

Material: Felt

Location:

Appearance: black, fibrous, homogenous

Layer: 3 of 4

Lab ID #: 69724 - 20c

Cust. #: CA-HM-10B

Material: Adhesive

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 4 of 4

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 35%

Other - 65%

Asbestos Present: NO Other - 100%

No Asbestos Observed

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

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Test Method, Polarized Light Microscopy (PLM)

Project: 15 Crescent Ave

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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

No Asbestos Observed

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

Lab ID #: 69724 - 22

Cust. #: CA-HM-11B

Material: 2x4 White Smooth Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69724 - 23

Cust. #: CA-HS-01A

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: NO

Cellulose - 95%

Other - 5%

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 95%

Other - 5%

Other - 100%

Asbestos Present: NO

No Asbestos Observed

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

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Test Method, Polarized Light Microscopy (PLM)

Project: 15 Crescent Ave

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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

Asbestos Present: YES

POINT COUNT RESULT

Chrysotile - 1.50%

Non-Asbestos

Cellulose - 2%

Other - 96.50%

Lab ID #: 69724 - 23a

Cust. #: CA-HS-01A

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Asbestos Present: **NO** 

No Asbestos Observed

Other - 100%

Lab ID #: 69724 - 24 Cust. #: CA-HS-01B

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69724 - 24a

Asbestos Present:

Cust. #: CA-HS-01B

Material: Plaster Base Coat

Location:

NOT ANALYZED

Appearance:

Layer: 2 of 2

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: 15 Crescent Ave

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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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69724 - 25

Cust. #: CA-HS-01C

Material: Plaster Texture

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 3

Asbestos Present: **NO** 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

Lab ID #: 69724 - 25b

Asbestos Present:

Cust. #: CA-HS-01C

Material: Plaster Base Coat Location:

NOT ANALYZED

Appearance:

Layer: 3 of 3

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

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Test Method, Polarized Light Microscopy (PLM)

Project: 15 Crescent Ave

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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 - 26

Cust. #: CA-HS-01D

Material: Plaster Texture

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 3

Lab ID #: 69724 - 26a

Cust. #: CA-HS-01D

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 3

Lab ID #: 69724 - 26b

Material: Plaster Base Coat

Location:

Layer: 3 of 3

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Asbestos Present: **NO** 

No Asbestos Observed

Other - 100%

Asbestos Present:

Cust. #: CA-HS-01D

Appearance:

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: 15 Crescent Ave

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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

Lab ID #: 69724 - 27a

Cust. #: CA-HS-01E

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 3

Lab ID #: 69724 - 27b

Cust. #: CA-HS-01E

Material: Plaster Base Coat

Location:

Appearance:

Layer: 3 of 3

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Asbestos Present: **NO** 

No Asbestos Observed

Other - 100%

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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69724 - 28

Cust. #: CA-HS-01F

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

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: NO No Asbestos Observed

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

Robert T. Letarte Jr., Laboratory Director

Other - 100%

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.



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 - 29a

Cust. #: CA-HS-01G

Material: Plaster Base Coat

Location:

NOT ANALYZED

Asbestos Present:

Appearance: Layer: 2 of 2

Lab ID #: 69724 - 30

Cust. #: CA-HS-02A

Material: Surfacing Material

Location:

Appearance: white, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 2%

Vermiculite - 5%

Other - 93%

Edyci: 1 of

Lab ID #: 69724 - 31

Cust. #: CA-HS-02B

Material: Surfacing Material

Location:

Appearance: white, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Cellulose - 2%

Vermiculite - 5%

Other - 93%

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.



Test Method, Polarized Light Microscopy (PLM)

Project: 15 Crescent Ave

R	eno	rt	$T_{\Lambda}$	•

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 Reported: 04/28/17

Date Analyzed: 04/26/17

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

Lab ID #:

Cust. #: Material: Location: Appearance:

Lab ID #:

Layer:

Cust. #: Material:

Location: Appearance:

Layer:

of

of

Asbestos Present: NO

No Asbestos Observed

Cellulose - 2% Vermiculite - 5%

Other - 93%

Asbestos Present:

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.

# APEX Research, Inc. 11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

Phone: 734-449-9990

Fax: 734-449-9991

E-mail: apexresearch@chartermi.net

Date: 4-20-17	Relinquished by: All Mexico	-	1	10	0	a	7	0	6	+	3	\\	my called 3	Lab ID#	A seem	Other:	48 hour 72 hour	Rush 24 hour	Turn Arou	Phone: (888) 449-456	City, St., Zip:	Address: _	Client Name:
Date:	Western Received by:	•	CA HM-06%	CA- HM-05B	CA-44-054	CA. HM-04B	CA.HM-O+A	CA-44-03B	CA·HM-03A	CA-44-028	CA-4M-02A	CA .AH-O/B	CA. HM-01A	Client ID#	- CATT SWILL	TTP 111 Campa			Around Times: (Circle One)	9-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
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Date:	Received by:													Area	П	Other Viable	Soil	PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	aquet		* Marie	-20-17
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Rev: 12/03 Work Forms: COC

PER BESEATOR

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



Relinquished by: Descrived by: Date: 4-20-17 Date:		21 - 11 - 12	2 CA-HH-11A	20 CA-HM-10B	9 CA- HM-10A	8 CA - HH-09B	17 CA- HM-09A	B CA. HM- 08B	15 CA. HM-08A	810-WH-87 M	13 CA-HH-57A	12 CA-HM-06B	Lab ID # Client ID #	Outoi. All Samples	K	Ĭ	Rush 24 hour	Turn Around Times: (Circle One)	Phone: (888) 449-4566 Fa	City, St., Zip: Lansing, MI 48901	Address: PO Box 13216	Client Name: Red Cedar Consulting
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y: Received by:  APR 1 2017  Date:									-				Volume Area	OB EPA Level II	BioSIS Other	Air Paint	Point Count PCM	apaquet@redce samples with a detection	Person: Aaron Paquet		: 15 Assocut 1	Date of Survey: 2-20-1
by:													a Results		Viable	Soil		apaquet@redcedarconsulting.net with a detection of <5% ACM.		socion s	Report	Lab Use Only

Rev: 12/03 Work Forms: COC

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



Rev: 12/03 Work Forms: COC	Date: 4-20-17	Relinquished by:		3/	90	29	20	75	R	35	24	2	Lab ID#	0	Other: 5 day	48 hour 72 hour	Rush 24 hour	Turn Aro		City, St., Zip:	Address:	Client Name:
	Date : 4-	Relinquished by: Alafffutter Received by:	CA-45-02C	CA-45.02B	CA-45-02A	CA-45-01G	CA- 45-01F	CA-15:01E	CA-45-01D	CA-45-01C	CA. HS-01B	CA-H5-01A	Client ID#		(TTP) All Samples			Around Times: (Circle One)	(888) 449-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
	Date: 4-20-17	UPS	<	1 61.	Suisseina Ma	*						Plenter	Material/Location	TEM: AHERA 7400	Mold: Bulk	Lead: Bulk	Asbestos: Bulk X	PLM	(888) 448-8739			ng
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# Red Cedar Consulting

# **Tables**

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

F	Hazardous Materials Description and Location							
Location	Material Description	Quantity						
1st Floor Living Room	Thermostat	1						
1st Floor Hallway	Smoke Detector	1						
1st Floor Kitchen	2' Fluorescent Light (Fixture and Ballast Only)	1						
1st 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	1st Fl. Rear Entry	NA
CA-HM-04A	Gray 12x12 Vinyl Floor Tile	No	M	Category I	ND/ND	1st Fl. Bathroom	NA
CA-HM-04B	Gray 12x12 Vinyl Floor Tile	No	M	Category I	ND/ND	1st 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	1st Fl. W Bedroom	NA
CA-HM-07B	White 1'x1' Textured Ceiling Tile	Yes	M	Category II	ND	1st 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	1st 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	1st 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:**

CH

= Chrysotile Asbestos

Material Types Abbreviations

M = Miscellaneous building material NQ = Not quantified
TSI = Thermal System Insulation NA = Not applicable

S = Surfacing Material ND = Not detected. Laboratory result is less than 1 % asbestos PC = Point Count Analysis lin. ft. = linear feet

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

Asbestos Containing Material Description and Location								
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity			
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.)  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

Interior - Asbestos Containing Materials			
Location	Material Description	Friable	Approx. Quantity
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.)  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	159 sq. ft.
		Total	159 sq. ft.
Interior - Asbestos Containing Materials			
Location	<b>Material Description</b>	Friable	<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
		Total	17 Windows

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

Interior - Asbestos Containing M	Materials		
Location	<b>Material Description</b>	Friable	Approx. Quantity
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.
		Total	7,941 sq. ft.

### **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.

Muskegon County Land Bank Parcel ID: 61-24-205-208-0005-00

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.

Muskegon County Land Bank Parcel ID: 61-24-205-208-0005-00

### **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.

Muskegon County Land Bank Parcel ID: 61-24-205-208-0005-00

### 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.

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

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

Raion Paguet

Aaron Paquet

Michigan/EPA Certified Asbestos Building Inspector (A30955)

# Red Cedar Consulting

# Attachment 1 APEX Research Laboratory Analytical Results



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

Asbestos Present: **NO** 

Asbestos Present: **NO** 

No Asbestos Observed

No Asbestos Observed

Non-Asbestos

Fiberglass - 30%

Fiberglass - 30%

Other - 70%

Other - 70%

Lab ID #: 69878 - 01

Cust. #: MA-HM-01A

Material: Asphalt Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 6

Lab ID #: 69878 - 01a

Cust. #: MA-HM-01A

Material: Green/White Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 6

Lab ID #: 69878 - 01b

Cust. #: MA-HM-01A

Material: Black Shingle

Asbestos Present: NO

Fiberglass - 30%

No Asbestos Observed

Other - 70%

Location:

Appearance: black,fibrous,homogenous

Layer: 3 of 6

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.



Test Method, Polarized Light Microscopy (PLM)

Project: B9 Myrtle Ave

**Report To:** 

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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

Lab ID #: 69878 - 01d

Cust. #: MA-HM-01A

Material: Green/White Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 5 of 6

Lab ID #: 69878 - 01e

Cust. #: MA-HM-01A

Material: Green/White Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 6 of 6

Asbestos Present: **NO** 

Cellulose - 40%

No Asbestos Observed

Other - 60%

Asbestos Present: **NO** 

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

Cellulose - 40%

Cellulose - 40%

Other - 60%

Other - 60%

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: B9 Myrtle Ave

**Report To:** 

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 17-0

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

Asbestos Present: **NO** 

Asbestos Present: **NO** 

No Asbestos Observed

No Asbestos Observed

Non-Asbestos

Fiberglass - 30%

Fiberglass - 30% Other - 70%

Other - 70%

Lab ID #: 69878 - 02

Cust. #: MA-HM-01B

Material: Asphalt Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 6

Lab ID #: 69878 - 02a

Cust. #: MA-HM-01B

Material: Green/White Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 6

Lab ID #: 69878 - 02b

Cust. #: MA-HM-01B

Material: Black Shingle

Asbestos Pr

Asbestos Present: NO

Fiberglass - 30%

No Asbestos Observed

Other - 70%

Location:

Appearance: black,fibrous,homogenous

Layer: 3 of 6

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: 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

No Asbestos Observed

Non-Asbestos

Lab ID #: 69878 - 02c

Cust. #: MA-HM-01B

Material: Black Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 4 of 6

Lab ID #: 69878 - 02d

Cust. #: MA-HM-01B

Material: Green/White Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 5 of 6

Lab ID #: 69878 - 02e

Cust. #: MA-HM-01B

Material: Green/White Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 6 of 6

Asbestos Present: **NO** 

Fiberglass - 30%

Other - 70%

Asbestos Present: **NO** No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Cellulose - 40%

Cellulose - 40%

Other - 60%

Other - 60%

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: 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 - 03

Cust. #: MA-HM-02A

Material: Fiberboard Siding

Location:

Appearance: black, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 69878 - 04

Cust. #: MA-HM-02B

Material: Fiberboard Siding

Location:

Appearance: black, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 69878 - 05

Cust. #: MA-HM-03A

Material: Beige Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: **NO** 

Cellulose - 40%

No Asbestos Observed

Other - 60%

Asbestos Present: **NO** 

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

Cellulose - 40%

Cellulose - 10%

Fiberglass - 10%

Other - 80%

Other - 60%

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: 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 - 06

Cust. #: MA-HM-03B

Material: Beige Linoleum

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 10% Fiberglass - 10%

Other - 80%

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

Lab ID #: 69878 - 08

Cust. #: MA-HM-04B

Material: White Linoleum

Asbestos Present: NO

No Asbestos Observed

Cellulose - 10%

Fiberglass - 10%

Other - 80%

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 1

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: 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 - 09

Cust. #: MA-HM-05A

Material: White Smooth 16x16 Ceiling Tile

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 69878 - 10

Cust. #: MA-HM-05B

Material: White Smooth 16x16 Ceiling Tile

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 1

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: NO

No Asbestos Observed

Cellulose - 80%

Other - 20%

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 80%

Other - 20%

Asbestos Present: NO

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: 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

No Asbestos Observed

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

Lab ID #: 69878 - 13

Cust. #: MA-HM-07A

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

Lab ID #: 69878 - 13a

Cust. #: MA-HM-07A

Material: Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

Cellulose - 80%

Other - 20%

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 20%

Other - 80%

Other - 100%

Asbestos Present: NO

No Asbestos Observed

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: 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 - 14

Cust. #: MA-HM-07B

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

Lab ID #: 69878 - 14a

Cust. #: MA-HM-07B

Material: Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Lab ID #: 69878 - 15

Cust. #: MA-HM-08A

Material: Glazing

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

Cellulose - 20%

No Asbestos Observed

Other - 80%

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: YES

Chrysotile - 5%

Other - 100%

Wollastonite - 5%

Other - 90%

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: 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 - 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

Lab ID #: 69878 - 18

Cust. #: MA-HM-09B

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: **NO** 

Cellulose - 20%

No Asbestos Observed

Other - 80%

Asbestos Present: NO

No Asbestos Observed

Cellulose - 20%

Other - 80%

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

Robert T. Letarte Jr., Laboratory Director

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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

Other - 100%

Lab ID #: 69878 - 19

Cust. #: MA-HS-01A

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69878 - 19a

Cust. #: MA-HS-01A

Material: Plaster Base Coat

Location:

Appearance: grey, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 69878 - 20

Cust. #: MA-HS-01B

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Hair - 5%

Other - 95%

Other - 100%

Asbestos Present: NO

No Asbestos Observed

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: 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 Reported: 05/04/17

Date Analyzed: 05/04/17

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Hair - 5%

Other - 95%

Lab ID #: 69878 - 20a

Cust. #: MA-HS-01B

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: **NO** 

No Asbestos Observed

No Asbestos Observed

Other - 100%

Lab ID #: 69878 - 21 Cust. #: MA-HS-01C

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69878 - 21a

Cust. #: MA-HS-01C

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

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

Layer: 2 of 2

Asbestos Present: NO Hair - 2%

Other - 98%

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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Hair - 5%

Other - 95%

Lab ID #: 69878 - 22 Cust. #: MA-HS-01D

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 100%

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

Lab ID #: 69878 - 23a

Cust. #: MA-HS-01E

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69878 - 24

Cust. #: MA-HS-02A

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 3

Lab ID #: 69878 - 24a

Cust. #: MA-HS-02A

Material: Plaster Base Coat

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 1%

Vermiculite - 20%

Other - 79%

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 2 of 3

Asbestos Present: NO

No Asbestos Observed

Cellulose - 20% Other - 80%

Lab ID #: 69878 - 24b Cust. #: MA-HS-02A

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 3 of 3

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.



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

Other - 100%

Lab ID #: 69878 - 25

Cust. #: MA-HS-02B

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 3

Lab ID #: 69878 - 25a

Cust. #: MA-HS-02B

Material: Plaster Base Coat

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 2 of 3

Lab ID #: 69878 - 25b

Cust. #: MA-HS-02B

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 3 of 3

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 1%

Other - 99%

Asbestos Present: NO

No Asbestos Observed

Cellulose - 20%

Other - 80%

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

Robert T. Letarte Jr., Laboratory Director

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



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69878 - 26

Cust. #: MA-HS-02C

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 3

Lab ID #: 69878 - 26a

Cust. #: MA-HS-02C

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 1%

Vermiculite - 20%

Other - 79%

Material: Plaster Base Coat

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 2 of 3

Asbestos Present: NO

Cellulose - 20%

No Asbestos Observed

Other - 80%

Cust. #: MA-HS-02C Material: Drywall

Lab ID #: 69878 - 26b

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 3 of 3

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.

# 69878

# APEX Kesearch, Inc. 11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990 E-mail: apexresearch@chartermi.net

Fax: 734-449-9991

Date: 428-17 Date: 42	Relinquished by: Received by:	1 m 4 mm - 06 A wh	SS0-WH-VW O]	mA-HM-05A whi	Sho whith our	F MA-HAN- OUA White	MA-4M-0313	5 MA-HM-03/7 Beige	4 MA-447-02B	À	SIO-MA-AM &	mA-HM-OIA AS	Lab ID # Client ID #	Ouner:		Ĭ	Rush 24 hour	Turn Around Times: (Circle One)	Phone: (888) 449-4566 Fax: (8	City, St., Zip: Lansing, MI 48901	Address: PO Box 13216	Client Name: Red Cedar Consulting
4-78-17 Date:	Relinquished by:	white Smooth lix I CT	10 11	white smooth laxe or	70	it Livoleur	1	ge Liveleum	12 31	Fiberboard Sidis	7	Asphall Shingle	Material/Location	TEM: AHERA 7400 Bulk/NOB	Mold: Bulk Tape	Lead: Bulk Wipe	Asbestos: Bulk X Wipe	PLM EPA 600, PC all	(888) 448-8739 Contact Person:	Project #:	Project:	Date of Survey
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	2015												Results		le			ulting.net % ACM.			Report	Lab Use Only

Rev: 12/03 Work Forms: COC

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



Rev: 12/03 Work Forms: COC	Date: 4	Relinquished by Received by:	TE MA-148-OID	TIGHTAN F	8 MALTE DIS	MA-HS-OH	A MA-HM- 09B	+ mp +m +	16 mA-4m-08B	ASO-MA-AM 3	BLO - WA-HW TI	· ALQ -WH YW E	12 MA-HM-063	Lab ID # Client ID #		5	Ĭ	Rush 24 hour	Turn Around Times: (Circle One)	Phone: (888) 449-4566 Fax:	City, St., Zip: Lansing, MI 48901	Address: PO Box 13216	Client Name: Red Cedar Consulting
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APRIX RESEARCH	Date :	Received by:												Volume Area I	NOB EPA Level II	BioSIS Other Viable	Air Paint Soil Soil	Point Count PCM	apaquet@redcedarconsulting.net all samples with a detection of <5% ACM.	t Person: Aaron Paquet		1: 139 motte are	Date of Survey: 4-28-17
	2017												and the second and the second and the second	Results					ting.net \CM.		respont.	D CK-III	Lab Use Only

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
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Rev: 12/03 Work Forms: COC	Relinquished by: Mr. Received by: UE  Date: 478-17  Date: 478-1				26 MA-45-02C	DE MA 145-023	25 ma-45-02A	3 MA 75-01E	Lab ID # Client ID #		Other: Sirver (TIP) All Samples	48 hour 72 hour	Rush 24 hour	Turn Around Times: (Circle One)	Phone: (888) 449-4566 Fax:	City, St., Zip: Lansing, MI 48901	Address: PO Box 13216	Client Name: Red Cedar Consulting
	Received by: US Relinquished by: Date:				*			1)05-67	Material/Location	TEM: AHERA 7400 Bulk/NOB	Mold: Bulk Tape	Lead: Bulk Wipe	Asbestos: Bulk X Wipe	I WTA	48-8739	Project #:	Project :	Date of Survey:
	Received by:								Volume Area	B EPA Level II	BioSIS Other Viable	Air Paint Soil	Point Count PCM	apaquet@redcedarconsulting.net amples with a detection of <5% ACM.	Person: Aaron Paquet		12	Survey: 4-28-17
	2017							do de la companya de	Results		ile			sulting.net 5% ACM.		xepon	Log-in	Lab Use Only

STX PROFILE

# Red Cedar Consulting

# **Tables**

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

Hazardous Materials Description and Location										
Location Material Description Quanti										
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

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
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:

Mate	<u>rial Types</u>	<u>Abbrev</u>	riations
M	= Miscellaneous building material	NQ	= Not quantified
TSI	= Thermal System Insulation	NA	= Not applicable
$\mathbf{S}$	= Surfacing Material	ND	= Not detected. Laboratory result is less than 1 % asbestos
PC	= Point Count Analysis	lin. ft.	= linear feet
CH	= Chrysotile Asbestos	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

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

**Notes:** Material Types

M = Miscellaneous building material TSI = Thermal System Insulation

= Surfacing Material S

**Abbreviations** 

lin. ft. = linear feet

sq. ft. = square feet

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

Interior - Asbestos Containing Materials				
Location	<b>Material Description</b>		Friable	Approx. Quantity
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
		Total		9 Windows

#### **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.

Muskegon County Land Bank Parcel ID: 61-26-185-066-0001-10

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.

Muskegon County Land Bank Parcel ID: 61-26-185-066-0001-10

#### **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.

Muskegon County Land Bank Parcel ID: 61-26-185-066-0001-10

#### 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.

Muskegon County Land Bank Parcel ID: 61-26-185-066-0001-10

#### **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:

• 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

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

Raion Paguet

Aaron Paquet

Michigan/EPA Certified Asbestos Building Inspector (A30955)

# Red Cedar Consulting

# Attachment 1 APEX Research Laboratory Analytical Results



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

Lab ID #: 69624 - 01

Cust. #: HA-HM-01A

Material: Roofing Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 1

Lab ID #: 69624 - 02

Cust. #: HA-HM-01B

Material: Roofing Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69624 - 03

Cust. #: HA-HM-02A

Material: Tan Marble Vinyl

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Non-Asbestos

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 40%

Cellulose - 40%

Other - 60%

Other - 60%

Other - 60%

Asbestos Present: YES Chrysotile - 40%

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: 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

Cellulose - 10%

Fiberglass - 10%

Other - 80%

Other - 65%

Lab ID #: 69624 - 04

Cust. #: HA-HM-02B

Material: Tan Marble Vinyl

Location:

NOT ANALYZED

Asbestos Present: **NO** 

Asbestos Present: YES

Chrysotile - 35%

No Asbestos Observed

Asbestos Present:

Appearance: Layer: of

Lab ID #: 69624 - 05

Cust. #: HA-HM-03A

Material: Tan Squared Vinyl

Location:

Location.

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

Lab ID #: 69624 - 05a

Cust. #: HA-HM-03A

Material: Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 2 of 2

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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

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

Lab ID #: 69624 - 06a

Cust. #: HA-HM-03B Material: Linoleum

Location:

Appearance:

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Cellulose - 10%

Fiberglass - 10%

Other - 80%

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: **NO**No Asbestos Observed

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Robert T. Letarte Jr., Laboratory Director

Other - 100%

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Project: 227 E. Hackley Ave

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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

Other - 100%

Lab ID #: 69624 - 07a

Cust. #: HA-HM-04A

Material: Glue Location:

Appearance: yellow,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 69624 - 08

Cust. #: HA-HM-04B

Material: 12x12 Black/Grey VFT

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 1 of 2

Lab ID #: 69624 - 08a

Cust. #: HA-HM-04B

Material: Glue

Location:

Appearance: yellow,nonfibrous,homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Other - 100%

Asbestos Present: NO Other - 100%

No Asbestos Observed

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Project: 227 E. Hackley Ave

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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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 10%

Fiberglass - 10%

Other - 80%

Lab ID #: 69624 - 09

Cust. #: HA-HM-05A

Material: Multilayer Flooring

Location: NE Bedroom

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 3

Asbestos Present: YES Chrysotile - 10%

Other - 90%

Other - 100%

Lab ID #: 69624 - 09a Cust. #: HA-HM-05A

Material: Floor Tile

Location: NE Bedroom

Appearance: green, fibrous, homogenous

Layer: 2 of 3

Lab ID #: 69624 - 09b

Cust. #: HA-HM-05A

Material: Mastic

Location: NE Bedroom

Appearance: black,nonfibrous,homogenous

Layer: 3 of 3

Asbestos Present: NO No Asbestos Observed

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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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 10%

Fiberglass - 10% Other - 80%

Lab ID #: 69624 - 10

Cust. #: HA-HM-05B

Material: Multilayer Flooring

Location: NE Bedroom

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 3

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

T. ... NED 1

Location: NE Bedroom

Appearance: black,nonfibrous,homogenous

Layer: 3 of 3

Asbestos Present: **NO**No Asbestos Observed

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

Robert T. Letarte Jr., Laboratory Director

Other - 100%

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Project: 227 E. Hackley Ave

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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

Layer: 1 of 1

Asbestos Present: NO No Asbestos Observed

Cellulose - 80% Other - 20%

Location:

Appearance: brown, fibrous, homogenous

Asbestos Present: **NO** 

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: NO No Asbestos Observed

No Asbestos Observed

Cellulose - 20%

Other - 80%

Lab ID #: 69624 - 13 Cust. #: HA-HM-07A

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

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: 227 E. Hackley Ave

**Report To:** 

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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:

Layer: 2 of 2

Asbestos Present: **NO** 

Chrysotile - 0.50%

POINT COUNT RESULT

Appearance: white, fibrous, homogenous

Lab ID #: 69624 - 14

Cust. #: HA-HM-07B

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

Lab ID #: 69624 - 14a

Cust. #: HA-HM-07B

Material: Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Other - 99.50%

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 20%

Other - 80%

Asbestos Present: NO Other - 99.00%

Chrysotile - 1.00%

POINT COUNT RESULT

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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

Lab ID #: 69624 - 16

Cust. #: HA-HM-08B

Material: Window Glazing

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69624 - 17

Cust. #: HA-HS-01A

Material: Plaster Finish Coat

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

Wollastonite - 2%

Other - 98%

Wollastonite - 1% Other - 99%

Other - 100%

Location:

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Project: 227 E. Hackley Ave

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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

Non-Asbestos

Lab ID #: 69624 - 17a

Cust. #: HA-HS-01A

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 69624 - 18

Cust. #: HA-HS-01B

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69624 - 19

Cust. #: HA-HS-01C

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Hair - 5%

Hair - 5% Other - 95%

Other - 95%

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO No Asbestos Observed

Other - 100%

Layer: 1 of 2

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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

Lab ID #: 69624 - 20

Cust. #: HA-HS-01D

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69624 - 20a

Cust. #: HA-HS-01D

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: **NO** 

No Asbestos Observed

Hair - 5%

Other - 95%

Asbestos Present: **NO** 

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

Other - 100%

Hair - 5%

Other - 95%

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Project: 227 E. Hackley Ave

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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

Non-Asbestos

Other - 100%

Lab ID #: 69624 - 21

Cust. #: HA-HS-01E

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69624 - 21a

Cust. #: HA-HS-01E

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 69624 - 22

Cust. #: HA-HS-02A

Material: Popcorn Surfacing

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

No Asbestos Observed

Hair - 5%

Other - 95%

Asbestos Present: NO Other - 100%

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

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Project: 227 E. Hackley Ave

**Report To:** 

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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

Asbestos Present: NO

Asbestos Present: **NO** 

No Asbestos Observed

No Asbestos Observed

Non-Asbestos

Cellulose - 1%

Other - 99%

Other - 100%

Lab ID #: 69624 - 23

Cust. #: HA-HS-02B

Material: Popcorn Surfacing

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 69624 - 24

Cust. #: HA-HS-02C

Material: Popcorn Surfacing

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #:

Asbestos Present:

Lau ID #.

Cust. #: Material: Location: Appearance:

Layer:

of

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# 69624

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

	Date:		Date :	4-14-17	7 Date :	Date: 4-14-1
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Results	Area	Volume	Location	Material/Location	Client ID#	Lab ID#
	vel II	B EPA Level II	A 7400 Bulk/NOB	TEM: AHERA 7400	- ATT Squiptes	1
	Other Viable	BioSIS	Tape	Mold: Bulk _	TTP 11 CONT	Other: Shi
I	soil	Air Paint	Wipe	Lead: Bulk _		48 hour 72 hour
	PCM	Point Count	Wipe	Asbestos: Bulk	,	Rush 24 hour
llting.net ACM.	apaquet@redcedarconsulting.net with a detection of <5% ACM.		EPA 600, PC all samples	PLM	Around Times: (Circle One)	Turn Arou
	Aaron Paquet	n: _	Contact Perso	: (888) 448-8739	19-4566 Fax:	Phone: (888) 449-4566
	d		Project #:		Lansing, MI 48901	City, St., Zip:
Report	blen and	2270 the	Project: 227		PO Box 13216	Address: _
Lab Use Only Log-in	4-17	urvey: 4-/	Date of Survey:	g	Red Cedar Consulting	Client Name: _

Rev: 12/03 Work Forms: COC

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

	Date:		Date :	4-14-17	Date :	Date: 4-14-1
Col F Name Back	Received by:		Relinquished by:	Received by: UFS	Receive	Relinquished by:
	The state of the s		0			<u>&gt;</u>
			Surfacing	A Forcom	HA-45-02A	24
				JE V	14-45-018	D
				o/D	14-45-010	S
				C	HA- HS-01C	
					HA - H5-01B	2
			7	OIA Flecter	HA - H5-01A	7
			7		44.4M-08B	6
			Glasina,	8A Window	HA-HH08A	3
				97B	HA-HM-07B	-
			all frint loversund	7A Meyer	HA- HM-07A	(X)
			ite Textured or	XB 1X1 67	HA-477-068	2
Results	Area	Volume	Material/Location	Attended to the second	Client ID#	Lab ID#
	vel II	B EPA Level II	AHERA 7400 Bulk/NOB	TEM:	The samples	
	Other Viable	BioSIS	Bulk Tape	Mold:	TTP	Other: 5 day
ı	ıt Soil	Air Paint	Bulk Wipe	Lead:		48 hour 72 hour
	PCM	Point Count	: Bulk Wipe	Asbestos: Bulk		Rush 24 hour
llting.net ACM.	apaquet@redcedarconsulting.net with a detection of <5% ACM.	apaqua all samples with a c	A 600, PC	Times: (Circle One)	und Times	Turn Around
	Paquet	Person: Aaron	448-8739 Contact Person:	Fax: (888) 44	9	Phone: (888) 449-456
1000	J		Project #:	901	Lansing, MI 48901	City, St., Zip:
Report	chlay A. s	227 E She	Project: 227		PO Box 13216	Address:
Lab Use Only Log-In	2-14-17	~	Date of Survey	Consulting	Red Cedar Consu	Client Name:

Rev: 12/03 Work Forms: COC

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

Relinquished by:				2	2 2 22	Lab ID#		Ŋ	Ĕ	Rush 24 hour	Turn Arou	Phone: (888) 449-4566	City, St., Zip: Lansing, MI	Address: _	Client Name: _
Relinquished by: All Matters Received by: UFS  Date: 4-14-17  Date: 4-14-17				720-CH. HH	111-45-028	Client ID#	— All Samples	TTP :::			Turn Around Times: (Circle One)	9-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
Received by: UFS Relinquished by:  Date: 4-14-17 Date:					Foreour Surfacing	Material/Location	TEM: AHERA 7400 Bulk/NOB	Mold: Bulk Tape	Lead: Bulk Wipe	Asbestos: Bulk Wipe	PLM EPA 600, PC	(888) 448-8739	Project # :	Projec	
						Volume	NOB EPA Level II	BioSIS	Air Paint	Point Count	apaque all samples with a de	rson: Aaron		Project: 2276.X	Date of Survey: 4-
Received by: APR						Area	el II	Other Viable	Soil	PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	Paquet	đ	kel Bar lin	14-17
						Results		ble			sulting.net 5% ACM.			Report	Lab Use Only

Rev: 12/03 Work Forms: COC

APRIX BROWNERS

# Red Cedar Consulting

# **Tables**

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

	Hazardous Materials Description and Location	
Location	Material Description	Quantity
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.
НА-НМ-03В	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
НА-НМ-06В	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

Abbreviations

M = Miscellaneous building material

NQ = Not quantified

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

TSI = Thermal System Insulation NA = Not applicable

S = Surfacing Material ND = Not detected. Laboratory result is less than 1 % asbestos

PC = Point Count Analysis lin. ft. = linear feet CH = Chrysotile Asbestos 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

1	Asbestos Containing Material Description a	nd Location			
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity
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

Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
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.
		Total		477 sq. ft.
Interior - Asbestos Containing Materials				
Location	<b>Material Description</b>		Friable	Approx. Quantity
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	40 sq. ft.
		Total		40 sq. ft.

#### **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.

Muskegon County Land Bank Parcel ID: 61-26-770-021-0021-00

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.

Muskegon County Land Bank Parcel ID: 61-26-770-021-0021-00

#### 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 Cementatious "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.

Muskegon County Land Bank Parcel ID: 61-26-770-021-0021-00

#### 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 cementatious "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 cementatious (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.)

Muskegon County Land Bank Parcel ID: 61-26-770-021-0021-00

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 cementatious 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.

Muskegon County Land Bank Parcel ID: 61-26-770-021-0021-00

- 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

#### **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)

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# Red Cedar Consulting

# Attachment 1 APEX Research Laboratory Analytical Results



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

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Fiberglass - 30%

Other - 70%

Lab ID #: 69723 - 01

Cust. #: RA-HM-01A

Material: Roofing Materials

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 4

No Asbestos Observed

Asbestos Present: **NO** 

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: NO No Asbestos Observed

Cellulose - 40%

Other - 60%

Cust. #: RA-HM-01A

Material: Black Shingle

Lab ID #: 69723 - 01b

Location:

Appearance: black,fibrous,homogenous

Layer: 3 of 4

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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 40%

Other - 60%

Lab ID #: 69723 - 01c

Cust. #: RA-HM-01A

Material: Black Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 4 of 4

Asbestos Present: **NO** 

No Asbestos Observed

Fiberglass - 30%

Other - 70%

Cust. #: RA-HM-01B

Lab ID #: 69723 - 02

Material: Roofing Materials

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 4

Lab ID #: 69723 - 02a

Cust. #: RA-HM-01B

Material: Grey Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 2 of 4

Asbestos Present: NO

Fiberglass - 30%

No Asbestos Observed

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.



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 - 02b

Cust. #: RA-HM-01B

Material: Black Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 3 of 4

Lab ID #: 69723 - 02c

Cust. #: RA-HM-01B

Material: Black Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 4 of 4

Lab ID #: 69723 - 03

Cust. #: RA-HM-02A

Material: Drywall

Location: Garage

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 40%

Other - 60%

Asbestos Present: **NO** No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Cellulose - 40%

Cellulose - 20%

Fiberglass - 5%

Other - 75%

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.



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

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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69723 - 03a

Cust. #: RA-HM-02A

Material: Joint Compound

Location: Garage

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Cellulose - 20%

Fiberglass - 5%

Other - 75%

Cust. #: RA-HM-02B Material: Drywall

Lab ID #: 69723 - 04

Location: Garage

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

Asbestos Present: **NO** 

No Asbestos Observed

Other - 100%

Lab ID #: 69723 - 04a Cust. #: RA-HM-02B

Maria I I i C

Material: Joint Compound

Location: Garage

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

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.



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 Reported: 04/28/17

Date Analyzed: 04/26/17

Sample Information

Asbestos Type/Percent

No Asbestos Observed

Non-Asbestos

Lab ID #: 69723 - 05

Cust. #: RA-HM-03A

Material: 12x12 Tan VFT

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 1 of 2

Lab ID #: 69723 - 05a

Cust. #: RA-HM-03A

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 69723 - 06

Cust. #: RA-HM-03B

Material: 12x12 Tan VFT

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 1 of 2

Asbestos Present: NO

Cellulose - 1%

Other - 100%

Cellulose - 1% Other - 99%

Other - 99%

Asbestos Present: **NO** No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

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.



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

Non-Asbestos

Lab ID #: 69723 - 06a

Cust. #: RA-HM-03B

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 69723 - 07

Cust. #: RA-HM-04A

Material: Drywall Location: House

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

Lab ID #: 69723 - 07a

Cust. #: RA-HM-04A

Material: Joint Compound

Appearance: white, nonfibrous, homogenous

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

Layer: 2 of 2

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 20%

Other - 80%

Other - 99.75%

POINT COUNT RESULT Location: House

Asbestos Present: NO

Chrysotile - 0.25%

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.



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 - 08

Cust. #: RA-HM-04B

Material: Drywall Location: House

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

Lab ID #: 69723 - 08a

Cust. #: RA-HM-04B

Material: Joint Compound

Location: House

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Cellulose - 20%

Other - 80%

Other - 100%

Chrysotile - Trace

Asbestos Present: **NO** 

POINT COUNT RESULT

Lab ID #: 69723 - 09

Cust. #: RA-HM-05A

Material: 1st Floor Window Glazing

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 1

Asbestos Present: NO

Chrysotile - Trace

Other - 100%

POINT COUNT RESULT

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.



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

Asbestos Present: YES

Chrysotile - 5%

Non-Asbestos

Other - 95%

Lab ID #: 69723 - 10

Cust. #: RA-HM-05B

Material: 1st Floor Window Glazing

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO** 

Chrysotile - 0.25%

Other - 99.75%

Lab ID #: 69723 - 11 Cust. #: RA-HM-06A

Material: Basement Window Glazing

Location:

POINT COUNT RESULT Appearance: beige,nonfibrous,homogenous

Layer: 1 of 1

Lab ID #: 69723 - 12

Cust. #: RA-HM-06B

Material: Basement Window Glazing

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: YES

Other - 95%

Chrysotile - 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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69723 - 13

Cust. #: RA-HS-01A

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69723 - 13a

Cust. #: RA-HS-01A

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 1%

Hair - 2%

Other - 97%

Other - 100%

Lab ID #: 69723 - 14

Cust. #: RA-HS-01B

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

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

Layer: 1 of 2

Asbestos Present: **NO**No Asbestos Observed

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.



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 # 1

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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 1%

Hair - 2%

Other - 97%

Lab ID #: 69723 - 14a

Cust. #: RA-HS-01B

Material: Plaster Base Coat

Location:

Appearance: grey, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 69723 - 15

Asbestos Present: NO

Cellulose - 1%

Cust. #: RA-HS-01C

Material: Plaster Base Coat

No Asbestos Observed

Hair - 1% Other - 98%

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO**No Asbestos Observed

Other - 100%

Lab ID #: 69723 - 16 Cust. #: RA-HS-01D

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

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.



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

Cellulose - 1%

Lab ID #: 69723 - 16a

Cust. #: RA-HS-01D

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Asbestos Present: **NO** 

No Asbestos Observed

Lab ID #: 69723 - 17

Cust. #: RA-HS-01E

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69723 - 17a

Cust. #: RA-HS-01E

Material: Plaster Base Coat

Location:

Appearance: grey, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Hair - 1%

Other - 98%

Other - 100%

Asbestos Present: NO

Cellulose - 1%

No Asbestos Observed

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.

# APEX Research, Inc. 11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990 E-mail: apexresearch@chartermi.net



Fax: 734-449-9991

Date: 4-20-17 Date: 4-20-17	Relinquished by: DES Mater Received by: UPS	11 RA-HH-Ole A Basement We	10 RA-HH-05B : ' ::	9 RA-HM-05A 1 St Hove Wile	, 840-WH-42	RA. HM-OHA Shywell & Sain	6 RA-HM-03B	S RA-HH-03A 12x12 ton	4 RA-HM-02B "	3 RA-HK-024 Angusel 45	2 RA-HM-01B " 6	RA. HM-014 Rosping	Lab ID #   Client ID #   Materi	TEM:	N des	48 hour 72 hour Lead: Bulk	Rush 24 hour Asbestos: Bulk	Turn Around Times: (Circle One)	Phone: (888) 449-4566 Fax: (888) 448-873	City, St., Zip: Lansing, MI 48901	Address: PO Box 13216	Client Name: Red Cedar Consulting
Date: 1000	Relinquished by:	idou Chaquia	0 0:	udou Klazing	\:\ (\:\)	it Congressed (How	7	ET	: .:	bent Commend Che		Miterials	Material/Location	AHERA 7400 Bulk/NOB	k Tape	k Wipe	k Wipe	A 600, PC all	39 Contact Person:	Project #:	Project: 250	Date of Survey
APR 2 1 201	1880 V					<u>(2)</u>			)"				Volume	EPA Level II	BioSIS(	Air Paint	Point Count	apaquet samples with a de	Aaron		250 Rotterdam	.:
7017 Date :	Received by:												Area	1 II	Other Viable	Soil	PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	Paquet		lane leve.	-20-17
													Results			•		lting.net			Report	Lab Use Only Log-In

Rev: 12/03 Work Forms: COC

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



Rev: 12/03 Work Forms: COC	Date: 4-20-17 Date: 4	Relinquished by:			K.	<b>.</b>	16 RA-45-01D	15 RA-45-01C	14 RA-HS-01B	13 RA 45-01A	D RA-HK-06B	Lab ID # Client ID #	0	Other: 5dey (TTP) All Samples	48 hour 72 hour	Rush 24 hour	Turn Around Times: (Circle One)	Phone: (888) 449-4566 Fax:	City, St., Zip: Lansing, MI 48901	1 1	Client Name: Red Cedar Consulting
APEX PRESEA	-2017 Date: APR 2 1	UPS Relinquished by:			•					Plater	Basement Window Glasing	Material/Location v	TEM: AHERA 7400 Bulk/NOB	Mold: Bulk Bi	Lead: Bulk Wipe Air	os: Bulk X Wipe	PLM EPA 600,	(888) 448-8739	Project #:		g Date of Survey.
	2017	Received by:										Volume Area	EPA Level II	BioSIS Other	r Paint Soil	( )	¥. 1-	SOn: Aaron Paquet	i o menasa	たので、サールロック	(
												Results	l	Viable			rconsulting.net		Report	Log-In	Lab Use Only

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# Red Cedar Consulting

# **Tables**

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

	Hazardous Materials Description and Location	
Location	Material Description	Quantity
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	1st Floor Window Glazing	Yes	M	Category II	Trace CH-PC	Living Room	NA
RA-HM-05B	1st 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

	Asbestos Containing Material Description a	nd Location			
Location	Material Description	Material DescriptionFriableConditionMaterial Type			Approx. Quantity
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

Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Living (2 registers, 20 sq. ft.)	HVAC Duct Wrap		Yes	20 sq. ft.
	1	Total		20 sq. ft.
Interior - Asbestos Containing Materials				
Location	<b>Material Description</b>		Friable	Approx. Quantity
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
	1	Total		17 Windows
<b>Exterior - Asbestos Containing Materials</b>				
Location	Material Description		Friable	Approx. Quantity
Building Exterior	Transite Siding and Transite Debris in Yard		No	1,280 sq. ft.
		Total		1,280 sq. ft.

### **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.

Muskegon County Land Bank Parcel ID: 61-24-205-245-0007-00

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.

Muskegon County Land Bank Parcel ID: 61-24-205-245-0007-00

### **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.

Muskegon County Land Bank Parcel ID: 61-24-205-245-0007-00

### 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.

Muskegon County Land Bank Parcel ID: 61-24-205-245-0007-00

- 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

### **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



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 30%

Other - 70%

Lab ID #: 69841 - 01

Cust. #: SA-HM-01A

Material: Roofing Materials

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 5

Asbestos Present: **NO** 

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: NO

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

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.



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: NO 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: **NO** 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: NO

Cellulose - 30%

No Asbestos Observed

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: 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 Reported: 05/04/17

Date Analyzed: 05/03/17

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

Asbestos Present: **NO** 

No Asbestos Observed

No Asbestos Observed

Non-Asbestos

Cellulose - 30%

Cellulose - 30% Other - 70%

Other - 70%

Lab ID #: 69841 - 02a

Cust. #: SA-HM-01B

Material: Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 2 of 5

Lab ID #: 69841 - 02b

Cust. #: SA-HM-01B

Material: Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 3 of 5

Asbestos Present: NO

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

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

**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 - 02d

Cust. #: SA-HM-01B

Material: Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 5 of 5

Lab ID #: 69841 - 03

Cust. #: SA-HM-02A

Material: 12x12 White VFT

Location:

Appearance: beige, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69841 - 03a

Material: Mastic

Location:

Appearance: yellow,nonfibrous,homogenous

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

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Fiberglass - 25%

Other - 75%

Other - 100%

Other - 100%

Asbestos Present: **NO** No Asbestos Observed

Cust. #: SA-HM-02A

Asbestos Present: NO

No Asbestos Observed

Robert T. Letarte Jr., Laboratory Director

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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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69841 - 04

Cust. #: SA-HM-02B

Material: 12x12 White VFT

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 2

Asbestos Present: **NO** 

No Asbestos Observed

Other - 100%

Lab ID #: 69841 - 04a Cust. #: SA-HM-02B

Material: Mastic

Location:

Appearance: yellow,nonfibrous,homogenous

Layer: 2 of 2

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: NO

No Asbestos Observed

Other - 5%

Cellulose - 95%

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

**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

Asbestos Present: NO

Asbestos Present: **NO** 

No Asbestos Observed

No Asbestos Observed

Non-Asbestos

Cellulose - 95%

Cellulose - 15%

Fiberglass - 5%

Other - 80%

Other - 5%

Lab ID #: 69841 - 06

Cust. #: SA-HM-03B

Material: 1x1 White Smooth Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69841 - 07

Cust. #: SA-HM-04A

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 69841 - 08 Cust. #: SA-HM-04B Asbestos Present: NO

No Asbestos Observed

Cellulose - 15% Fiberglass - 5%

Other - 80%

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 1

Material: Drywall

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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Other - 100%

Other - 100%

Lab ID #: 69841 - 09

Cust. #: SA-HM-05A

Material: Window Glazing

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 1

Lab ID #: 69841 - 10

Cust. #: SA-HM-05B

Material: Window Glazing

Location:

Appearance: beige, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 69841 - 11

Cust. #: SA-HS-01A

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

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

**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: NO 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

Lab ID #: 69841 - 12a

Cust. #: SA-HS-01B

Material: Plaster Base Coat

Location:

Appearance: grey, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

Other - 100%

Cellulose - 2%

Other - 98%

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

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

**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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69841 - 13

Cust. #: SA-HS-01C

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69841 - 13a

Cust. #: SA-HS-01C

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Lab ID #: 69841 - 14

Cust. #: SA-HS-01D

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 2%

Other - 98%

Other - 100%

Asbestos Present: NO No Asbestos Observed

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

**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

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Cellulose - 2%

Other - 98%

Lab ID #: 69841 - 14a

Cust. #: SA-HS-01D

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Lab ID #: 69841 - 15

Cust. #: SA-HS-01E

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Other - 100%

Material: Plaster Texture

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 3

Lab ID #: 69841 - 15a

Cust. #: SA-HS-01E

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

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

Layer: 2 of 3

Robert T. Letarte Jr., Laboratory Director

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Test Method, Polarized Light Microscopy (PLM)

Project: 252 Isabella

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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

Lab ID #:

Cust. #:

Material:

Location:

Appearance:

Layer:

Lab ID #:

Cust. #: Material:

Location:

Appearance: Layer:

of

of

Asbestos Present: NO

No Asbestos Observed

Cellulose - 2%

Other - 98%

Asbestos Present:

Asbestos Present:

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

Robert T. Letarte Jr., Laboratory Director

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# Apex # 69841

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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

Date: 4-76-17	Relinquished by:	agence is	10	0	B	17	0	5		W	2	accentation .	Lab ID#	Onici - C	Other: 5day	48 hour 72 hour	Rush 24 hour	Turn Arou		t., Zip: _	Address: _	Client Name:
Date:	Relinquished by: At Masters Received by:	5A-45-01A	5A·#X-05B	5A-HM-05A	5A-4M-0BB	5A-HM-041	54-477-038	54-477-034	5A-HM-02B	SA. HM- 02A 12x12	5A.HM.01B	5A-HM-01A	Client ID#	All Samples	TTD			Around Times: (Circle One)	9-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
4-26-11	UPS	Plaster	, ,	Window Wes	0	Augual		1X1 white musth		White	0	Roofing Mate	Material/Location	TEM: AHERA 7400	Mold: Bulk	Lead: Bulk	Aspesios: Bulk	Circle One) PLM EPA	(888) 448-8739			19
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APR 2 7 2017													Volume	EPA Level II	BioSISC	Air Paint	Point Count	)	erson: Aaron P	•	252 Sea	×
Date :	Received by:												Area	1 п	Other Viable _	Soil	PCM	with a detection of <5% ACM.	Paquet		lalla	-26-17
													Results					ACM:	t.  -  -  -		Report	Lab Use Only Log-In

Date:

Rev: 12/03 Work Forms: COC

APEX PESEARCH



6784/
APEX Research, Inc. 11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990 E-mail: apexresearch@chartermi.net Fax: 734-449-9991

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	Date ·	Date: AFFX RESEARCH		4-26-77	Date:	Date: 4-26-17
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				$\checkmark$	SA-45-01E	7
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e	Other Viable	BioSIS	Bulk Tape	Mold:	TTP 11 C1-	Ŋ
I	t Soil	Air Paint	Bulk Wipe	Lead:		48 hour 72 hour
	PCM	Point Count	: Bulk Wipe	Asbestos: Bulk		Rush 24 hour
ulting.net % ACM.	apaquet@redcedarconsulting.net with a detection of <5% ACM.		<b>≍</b>	Circle One)	Turn Around Times: (Circle One)	Turn Arou
	Paquet	t Person: Aaron		(888) 448-8739	9-4566 Fax:	Phone: (888) 449-456
veborr		#:	Project #:		Lansing, MI 48901	City, St., Zip: Lansing,
D 100	Par II.	400	Project		PO Box 13216	Address:
Lab Use Only	26.17	y: X1.	Date of Survey	ng	Red Cedar Consulting	Client Name: _1

Rev: 12/03 Work Forms: COC

# Red Cedar Consulting

# **Tables**

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

Hazardous Materials Description and Location						
Location	Material Description (					
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

A	sbestos Containing Material Description a	nd Location			
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity
No Presumed Asbestos Containing Materials Identified					

**Notes:** Material Types

M = Miscellaneous building material TSI = Thermal System Insulation

= Surfacing Material S

**Abbreviations** 

lin. ft. = linear feet

sq. ft. = square feet

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

Exterior - Asbestos Containing Materials			
Location	Material Description	Friable	Approx. Quantity
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.

Muskegon County Land Bank Parcel ID: 61-26-185-032-0012-00

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.

Muskegon County Land Bank Parcel ID: 61-26-185-032-0012-00

### **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.

Muskegon County Land Bank Parcel ID: 61-26-185-032-0012-00

### 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.

Muskegon County Land Bank Parcel ID: 61-26-185-032-0012-00

- 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



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

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Lab ID #: 69750 - 01

Cust. #: DS-HM-01A

Material: Shingle Roof

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 2

Lab ID #: 69750 - 01a

Cust. #: DS-HM-01A

Material: Tar Paper

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 69750 - 02

Cust. #: DS-HM-01B

Material: Shingle Roof

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 2

Asbestos Type/Percent

Asbestos Present: **NO** 

Fiberglass - 15%

Fiberglass - 25%

Other - 75%

Other - 85%

Asbestos Present: NO

Fiberglass - 15%

No Asbestos Observed

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.



# 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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Fiberglass - 25%

Other - 75%

Lab ID #: 69750 - 02a

Cust. #: DS-HM-01B

Material: Tar Paper

Location:

Appearance: black,fibrous,homogenous

Layer: 2 of 2

Lab ID #: 69750 - 03

Cust. #: DS-HM-02A

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 60%

Other - 40%

Material: Asphalt Siding

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69750 - 04

Cust. #: DS-HM-02B

Material: Asphalt Siding

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Other - 40%

Cellulose - 60%

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: 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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 40%

Other - 60%

Lab ID #: 69750 - 05

Cust. #: DS-HM-03A

Material: Felt/Mastic

Location:

Appearance: black,fibrous,nonhomogenous

Layer: 1 of 3

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 1%

Other - 99%

Cust. #: DS-HM-03A

Lab ID #: 69750 - 05a

Material: 9x9 Layered VFT

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 3

Asbestos Present: NO

Cellulose - 20%

Lab ID #: 69750 - 05b Cust. #: DS-HM-03A

Material: Felt/Glue

No Asbestos Observed

Other - 80%

Location:

Appearance: black,fibrous,homogenous

Layer: 3 of 3

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: 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 - 06

Cust. #: DS-HM-03B

Material: Felt/Mastic

Location:

Appearance: black,fibrous,nonhomogenous

Layer: 1 of 3

Lab ID #: 69750 - 06a

Cust. #: DS-HM-03B

Material: 9x9 Layered VFT

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 3

Lab ID #: 69750 - 06b

Cust. #: DS-HM-03B

Material: Felt/Glue

Location:

Appearance: black,fibrous,homogenous

Layer: 3 of 3

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 40%

Cellulose - 1% Other - 99%

Other - 60%

Asbestos Present: NO

No Asbestos Observed

Cellulose - 20%

Other - 80%

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

Robert T. Letarte Jr., Laboratory Director

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### 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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 30%

Other - 70%

Lab ID #: 69750 - 07

Cust. #: DS-HM-04A

Material: Brown Linoleum

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Cellulose - 30%

Other - 70%

Lagation:

Cust. #: DS-HM-04B

Material: Brown Linoleum

Lab ID #: 69750 - 08

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO** 

No Asbestos Observed

Other - 100%

Cust. #: DS-HM-05A

Lab ID #: 69750 - 09

Material: Grey Square 12x12 VFT Layered

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 1 of 4

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.



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

Non-Asbestos

Other - 100%

Lab ID #: 69750 - 09a

Cust. #: DS-HM-05A

Material: Glue Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 4

Lab ID #: 69750 - 09b

Cust. #: DS-HM-05A

Material: Floor Tile

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 3 of 4

Lab ID #: 69750 - 09c

Cust. #: DS-HM-05A

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

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

Layer: 4 of 4

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

Other - 100%

No Asbestos Observed

Robert T. Letarte Jr., Laboratory Director

Other - 100%

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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

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: NO

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Lab ID #: 69750 - 10a Cust. #: DS-HM-05B

Cusi. #. D5-111v1-

Material: Glue Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 5

Lab ID #: 69750 - 10b

Cust. #: DS-HM-05B

Material: Floor Tile

Location:

Appearance: beige, nonfibrous, homogenous

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

Layer: 3 of 5

Robert T. Letarte Jr., Laboratory Director

Other - 100%

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.



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 - 10c

Cust. #: DS-HM-05B

Material: Glue Location:

Appearance: clear,nonfibrous,homogenous

Layer: 4 of 5

Lab ID #: 69750 - 10d

Cust. #: DS-HM-05B

Material: Flooring Remnants

Location:

Appearance: brown, fibrous, homogenous

Layer: 5 of 5

Lab ID #: 69750 - 11

Cust. #: DS-HM-06A

Material: Vapor Barrier

Location:

Appearance: brown, fibrous, homogenous

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

Asbestos Present: NO

Other - 100%

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Cellulose - 80%

Cellulose - 15%

Other - 85%

Other - 20%

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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 80%

Other - 20%

Lab ID #: 69750 - 12

Cust. #: DS-HM-06B

Material: Vapor Barrier

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO** 

No Asbestos Observed

Other - 100%

Lab ID #: 69750 - 13 Cust. #: DS-HS-01A

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 3

Asbestos Present: NO

Cellulose - 1%

Other - 98%

Lab ID #: 69750 - 13a Cust. #: DS-HS-01A

Material: Plaster Base Coat

No Asbestos Observed Hair - 1%

Location:

Appearance: beige, fibrous, homogenous

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

Layer: 2 of 3

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.



### 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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 20%

Other - 80%

Lab ID #: 69750 - 13b

Cust. #: DS-HS-01A

Material: Drywall

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 3 of 3

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Cust. #: DS-HS-01B

Lab ID #: 69750 - 14a

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 3

Lab ID #: 69750 - 14b

Cust. #: DS-HS-01B

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 3

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 1% Hair - 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.



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 - 14c

Cust. #: DS-HS-01B

Material: Drywall

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 3 of 3

Lab ID #: 69750 - 15

Cust. #: DS-HS-01C

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 3

Lab ID #: 69750 - 15a

Cust. #: DS-HS-01C

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 3

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 20%

Other - 80%

Other - 100%

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

Cellulose - 1%

No Asbestos Observed 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.



### 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

Lab ID #:

Cust. #: Material: Location: Appearance:

of

of

Layer:

Lab ID #:

Cust. #: Material: Location:

Appearance:

Layer:

Asbestos Present: NO

No Asbestos Observed

Cellulose - 20%

Other - 80%

Asbestos Present:

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.

# 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

48 hour Rush Other: Dday Phone: Address: Client Name: City, St., Zip: Turn Around Times: (Circle One) Lab ID# (888) 449-4566 72 hour a)  $\mathcal{Q}$ 24 hour 3 Red Cedar Consulting Lansing, MI 48901 PO Box 13216 DUI DS-14M-05B DS-HM-05A DS-HM-04B D5. HM-04A Burn Linoleum DS-AM-03A 05-41M-02B D5-414-02A DS-HM-03B D5-HN-0 (B DS-HM-014 TTP) All Samples Client ID# HM-OGA Fax: 9×9 Leyered VF Exphalt (888) 448-8739 Japa Barrier Asbestos: Bulk Mold: Lead: hingle X or TEM: Square 12×12 VFT Material/Location Bulk Bulk AHERA 7400 PLM EPA 600, PC all samples with a detection of <5% ACM. × Wipe Wipe Tape Contact Person: Aaron Paquet Date of Survey: ダ・ユ/-Project #:\_ Project: 276 Bulk/NOB Air Point Count BioSIS Volume Received by: EPA Level II **Paint** Other Area PCM Soil Viable Results Report\_ Lab Use Only Log-In\_

Rev: 12/03 Work Forms: COC

Relinquished by: Afth Matter Received by:

Date:

Date: MXS Relinquished by: 6

APR 2 4 2011/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

Relinquished by: Mestern Received by:  Date: 4-21-17 Date: 4  Rev: 12/03  Work Forms: COC			14 DS-HS-018		Lab ID# Chent ID#		Ħ	Turn Around Times: (Circle One)  Asbest  Asbest	Client Name: Red Cedar Consulting Address: PO Box 13216 City, St., Zip: Lansing, MI 48901 Phone: (888) 449-4566 Fax:
Relinquished		7000	0 8	OIA Phater	Ma	TEM: AHERA 7400	Lead: Bulk Wipe Mold: Bulk Tape	PLM EPA 600,	(888) 448-8739
F 77 A					Volume Area	EPA Lev	Air Paint Soil BioSIS Other	wit Coun	y: X:
					Results	Y IAUIC		of <5% ACM.	Lab Use Only Log-in Report

### Red Cedar Consulting

### **Tables**

Table 1 - Summary of Hazardous Materials, 276 E Delano Ave., Muskegon Heights, Michigan

	Hazardous Materials Description and Location	
Location	Material Description	Quantity
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 Abbreviations

M = Miscellaneous building material NQ = Not quantified TSI = Thermal System Insulation NA = Not applicable

S = Surfacing Material ND = Not detected. Laboratory result is less than 1 % asbestos

PC = Point Count Analysis lin. ft. = linear feet CH = Chrysotile Asbestos 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

A	sbestos Containing Material Description and Location										
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity						
No Presumed Asbestos Containing Materials Identified											

**Notes:** Material Types

M = Miscellaneous building material TSI = Thermal System Insulation

= Surfacing Material S

**Abbreviations** 

lin. ft. = linear feet

sq. ft. = square feet

Table 4 - Summary of All Asbestos Containing Materials, 276 E Delano Ave., Muskegon Heights, Michigan

Exterior - Asbestos Containing Materials			
Location	<b>Material Description</b>	Friable	Approx. Quantity
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.

Muskegon County Land Bank Parcel ID: 61-26-400-015-0020-00

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.

Muskegon County Land Bank Parcel ID: 61-26-400-015-0020-00

### **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.

Muskegon County Land Bank Parcel ID: 61-26-400-015-0020-00

### 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)

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

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

Raion Paguet

Aaron Paquet

Michigan/EPA Certified Asbestos Building Inspector (A30955)

### Red Cedar Consulting

## Attachment 1 APEX Research Laboratory Analytical Results



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

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Cellulose - 50%

Other - 50%

Lab ID #: 69696 - 01

Cust. #: MA-HM-01A

Material: Vapor Barrier

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69696 - 02

Cust. #: MA-HM-01B

Asbestos Present: NO

No Asbestos Observed

Cellulose - 50%

Other - 50%

Material: Vapor Barrier

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69696 - 03

Cust. #: MA-HM-02A

Material: 12x12 Brown Marble VFT

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 2

Asbestos Present: **YES** 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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69696 - 03a

Cust. #: MA-HM-02A

Material: Glue Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 69696 - 04

Cust. #: MA-HM-02B

Material: 12x12 Brown Marble VFT

Location:

Appearance:

Layer: 1 of 2

Asbestos Present:

NOT ANALYZED

Asbestos Present: NO

No Asbestos Observed

Lab ID #: 69696 - 04a

Cust. #: MA-HM-02B

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

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

Layer: 2 of 2

Robert T. Letarte Jr., Laboratory Director

Other - 100%

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.



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

Asbestos Present: YES

Chrysotile - 5%

Non-Asbestos

Other - 95%

Lab ID #: 69696 - 05

Cust. #: MA-HM-03A

Material: 12x12 Tan VFT

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 2

Asbestos Present: NO

No Asbestos Observed

Cellulose - 1%

Other - 99%

Cust. #: MA-HM-03A Material: Mastic

Lab ID #: 69696 - 05a

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Location:

Appearance: black,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 69696 - 06

Asbestos Present:

Cust. #: MA-HM-03B Material: 12x12 Tan VFT

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

Location:

NOT ANALYZED

Appearance:

Layer: 1 of 2

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.



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

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Cellulose - 1%

Other - 99%

Lab ID #: 69696 - 06a

Cust. #: MA-HM-03B

Material: Mastic

Location:

Appearance: black,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 69696 - 07

Material: Grey Vinyl

Cust. #: MA-HM-04A

Asbestos Present: **NO** 

Cellulose - 10%

No Asbestos Observed

Fiberglass - 10%

Other - 80%

Location:

Appearance: grey,fibrous,nonhomogenous

Layer: 1 of 1

Asbestos Present: NO

Cellulose - 10%

Lab ID #: 69696 - 08 Cust. #: MA-HM-04B

No Asbestos Observed

Fiberglass - 10% Other - 80%

Material: Grey Vinyl

Location:

Appearance: grey,fibrous,nonhomogenous

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

Layer: 1 of 1

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.



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

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Cellulose - 80%

Other - 20%

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: **NO** 

Cellulose - 80%

Lab ID #: 69696 - 10 Cust. #: MA-HM-05B

Material: 1x1 White Smooth Ceiling Tile

No Asbestos Observed

Other - 20%

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

Cellulose - 20%

Lab ID #: 69696 - 11 Cust. #: MA-HM-06A

No Asbestos Observed

Other - 80%

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69696 - 11a

Cust. #: MA-HM-06A

Material: Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 20%

Other - 80%

Other - 100%

Material: Drywall

Lab ID #: 69696 - 12

Cust. #: MA-HM-06B

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

Lab ID #: 69696 - 12a

Cust. #: MA-HM-06B

Material: Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO No Asbestos Observed

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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 80%

Other - 20%

Lab ID #: 69696 - 13

Cust. #: MA-HM-07A

Material: Fiberboard

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 2

. . \_

Chrysotile - 5%

Asbestos Present: YES

Other - 95%

Lab ID #: 69696 - 13a Cust. #: MA-HM-07A

Material: Glue

Material: Glue

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 69696 - 14

Cust. #: MA-HM-07B

Material: Fiberboard

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 2

Asbestos Present: NO

Cellulose - 80%

No Asbestos Observed

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.



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 # Date Collected: 04/19/17

17-69696

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

Asbestos Present: **NO** 

No Asbestos Observed

Lab ID #: 69696 - 15

Cust. #: MA-HM-08A

Material: Window Glazing

Location:

Appearance: beige,nonfibrous,homogenous

Lab ID #: 69696 - 16

Cust. #: MA-HM-08B

Layer: 1 of 1

Asbestos Present: NO

Wollastonite - 1%

Wollastonite - 1% Other - 99%

No Asbestos Observed

Other - 99%

Material: Window Glazing Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 1

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.



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

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Cellulose - 40%

Other - 60%

Lab ID #: 69696 - 17

Cust. #: MA-HM-09A

Material: Roofing Shingles, Core

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 6

No Asbestos Observed

Asbestos Present: **NO** 

Cellulose - 40%

Other - 60%

Cust. #: MA-HM-09A

Lab ID #: 69696 - 17a

Material: Green Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 6

Asbestos Present: NO

No Asbestos Observed

Fiberglass - 30% Other - 70%

Lab ID #: 69696 - 17b Cust. #: MA-HM-09A

Material: Grey Shingle

Location:

Appearance: black,fibrous,homogenous

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

Layer: 3 of 6

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.



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

Asbestos Present: **NO** 

No Asbestos Observed

No Asbestos Observed

Non-Asbestos

Fiberglass - 30%

Other - 70%

Lab ID #: 69696 - 17c

Cust. #: MA-HM-09A

Material: Grey Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 4 of 6

Asbestos Present: **NO** 

Cellulose - 40%

Other - 60%

Cust. #: MA-HM-09A

Lab ID #: 69696 - 17d

Material: Green/White Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 5 of 6

Lab ID #: 69696 - 17e

Asbestos Present: NO

Cellulose - 40%

Cust. #: MA-HM-09A

Material: Green/White Shingle

No Asbestos Observed

Other - 60%

Location:

Appearance: black,fibrous,homogenous

Layer: 6 of 6

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.



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 - 18

Cust. #: MA-HM-09B

Material: Roofing Shingles, Core

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 6

Asbestos Present: **NO**No Asbestos Observed

Cellulose - 40%

Cellulose - 40%

Other - 60%

Other - 60%

Lab ID #: 69696 - 18a

Cust. #: MA-HM-09B

Material: Green Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 6

Lab ID #: 69696 - 18b

Cust. #: MA-HM-09B

Material: Grey Shingle

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

Fiberglass - 30%

No Asbestos Observed

Other - 70%

Location:

Appearance: black, fibrous, homogenous

Layer: 3 of 6

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 - 18c

Cust. #: MA-HM-09B

Material: Grey Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 4 of 6

Lab ID #: 69696 - 18d

Cust. #: MA-HM-09B

Material: Green/White Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 5 of 6

Lab ID #: 69696 - 18e

Cust. #: MA-HM-09B

Material: Green/White Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 6 of 6

Asbestos Present: **NO** 

Fiberglass - 30%

No Asbestos Observed

Other - 70%

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 40%

Other - 60%

Asbestos Present: NO 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.

# 69696

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

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apaquet@redcedarconsulting.net with a detection of <5% ACM.	apaquet@redosamples with a detecti	A 600, PC all	Times: (Circle One)	Around Tir	Turn Aro
ίŤ	Person: Aaron Paquet	8739	Fax: (888) 448-	(888)449-4566	Phone: (888) 4
	/- /	Project #:	I 48901	Lansing, MI	City, St., Zip:
lace	297 Maslewood	Project: 29	16	PO Box 13216	Address:
/ 7 Lab Use Only	Survey: 4-19-1	Date of Survey	Consulting	Red Cedar (	Client Name:

Rev: 12/03 Work Forms: COC

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



Date: $4-19-1$	The state of the s	V. T.		B	7	16	15	74	26	Ď	Lab ID#	0	Other: Shan	48 hour 72 hour	Rush 24 hour	Turn Arol	Phone: (888) 4	City, St., Zip:	Address:	Client Name:
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Relinquished by:				()	ingles (ore)	.,o &	anns,			it languard	ocation	7400 Bulk/NOB	Tape	Wipe	Wipe	IPA 600, PC all samples	Contact Person	Project #:	Project:	Date of Survey:
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Rev: 12/03 Work Forms: COC

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# Red Cedar Consulting

# **Tables**

Table 1 - Summary of Hazardous Materials, 297 W Maplewood Ave., Muskegon Heights, Michigan

	Hazardous Materials Description and Location	
Location	Material Description	Quantity
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	М	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

**Abbreviations** 

= Not quantified

= Not applicable

# **Notes:**

# Material Types

M = Miscellaneous building material NQ
TSI = Thermal System Insulation NA

S = Surfacing Material ND = Not detected. Laboratory result is less than 1 % asbestos

PC = Point Count Analysis lin. ft. = linear feet
CH = Chrysotile Asbestos 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

A	sbestos Containing Material Description a	nd Location			
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity
No Presumed Asbestos Containing Materials Identified					

**Notes:** Material Types

M = Miscellaneous building material TSI = Thermal System Insulation

= Surfacing Material S

**Abbreviations** 

lin. ft. = linear feet

sq. ft. = square feet

Table 4 - Summary of All Asbestos Containing Materials, 297 W Maplewood Ave., Muskegon Heights, Michigan

Location	Material Description		Friable	Approx. Quantity
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.
		Total		422 sq. ft.
Interior - Asbestos Containing Materials				
Location	<b>Material Description</b>		Friable	Approx. Quantity
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.
		Total		2,126 sq. ft.

# 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.

Muskegon County Land Bank Parcel ID: 61-24-205-247-0012-00

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.

Muskegon County Land Bank Parcel ID: 61-24-205-247-0012-00

### **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.

Muskegon County Land Bank Parcel ID: 61-24-205-247-0012-00

### 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

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 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

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

Raion Paguet

Aaron Paquet

Michigan/EPA Certified Asbestos Building Inspector (A30955)

# Red Cedar Consulting

# Attachment 1 APEX Research Laboratory Analytical Results



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

Lab ID #: 69842 - 02

Cust. #: IS-HM-01B

Material: Asphalt Siding

Location:

Appearance: black, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 69842 - 03

Cust. #: IS-HM-02A

Material: Roofing Materials

Location:

Appearance: black, fibrous, homogenous

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

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Cellulose - 60%

Other - 40%

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 60%

Other - 40%

Asbestos Present: NO No Asbestos Observed

Cellulose - 30%

Other - 70%

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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 30%

Other - 70%

Lab ID #: 69842 - 04

Cust. #: IS-HM-02B

Material: Roofing Materials

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Other - 100%

Lab ID #: 69842 - 05 Cust. #: IS-HM-03A

Material: 12x12 Blue/White VFT

Location:

Appearance: blue,nonfibrous,homogenous

Layer: 1 of 2

Lab ID #: 69842 - 05a

Cust. #: IS-HM-03A

Material: Mastic

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

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: 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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69842 - 06

Cust. #: IS-HM-03B

Material: 12x12 Blue/White VFT

Location:

Appearance: blue,nonfibrous,homogenous

Layer: 1 of 2

\_\_

No Asbestos Observed

Asbestos Present: **NO** Other - 100%

Lab ID #: 69842 - 06a Cust. #: IS-HM-03B

Material: Mastic

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 69842 - 07

Cust. #: IS-HM-04A

Material: Cream Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: NO

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.



# 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 - 08

Cust. #: IS-HM-04B

Material: Cream Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

No Asbestos Observed

Cellulose - 20%

Lab ID #: 69842 - 09

Cust. #: IS-HM-05A

Material: 1x1 White Smooth Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 2

Lab ID #: 69842 - 09a

Cust. #: IS-HM-05A

Material: Glue Pod

Appearance: brown,nonfibrous,homogenous

Layer: 2 of 2

Asbestos Present: NO

Fiberglass - 10%

Other - 70%

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Cellulose - 95%

Other - 5%

Location:

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: 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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 95%

Other - 5%

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: **NO** 

No Asbestos Observed

Asbestos Present: YES

Chrysotile - 10%

Other - 100%

Other - 90%

Lab ID #: 69842 - 10a Cust. #: IS-HM-05B

Material: Glue Pod

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 69842 - 11

Cust. #: IS-HM-06A

Material: Window Glazing

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

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: 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 - 12

Cust. #: IS-HM-06B

Material: Window Glazing

Location:

NOT ANALYZED

Asbestos Present:

Appearance:

Layer: of

Lab ID #: 69842 - 13

Cust. #: IS-HM-07A

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 69842 - 14

Cust. #: IS-HM-07B

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: **NO** 

Cellulose - 20%

No Asbestos Observed

Other - 80%

Asbestos Present: NO

No Asbestos Observed

Cellulose - 20%

Other - 80%

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

Robert T. Letarte Jr., Laboratory Director

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# 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 Reported: 05/04/17

Date Analyzed: 05/03/17

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

Lab ID #: 69842 - 15a

Cust. #: IS-HS-01A

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Lab ID #: 69842 - 16

Cust. #: IS-HS-01B

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: NO

Other - 100%

Cellulose - 2%

Cellulose - 2%

Other - 98%

Other - 98%

No Asbestos Observed

Asbestos Present: **NO** 

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69842 - 17

Cust. #: IS-HS-01C

Material: Plaster Texture

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69842 - 17a

Cust. #: IS-HS-01C

Material: Plaster Base Coat

Asbestos Present: **NO** 

Cellulose - 2%

No Asbestos Observed

Other - 98%

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Lab ID #: 69842 - 18

Cust. #: IS-HS-01D

Material: Plaster/Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: NO No Asbestos Observed

Cellulose - 20% Other - 80%

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

Robert T. Letarte Jr., Laboratory Director

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



# Test Method, Polarized Light Microscopy (PLM)

Project: 325 Iona St.

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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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 2%

Other - 98%

Lab ID #: 69842 - 19 Cust. #: IS-HS-01E

Material: Plaster Base Coat

Location:

Appearance: grey, fibrous, homogenous

Layer: 1 of 1

Lab ID #:

Cust. #: Material:

Location:
Appearance:

Layer:

of

Lab ID #:

Cust. #: Material:

Location:
Appearance:

Layer:

of

Asbestos Present:

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.

# Apex # 69842

# APEX Research, Inc. 11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

E-mail: apexresearch@chartermi.net

Fax: 734-449-9991

Date: 4-26-19	Relinquished by:			0	_	L		9	(5)		2	8		Lab ID#	J. J	Other: N	48 hour 72 hour	Rush 24 hour	Turn Arou	Phone: (888) 449-456	City, St., Zip:	Address: _	Client Name:
Date :	Relinquished by: July Lately Received by:		15-14M-56A	15. AM-05B	15. HM-05A	15- HM-048	15- HM-04A	15-411-038	15. HM-031	15. HM.028	15. HM-021	15-4M-01B	15-HM-0/A	Client ID#	- ( *** FIT Pampires	TTP 111 2-11			Around Times: (Circle One)	9-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
4-26-17 Date: 1045	Relinquished by:	1	Window Having		1x1/10 hite specth CT is plue		Cream Lindener		12×12 Plus + White VF	P., 8.	Rosling Materials	1 0	lisphalt Siding	Material/Location	TEM: AHERA 7400	Mold: Bulk Tape	Lead: Bulk Wipe _	Asbestos: Bulk Wipe _	PLM EPA 600, PC	(888) 448-8739	Pro	Pr	
75 ATK 2 7 201	and the second			•	ada				7		6,			Volume	Bulk/NOB EPA Level II	BioSIS	Air Paint	Point Count	all samples	Contact Person: Aaron		Project: 325 2	Date of Survey: <
Date:	Received by:	20,4						÷						Area	el II	Other Viable	Soil	PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	Paquet		a A	26-17
														Results		ble			sulting.net 5% ACM.			Report	Lab Use Only

Rev: 12/03 Work Forms: COC

AFEX RESEARCE

# APEX Research, Inc. 11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

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



	Date:		Date : 1045 AFR 2	Date: 4-26-17	Date:	Date: 7.26-17
	Received by:		Relinquished by:	Received by: UPS	J	Relinquished by: Affiliation
				!		2
				*	15.45-OF	C
					15-145.01D	5
					15.45.01C	F
					15.15.01B	0
				Pleater	15- HS-01A	か
				T	15-HM-07B	75
			0 9	A	15-HM-07A	3
The second secon			judow Glasing	hejudow	IS-4M-06B	9
Results	Area	Volume	Material/Location	Mate	Client ID#	Lab ID#
	vel II	NOB EPA Level II	AHERA 7400 Bulk/NOB	TEM:		0
Viable	Other Via	BioSIS	Bulk Tape	Mold: I	TTP) All samples	Other: 5 day
	tt Soil	Air Paint	Bulk Wipe	Lead: I		48 hour 72 hour
	PCM	Point Count	Bulk Wipe	Asbestos: Bulk		Rush 24 hour
nsulting.net :5% ACM.	apaquet@redcedarconsulting.net with a detection of <5% ACM.	apaque all samples with a d	PLM EPA 600, PC all	(Circle One)	nd Times:	Turn Around Times: (Circle One)
, <b>I</b>	Paquet	t Person: Aaron	9	X: (888) 448-873	)-4566 Fax:	Phone: (888) 449-4566
Keport	ana, w		Project #:		Lansing, MI 48901	City, St., Zip: _1
Log-in	th has	7	Project		PO Box 13216	Address:P
Lab Use Only	26:17	Date of Survey:	Date of	ing	Red Cedar Consulting	Client Name: R

Rev: 12/03 Work Forms: COC

STREET START

Date:\_

# Red Cedar Consulting

# **Tables**

Table 1 - Summary of Hazardous Materials, 325 Iona Ave., Muskegon, Michigan

	Hazardous Materials Description and Location	
Location	Material Description	Quantity
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

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

A	sbestos Containing Material Description a	nd Location			
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity
No Presumed Asbestos Containing Materials Identified					

Material Types

M = Miscellaneous building material TSI = Thermal System Insulation

= Surfacing Material S

**Abbreviations** 

lin. ft. = linear feet

sq. ft. = square feet

Table 4 - Summary of All Asbestos Containing Materials, 325 Iona Ave., Muskegon, Michigan

Interior - Asbestos Containing Materials				
Location	<b>Material Description</b>		Friable	Approx. Quantity
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
		Total		18 Windows

# **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.

Muskegon County Land Bank Parcel ID: 61-24-205-261-0011-00

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.

Muskegon County Land Bank Parcel ID: 61-24-205-261-0011-00

### **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 Cementatious "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.

Muskegon County Land Bank Parcel ID: 61-24-205-261-0011-00

### 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 cementatious "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 cementatious (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.)

Muskegon County Land Bank Parcel ID: 61-24-205-261-0011-00

- 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 cementatious 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.

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

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

Raion Paguet

Aaron Paquet

Michigan/EPA Certified Asbestos Building Inspector (A30955)

# Red Cedar Consulting

# Attachment 1 APEX Research Laboratory Analytical Results



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

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Cellulose - 20%

Other - 80%

Lab ID #: 69941 - 01

Cust. #: CA-HM-01A

Material: Black Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 2

Asbestos Present: **NO** 

Cellulose - 40%

Lab ID #: 69941 - 01a Cust. #: CA-HM-01A

Material: Vapor Paper

No Asbestos Observed

Other - 60%

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

Cellulose - 20%

Lab ID #: 69941 - 02 Cust. #: CA-HM-01B

Material: Black Shingle

No Asbestos Observed

Other - 80%

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 2

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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 40%

Other - 60%

Lab ID #: 69941 - 02a

Cust. #: CA-HM-01B

Material: Vapor Paper

Location:

Appearance: black,fibrous,homogenous

Layer: 2 of 2

Lab ID #: 69941 - 03

Cust. #: CA-HM-02A

Material: Red Shingle

Asbestos Present: **NO** 

Fiberglass - 15%

No Asbestos Observed

Other - 85%

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 3

Lab ID #: 69941 - 03a

Cust. #: CA-HM-02A

Material: Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 2 of 3

Asbestos Present: NO

Fiberglass - 15%

No Asbestos Observed

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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 60%

Other - 40%

Lab ID #: 69941 - 03b

Cust. #: CA-HM-02A

Material: Vapor Paper

Location:

Appearance: black,fibrous,homogenous

Layer: 3 of 3

Asbestos Present: **NO** No Asbestos Observed

Fiberglass - 15% Other - 85%

Cust. #: CA-HM-02B

Lab ID #: 69941 - 04

Material: Red Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 3

Asbestos Present: NO

No Asbestos Observed

Fiberglass - 15%

Other - 85%

Cust. #: CA-HM-02B

Material: Shingle

Lab ID #: 69941 - 04a

Location:

Appearance: black,fibrous,homogenous

Layer: 2 of 3

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.



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

No Asbestos Observed

Non-Asbestos

Lab ID #: 69941 - 04b

Cust. #: CA-HM-02B

Material: Vapor Paper

Location:

Appearance: black,fibrous,homogenous

Layer: 3 of 3

Lab ID #: 69941 - 05

Cust. #: CA-HM-03A

Material: Brown 12x12 VFT

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 1 of 4

Lab ID #: 69941 - 05a

Cust. #: CA-HM-03A

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 4

Asbestos Present: NO

Cellulose - 60%

Other - 100%

Other - 40%

Asbestos Present: **NO** 

No Asbestos Observed

No Asbestos Observed

Asbestos Present: NO 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.



## 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

Other - 100%

Lab ID #: 69941 - 05b

Cust. #: CA-HM-03A

Material: Floor Tile

Location:

Appearance: white, nonfibrous, homogenous

Layer: 3 of 4

Lab ID #: 69941 - 05c

Cust. #: CA-HM-03A

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 4 of 4

Lab ID #: 69941 - 06

Cust. #: CA-HM-03B

Material: Brown 12x12 VFT

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 1 of 4

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Other - 100%

Other - 100%

Asbestos Present: NO No Asbestos Observed

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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69941 - 06a

Cust. #: CA-HM-03B

Material: Glue Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 4

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Other - 100%

Lab ID #: 69941 - 06b Cust. #: CA-HM-03B

Material: Floor Tile

Location:

Appearance: white, nonfibrous, homogenous

Layer: 3 of 4

Lab ID #: 69941 - 06c

Cust. #: CA-HM-03B

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 4 of 4

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: 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 - 07

Cust. #: CA-HM-04A

Material: White 12x12 VFT Multilayer

Location:

Appearance: pink,nonfibrous,homogenous

Layer: 1 of 5

Lab ID #: 69941 - 07a Cust. #: CA-HM-04A

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 5

Lab ID #: 69941 - 07b

Cust. #: CA-HM-04A

Material: Floor Tile

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 3 of 5

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Other - 100%

Asbestos Present: **NO** No Asbestos Observed

Asbestos Present: NO

Other - 100%

No Asbestos Observed

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: 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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69941 - 07c

Cust. #: CA-HM-04A

Material: Glue Location:

Appearance: clear,nonfibrous,homogenous

Layer: 4 of 5

Chrysotile - 20%

Asbestos Present: YES

Other - 80%

Other - 100%

Lab ID #: 69941 - 07d Cust. #: CA-HM-04A

Material: Linoleum

Location:

Appearance: yellow,fibrous,nonhomogenous

Layer: 5 of 5

Lab ID #: 69941 - 08

Cust. #: CA-HM-04B

Material: White 12x12 VFT Multilayer

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 5

Asbestos Present: NO

No Asbestos Observed

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: 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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69941 - 08a

Cust. #: CA-HM-04B

Material: Glue Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 5

No Asbestos Observed

Asbestos Present: **NO** 

Other - 100%

Lab ID #: 69941 - 08b Cust. #: CA-HM-04B

Material: Floor Tile

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 3 of 5

Lab ID #: 69941 - 08c

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Cust. #: CA-HM-04B

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 4 of 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: 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 - 08d

Cust. #: CA-HM-04B Material: Linoleum

Location:

NOT ANALYZED

Asbestos Present:

Appearance: Layer: 5 of 5

Lab ID #: 69941 - 09

Cust. #: CA-HM-05A

Material: Brown/Green 12x12 VFT

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 2

Lab ID #: 69941 - 09a

Cust. #: CA-HM-05A

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

Asbestos Present: **NO** 

Cellulose - 2%

No Asbestos Observed

Other - 98%

Other - 100%

No Asbestos Observed

Asbestos Present: NO

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: 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 Reported: 05/11/17

Date Analyzed: 05/09/17

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: NO

Other - 100%

Lab ID #: 69941 - 10a

Cust. #: CA-HM-05B

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 69941 - 11

Cust. #: CA-HM-06A

Appearance: grey,fibrous,nonhomogenous

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

Layer: 1 of 1

No Asbestos Observed

Asbestos Present: **NO** No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Material: Grey Vinyl

Location:

Other - 60%

Cellulose - 40%

Robert T. Letarte Jr., Laboratory Director

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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

No Asbestos Observed

Non-Asbestos

Lab ID #: 69941 - 12

Cust. #: CA-HM-06B

Material: Grey Vinyl

Location:

Appearance: grey,fibrous,nonhomogenous

Layer: 1 of 2

Lab ID #: 69941 - 12a

Cust. #: CA-HM-06B

Material: Flooring

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 2 of 2

Lab ID #: 69941 - 13

Cust. #: CA-HM-07A

Material: White 12x12 Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 2

Asbestos Present: **NO** 

Cellulose - 40%

Other - 60%

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 40%

Other - 60%

Asbestos Present: NO

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: 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 - 13a

Cust. #: CA-HM-07A

Material: Glue Pod

Location:

Layer: 2 of 2

POINT COUNT RESULT

Asbestos Present: **NO** 

No Asbestos Observed

Chrysotile - 4.00%

Asbestos Present: YES

Other - 96.00%

Cellulose - 80%

Other - 20%

Appearance: brown, fibrous, homogenous

Lab ID #: 69941 - 14

Cust. #: CA-HM-07B

Material: White 12x12 Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 2

Lab ID #: 69941 - 14a

Cust. #: CA-HM-07B

Material: Glue Pod

Location:

NOT ANALYZED

Asbestos Present:

Appearance: Layer: 2 of 2

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: 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

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Cellulose - 20%

Other - 80%

Lab ID #: 69941 - 15

Cust. #: CA-HM-08A

Material: Drywall

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 2

Asbestos Present: NO

No Asbestos Observed

ON

Fiberglass - 10%

Other - 90%

Lab ID #: 69941 - 15a Cust. #: CA-HM-08A

Material: Joint Compound/Mesh

Location:

Location.

Appearance: beige, fibrous, nonhomogenous

Layer: 2 of 2

Asbestos Present: NO

Cellulose - 20%

Lab ID #: 69941 - 16 Cust. #: CA-HM-08B

No Asbestos Observed

Other - 80%

Material: Drywall

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 2

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: 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

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Cellulose - 20%

Other - 80%

Lab ID #: 69941 - 16a

Cust. #: CA-HM-08B

Material: Joint Compound/Tape

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 2 of 2

Lab ID #: 69941 - 17 Cust. #: CA-HM-09A

Material: White 2x4 Ceiling Tile

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO** Cellulose - 30%

No Asbestos Observed

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: NO

Cellulose - 30%

No Asbestos Observed

Mineral Wool - 30%

Fiberglass - 10%

Perlite - 5%

Other - 25%

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.



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 - 19

Cust. #: CA-HM-10A

Material: Glazing

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69941 - 20

Cust. #: CA-HM-10B Material: Glazing

Location:

Appearance:

Layer:

Lab ID #: 69941 - 21

Cust. #: CA-HM-11A

Material: Glazing

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 1

Asbestos Present: YES

Other - 98.50%

POINT COUNT RESULT

Chrysotile - 1.50%

NOT ANALYZED

Asbestos Present:

Asbestos Present: NO

No Asbestos Observed

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

Robert T. Letarte Jr., Laboratory Director

Other - 100%

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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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69941 - 22

Cust. #: CA-HM-11B

Material: Glazing

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 1

Asbestos Present: **NO** 

Hair - 5%

Lab ID #: 69941 - 23 Cust. #: CA-HS-01A

Material: Plaster Base Coat

No Asbestos Observed

Other - 95%

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69941 - 24

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Cust. #: CA-HS-01B

Material: Plaster Texture

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

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: 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

Non-Asbestos

Lab ID #: 69941 - 24a

Cust. #: CA-HS-01B

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 69941 - 25

Cust. #: CA-HS-01C

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69941 - 26

Cust. #: CA-HS-01D

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

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

Layer: 1 of 2

Asbestos Type/Percent

Asbestos Present: NO

Hair - 2%

No Asbestos Observed

Other - 98%

Asbestos Present: **NO** 

Hair - 5%

No Asbestos Observed

Other - 95%

Other - 100%

Asbestos Present: NO No Asbestos Observed

Robert T. Letarte Jr., Laboratory Director

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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 - 26a

Cust. #: CA-HS-01D

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 69941 - 27

Cust. #: CA-HS-01E

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69941 - 27a

Cust. #: CA-HS-01E

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Hair - 2%

Other - 98%

Other - 100%

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

Hair - 2%

No Asbestos Observed

Other - 98%

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: 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

Other - 100%

Lab ID #: 69941 - 28

Cust. #: CA-HS-02A

Material: Plaster Texture

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 69941 - 29

Cust. #: CA-HS-02B

Material: Plaster Texture

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 69941 - 30

Cust. #: CA-HS-02C

Material: Plaster Texture

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Other - 100%

Other - 100%

Asbestos Present: NO

No Asbestos Observed

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

Robert T. Letarte Jr., Laboratory Director

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# 69941

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

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APEX	107
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Tip: Lansing, MI 48901   Project: 333 calkest    Around Times: (Circle One)   PLM EPA 600, PC all samples with a detail Bulk   Wipe   Point Count    Ashestos: Bulk   Wipe   Point Count    Action ID #   Material/Location   Pollume    CA-HM-074   Received by: CA-HM-058   CA-HM-058    CA-HM-0	MAY 0 5 2017	Date:		Date :	5-4-17	Date:	Date: 5-4-17
Date of Survey: 5-4-17   Project: 333 Catherine Area   Project:		Received by:		Relinquished by:	Š.	Received	Relinquished by
Tip: Lansing, MI 48901   Project : 333 calkes we Ave      Red Cedar Consulting   Project : 333 calkes we Ave					624	CA- Mars 1064	
TID All Samples  TEM: AHERA 7400 Bulk/NOB EPA Level II  A CH-HMM-0218				11	10	CA-HM-OSB	0
Date of Survey: 5-H-17				~12xx2 UFT	Bran & Gree	CA-420-05A	_\$)
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Date of Survey: 5-4-17   Project: 333   Chestive April   Pro				-UFT writtilayer	L.	CA-Hon-OHA	
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Rev: 12/03 Work Forms: COC

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

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# Red Cedar Consulting

# **Tables**

Table 1 - Summary of Hazardous Materials, 333 Catherine Ave., Muskegon, Michigan

	Hazardous Materials Description and Location	
Location	Material Description	Quantity
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

A	Asbestos Containing Material Description a	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.) 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

Abbreviations

M = Miscellaneous building material TSI = Thermal System Insulation

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

S = Surfacing Material

Table 4 - Summary of All Asbestos Containing Materials, 333 Catherine Ave., Muskegon, Michigan

Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Kitchen	White 12x12 Vinyl Floor Tile Multilayered		No	169 sq. ft.
		Total		169 sq. ft.
<b>Interior - Asbestos Containing Materials</b>				
Location	Material Description		Friable	Approx. Quantity
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.
		Total		95 sq. ft.
Interior - Asbestos Containing Materials				•
Location	Material Description		Friable	Approx. Quantity
Front Entry (4 windows 33" wide x 62" tall)	Glazing		Yes	4 Windows
		Total		4 Windows
Exterior - Asbestos Containing Materials				
Location	<b>Material Description</b>		Friable	Approx. Quantity
Building Exterior	Transite Siding		No	2,300 sq. ft.
		Total		2,300 sq. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Living	Glue Pods		No	169 sq. ft.
Kitchen	Glue Pods		No	120 sq. ft.
		Total		289 sq. ft.

## 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.

Muskegon County Land Bank Parcel ID: 61-26-185-103-0023-10

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.

Muskegon County Land Bank Parcel ID: 61-26-185-103-0023-10

## **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 Cementatious "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.

Muskegon County Land Bank Parcel ID: 61-26-185-103-0023-10

## 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 cementatious "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 cementatious (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 cementatious 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.

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 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

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

Raion Paguet

Aaron Paquet

Michigan/EPA Certified Asbestos Building Inspector (A30955)

# Red Cedar Consulting

# Attachment 1 APEX Research Laboratory Analytical Results



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

Lab ID #: 69712 - 01a

Cust. #: BA-HM-01A

Material: White Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 4

Lab ID #: 69712 - 01b

Cust. #: BA-HM-01A

Material: Green Shingle

Location:

Appearance: black,fibrous,homogenous

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

Layer: 3 of 4

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 40%

Other - 60%

Asbestos Present: **NO** No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Cellulose - 40%

Cellulose - 40%

Other - 60%

Other - 60%

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.



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 - 01c

Cust. #: BA-HM-01A

Material: Green Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 4 of 4

Lab ID #: 69712 - 02

Cust. #: BA-HM-01B

Material: Roofing Material

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 4

Lab ID #: 69712 - 02a

Cust. #: BA-HM-01B

Material: White Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 2 of 4

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 40%

Cellulose - 40%

Other - 60%

Other - 60%

Asbestos Present: NO

Cellulose - 40%

No Asbestos Observed

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.



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

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Lab ID #: 69712 - 02b

Cust. #: BA-HM-01B

Material: Green Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 3 of 4

Lab ID #: 69712 - 02c

Cust. #: BA-HM-01B

Material: Green Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 4 of 4

Lab ID #: 69712 - 03

Cust. #: BA-HM-02A

Material: Brown 12x12 VFT

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 1 of 2

Asbestos Present: NO

Cellulose - 40%

Cellulose - 40%

Other - 60%

Other - 100%

Other - 60%

Asbestos Present: NO

No Asbestos Observed

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: 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 - 03a

Cust. #: BA-HM-02B

Material: Glue Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 69712 - 04 Cust. #: BA-HM-02A

Material: Brown 12x12 VFT

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 1 of 2

Lab ID #: 69712 - 04a

Cust. #: BA-HM-02B

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

Asbestos Present: NO

Other - 100%

Cellulose - 1%

Other - 99%

Other - 100%

No Asbestos Observed

Asbestos Present: **NO** 

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

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: 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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 10%

Fiberglass - 10%

Other - 80%

Lab ID #: 69712 - 05

Cust. #: BA-HM-03A

Material: Tan Vinyl

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 10%

Lab ID #: 69712 - 06 Cust. #: BA-HM-03B

Material: Tan Vinyl

Fiberglass - 10%

Other - 80%

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: NO

Cellulose - 10%

Cust. #: BA-HM-04A

Lab ID #: 69712 - 07

Material: White Vinyl

No Asbestos Observed

Fiberglass - 10%

Other - 80%

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 1

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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 10%

Fiberglass - 10% Other - 80%

Cellulose - 60%

Other - 40%

Other - 40%

Lab ID #: 69712 - 08

Cust. #: BA-HM-04B

Material: White Vinyl

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 69712 - 09

No Asbestos Observed

Asbestos Present: **NO** 

Cust. #: BA-HM-05A

Material: Vapor Barrier

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69712 - 10

Asbestos Present: NO No Asbestos Observed

Cellulose - 60%

Cust. #: BA-HM-05B

Material: Vapor Barrier

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 1

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: 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

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

Lab ID #: 69712 - 12

Cust. #: BA-HM-06B

Material: 1x1 White Smooth Ceiling Tile, Painted

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

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 Type/Percent

Asbestos Present: NO

No Asbestos Observed

Cellulose - 80%

Other - 20%

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 80%

Other - 20%

Asbestos Present: NO

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: 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 - 14

Cust. #: BA-HM-07B

Material: 16"x16" White Ceiling Tile, Painted

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69712 - 15

Cust. #: BA-HM-08A

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

Lab ID #: 69712 - 15a

Cust. #: BA-HM-08A

Material: Joint Compound

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Cellulose - 80%

Other - 20%

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 25%

Other - 75%

Asbestos Present: YES

Chrysotile - 2.25%

Other - 97.25%

POINT COUNT RESULT

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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 25%

Other - 75%

Lab ID #: 69712 - 16

Cust. #: BA-HM-08B

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

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

*π.* 09/12 - 17

Cust. #: BA-HM-09A

Material: Window Glazing

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 1

Asbestos Present: NO

Chrysotile - 0.50%

POINT COUNT RESULT

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

Robert T. Letarte Jr., Laboratory Director

Other - 99.50%

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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

Other - 100%

Lab ID #: 69712 - 18

Cust. #: BA-HM-09B

Material: Window Glazing

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 1

Lab ID #: 69712 - 19

Cust. #: BA-HM-10A

Material: Red Linoleum

Location:

Appearance: red,fibrous,nonhomogenous

Layer: 1 of 1

Lab ID #: 69712 - 20

Cust. #: BA-HM-10B

Material: Red Linoleum

Location:

Appearance: red,fibrous,nonhomogenous

Layer: 1 of 1

Asbestos Present: **NO** 

Chrysotile - Trace

POINT COUNT RESULT

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 50%

Other - 50%

Asbestos Present: NO

Cellulose - 50%

No Asbestos Observed

Other - 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: 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

Other - 100%

Lab ID #: 69712 - 21

Cust. #: BA-HS-01A

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69712 - 21a

Cust. #: BA-HS-01A

Material: Plaster Base Coat

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 69712 - 22

Cust. #: BA-HS-01B

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

No Asbestos Observed

Cellulose - 1%

Other - 99%

Asbestos Present: NO 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: 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 - 22a Cust. #: BA-HS-01B

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Asbestos Present: **NO**No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Cellulose - 1% Vermiculite - 15%

Other - 100%

Other - 84%

carance. grey

Lab ID #: 69712 - 23

Cust. #: BA-HS-01C

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69712 - 23a Cust. #: BA-HS-01C

Material: Plaster Base Coat

Asbestos Present: NO

No Asbestos Observed

Cellulose - 1%

Vermiculite - 15%

Other - 84%

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 2 of 2

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: 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

No Asbestos Observed

Non-Asbestos

Lab ID #: 69712 - 24

Cust. #: BA-HS-01D

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69712 - 24a

Cust. #: BA-HS-01D

Material: Plaster Base Coat

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 69712 - 25

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Type/Percent

Asbestos Present: NO

Other - 100%

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Vermiculite - 10%

Other - 90%

Other - 100%

Cust. #: BA-HS-01E

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: 409 Barney Ave

R	en	Λ	rt	T	Λ	•

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 - 25a Cust. #: BA-HS-01E

Material: Plaster Base Coat

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #:

Cust. #:

Material: Location: Appearance:

Layer:

of

Lab ID #:

Cust. #: Material:

Location:

Appearance: Layer:

of

Other - 100%

Asbestos Present: NO

No Asbestos Observed

Asbestos Present:

Asbestos Present:

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

Robert T. Letarte Jr., Laboratory Director

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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

APEX

48 hour Other: 5 May Rush Phone: Relinquished by: City, St., Zip: Address: Client Name: Turn Around Times: (Circle One) Lab ID# (888) 449-4566 72 hour 24 hour t 2 R  $\Omega$ 0 Red Cedar Consulting Lansing, MI 48901 PO Box 13216 BA . 4M-01A BA-HM-01B BA HM-06A/XI White smooth CT (Painted B4-BA-HM-02B BA. HM-024 Blown 12×12 VET BA-417-04A BA - 44-03B Received by: UPS BA-44-03A (TTP) All Samples BA- HM- 04B BA. HM-051 Client ID# MK-05B Fax: White Losting 1 Ry (888) 448-8739 Vapor Barrier Asbestos: Bulk TEM: Mold: Lead: Material/Location Bulk Bulk lany **AHERA 7400** Materiala PLM EPA 600, PC all samples with a detection of <5% ACM. × Relinquished by: Received by: Wipe Wipe Tape Project : \_\_.
Project # : Date of Survey: Contact Person: Bulk/NOB Air Point Count BioSIS Volume Aaron Paquet EPA Level II 4-20-17 Paint Other PCM Area Soil Results Lab Use Only
Log-In \_\_\_\_\_ Report

4-20-19

Date: 4-20-19

Date : 1000

APR 2 1 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



Date: 4-20-17 Date:	Relinquished by: Add Matter Received by:	32 BA H5-01B	21 BA· H5-01A	20 BA HM-10B	19 BA-14M-10A	18 BA. HM-09B	17 BA- HM-09A	880-WH. 48	B4-11M-08A	14 134 414-078	13 BH-411-07A	BA-44-06B	Lab ID # Client ID #	Other:	<u>.</u>	48 hour 72 hour	Rush 24 hour	Turn Around Times: (Circle One)	Phone: (888) 449-4566 Fax:	City, St., Zip: Lansing, MI 48901	Address: PO Box 13216	Client Name: Red Cedar Consulting
4-20-17 Date:	y: UPS Relinquished by:	, .	Plaster		Red Sinleys		Window Harris	111	Munuall & Sound Commenced	7, ,,	16 x 16 white et ( seinted)	(X) white smooth or painted	Material/Location	TEM: AHERA 7400 Bulk/NOB	Mold: Bulk Tape	Lead: Bulk Wipe	Asbestos: Bulk Wipe	PLM EPA 600, PC	: (888) 448-8739 Contact Persor	Project # :	Project:	Date of Survey
Date:													Volume Area	DBEPA Level II	BioSIS Other	Air Paint So	Point Count PCM_	apaquet@redcedarconsulting.net all samples with a detection of <5% ACM.	Person: Aaron Paquet		409 Ba	Survey: 4-20-11
	y:												Results	1	Viable	Soil		arconsulting.net of <5% ACM.	:		Report	Log-in

Rev: 12/03 Work Forms: COC

PUX RESEARCE

697)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



Pate: 4-20-17 Rev: 12/03	Relinquished by:					25	24	23	Lab ID#		S	48 hour 72 hour	Rush 24 hour	Turn Arou	Phone: (888) 449-4566	City, St., Zip:		Client Name:
Date:	Relinquished by: Abelle Matter Received by:					BA.45-OIE	BA-M5-01)	BA-45-01C	Client ID#	THE DEMINISTRA	TTP AND SOURCE			Turn Around Times: (Circle One)	19-4566 Fax:	City, St., Zip: Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
4-20-17 Date:	175 Relinquished by					4		Pleater	Material/Location	TEM: AHERA 7400 Bulk/NOB	Mold: Bulk Tape	Lead: Bulk Wipe	Asbestos: Bulk Wipe	Nircle ${\sf One})$ PLM EPA 600, PC all samples	48-8739	Project		
SEARCE		The second secon							Volume	OB EPA Level II	BioSIS Other	Air Paint	Point Count		Aaron	Project #:	Project: 49 8	Survey · L
Date:	Received by:								Area Results		er Viable	Soil	PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	Paquet	Kepon.	Log-In	Lab Use Only

Rev: 12/03 Work Forms: COC

# Red Cedar Consulting

# **Tables**

Table 1 - Summary of Hazardous Materials, 409 E Barney Ave., Muskegon Heights, Michigan

Hazardous Materials Description and Location										
Location Material Description Q										
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:** 

<u>Material Types</u> <u>Abbreviations</u>

#### Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 409 E Barney Ave., Muskegon Heights, Michigan

= Miscellaneous building material NQ = Not quantified M TSI = Thermal System Insulation NA = Not applicable

PC

= Chrysotile Asbestos

= Surfacing Material = Not detected. Laboratory result is less than 1 % asbestos ND = Point Count Analysis

= linear feet lin. ft. 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

Asbestos Containing Material Description and Location											
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity						
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 materialTSI = 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

Interior - Asbestos Containing Materials				
Location	<b>Material Description</b>		Friable	Approx. Quantity
Living/N Bedroom (1 register, 25 sq. ft.) Kitchen/Dining (1 register, 25 sq. ft.)	HVAC Duct Wrap		Yes	50 sq. ft.
		Total		50 sq. ft.
<b>Exterior - Asbestos Containing Materials</b>				
Location	<b>Material Description</b>		Friable	Approx. Quantity
Building Exterior	Transite Siding		No	756 sq. ft.
		Total		756 sq. ft.
Interior - Asbestos Containing Materials				
Location	<b>Material Description</b>		Friable	Approx. Quantity
S Bedroom Ceiling	<b>Drywall Compound</b>		No	80 sq. ft.
S Bedroom Walls	<b>Drywall Compound</b>		No	288 sq. ft.
		Total		368 sq. ft.

#### **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.

Muskegon County Land Bank Parcel ID: 61-24-205-055-0011-00

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.

Muskegon County Land Bank Parcel ID: 61-24-205-055-0011-00

#### **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.

Muskegon County Land Bank Parcel ID: 61-24-205-055-0011-00

#### 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.)

Muskegon County Land Bank Parcel ID: 61-24-205-055-0011-00

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 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.

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



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

Lab ID #: 69838 - 02

Cust. #: AA-HM-01B

Material: Asphalt Siding

Location:

Appearance: black, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 69838 - 03

Cust. #: AA-HM-02A

Material: Roofing Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 3

Asbestos Present: **NO** 

Cellulose - 50%

No Asbestos Observed

Other - 50%

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 50%

Other - 50%

Asbestos Present: NO

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.



### 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

Lab ID #: 69838 - 03b

Cust. #: AA-HM-02A

Material: Tar Paper

Location:

Appearance: black, fibrous, homogenous

Layer: 3 of 3

Lab ID #: 69838 - 04

Cust. #: AA-HM-02B

Material: Roofing Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 3

Asbestos Present: NO

Fiberglass - 20%

No Asbestos Observed

Other - 80%

Asbestos Present: **NO** No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Cellulose - 35%

Fiberglass - 20%

Other - 80%

Other - 65%

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

**Report To:** 

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 17

17-69838

Date Collected: 04/26/17 Date Received: 04/27/17

Date Received: 04/2//1/ Date Analyzed: 05/03/17

Date Reported: 05/03/17

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Fiberglass - 20%

Other - 80%

Lab ID #: 69838 - 04a

Cust. #: AA-HM-02B

Material: Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 3

Asbestos Present: **NO**No Asbestos Observed

Cellulose - 35% Other - 65%

Lab ID #: 69838 - 04b Cust. #: AA-HM-02B

Material: Tar Paper

Location:

Appearance: black, fibrous, homogenous

Layer: 3 of 3

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: **NO**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.



### 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

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Cellulose - 95%

Other - 5%

Lab ID #: 69838 - 06

Cust. #: AA-HM-03B

Material: 1x1 White Smooth Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

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: **NO** 

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: NO

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

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.



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 Reported: 05/03/17

Date Analyzed: 05/03/17

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 15%

Fiberglass - 5%

Other - 80%

Lab ID #: 69838 - 09

Cust. #: AA-HM-05A

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

Asbestos Present: **NO** 

No Asbestos Observed

Other - 100%

Lab ID #: 69838 - 09a Cust. #: AA-HM-05A

Material: Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Lab ID #: 69838 - 10

Cust. #: AA-HM-05B

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

Asbestos Present: NO

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.



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 Reported: 05/03/17

Date Analyzed: 05/03/17

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69838 - 10a

Cust. #: AA-HM-05B

Material: Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Lab ID #: 69838 - 11

Cust. #: AA-HM-06A

Material: Window Glazing Location: Main Rooms

Appearance: beige, nonfibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO** 

Other - 100%

Other - 100%

No Asbestos Observed

Lab ID #: 69838 - 12

Cust. #: AA-HM-06B Material: Window Glazing

Location: Main Rooms

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 1

Asbestos Present: NO No Asbestos Observed

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

**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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69838 - 13

Cust. #: AA-HM-07A

Material: Window Glazing Location: Rear Entry

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 1

Asbestos Present: **NO** 

No Asbestos Observed

Other - 100%

Cust. #: AA-HM-07B

Material: Window Glazing

Location: Rear Entry

Lab ID #: 69838 - 14

Appearance: beige, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 69838 - 15

Cust. #: AA-HM-08A

Material: Vapor Barrier

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

Cellulose - 95%

No Asbestos Observed

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: 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 - 16

Cust. #: AA-HM-08B

Material: Vapor Barrier

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69838 - 17

Cust. #: AA-HM-09A

Material: Yellow Striped Linoleum

Location:

Appearance: yellow,fibrous,nonhomogenous

Layer: 1 of 1

Lab ID #: 69838 - 18

Cust. #: AA-HM-09B

Material: Yellow Striped Linoleum

Location:

Appearance: yellow,fibrous,nonhomogenous

Layer: 1 of 1

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 95%

Other - 5%

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 20%

Fiberglass - 10%

Other - 70%

Asbestos Present: NO 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.



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 - 19

Cust. #: AA-HM-10A

Material: Black/Brown Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 69838 - 20

Cust. #: AA-HM-10B

Material: Black/Brown Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 69838 - 21

Cust. #: AA-HM-11A

Material: Window Glazing

Location: Basement

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Cellulose - 65%

Other - 35%

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 65%

Other - 98.50%

Other - 35%

Asbestos Present: YES

Chrysotile - 1.50%

POINT COUNT RESULT

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

**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

Vermiculite - 5% Other - 95%

Lab ID #: 69838 - 22

Cust. #: AA-HM-11B Material: Window Glazing

Location: Basement

Appearance: Layer:

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

Lab ID #: 69838 - 24

Cust. #: AA-HS-01B

Material: Popcorn Texture Surfacing

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

Asbestos Present: **NO** 

No Asbestos Observed

No Asbestos Observed

Vermiculite - 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.



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

No Asbestos Observed

Non-Asbestos

Lab ID #: 69838 - 25

Cust. #: AA-HS-01C

Material: Popcorn Texture Surfacing

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 69838 - 26

Cust. #: AA-HS-02A

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69838 - 26a

Cust. #: AA-HS-02A

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

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

Layer: 2 of 2

Asbestos Present: NO

Vermiculite - 5%

Other - 95%

Other - 100%

Cellulose - 2%

Other - 98%

Asbestos Present: **NO** No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

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.



# 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

Lab ID #: 69838 - 28

Cust. #: AA-HS-02C

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Lab ID #: 69838 - 29

Cust. #: AA-HS-02D

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: NO

Cellulose - 2%

No Asbestos Observed

Other - 98%

Asbestos Present: **NO** 

Asbestos Present: NO

No Asbestos Observed

Cellulose - 2%

No Asbestos Observed

Cellulose - 2%

Other - 98%

Other - 98%

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

**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

Lab ID #: 69838 - 31

Cust. #: AA-HS-02F

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Lab ID #: 69838 - 32

Cust. #: AA-HS-02G

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: NO

Cellulose - 2%

No Asbestos Observed

Other - 98%

Asbestos Present: **NO** 

Cellulose - 2%

Cellulose - 2%

Other - 98%

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 98%

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

Robert T. Letarte Jr., Laboratory Director

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# Apex # 69030



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

Date: 4-26-17 Date: 4	Relinquished by: ARAMALTEL Received by:	DOWN AA. HM-OGA	A20-M/H - AA - MM-05B	A A AA. HM-05A	Abo . M HV & A	184 AA 11M-04	TX6 AA-HM-03B	76 5 AA- HM-03A	15 FAA. UM. 028	+ 3 AA. 4M.021	J 2 AA-HM-01B		Lab ID #   Client ID #	TIL Samples	S. Trop	48 hour 72 hour	Rush 24 hour	Turn Around Times: (Circle One)	Phone: (888) 449-4566 Fax:	City, St., Zip: Lansing, MI 48901	Address: PO Box 13216	Client Name: Red Cedar Consulting
1-26-17	UPS	Widow Glage	· · · · · · · ·	Suprell & Join		2×210 Lite CT 15/0	,	1 X 1 white sousoth	1. 8"	Pooling She		Jackalt Side	Material/Location	TEM: AHERA 7400	Mold: Bulk	Lead: Bulk	Asbestos: Bulk^	FIW H	(888) 448-8739			ğ
Date : 1045	Relinquished by:	of Main From	1	+ Compained	:	wholes I brieve		the cr	d	nale	8	, P. C.	cation	400 Bulk/NOB	Tape	Wipe	Wipe	60	_ Contact Person	Project #:	_ Project:	_ Date of Survey
APR 2 7 2017	ARRANIED												Volume	B EPA Level II	BioSIS	Air Paint	Point Count		erson: Aaron 1		430 alle	<i>Y</i>
Date:	Received by:												Area	el II	Other Viable	Soil	PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	Paquet		line	. 26-17
												an an an annual Administration (Adjustments)	Results			٠		<pre>lting.net ACM.</pre>			Report	Lab Use Only Log-In

Rev: 12/03 Work Forms: COC

# (9838) APEX Research, Inc. 11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

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

Date: 4-26-17	Relinquished by: Lelef lastete Received by:	H - H X 26	21 6 44-11	70 × 11-14	19 8 AA H	18 × AA-H	17 & M. M	6 5 AA. H	5 \$ AA. H	14 3 44-14	1 2 2 AA-H	AA-	Lab ID# Client ID#	Outor: All Samples	1	our C	Rush 24 hour	Turn Around Times: (Circle One)	Phone: (888)449-4566	City, St., Zip: Lansing, MI	Address: PO Box 13216	Client Name: Red Cedar Consulting
Date: 4-26-17	Received by:	HM-11B	UM-11A Window Was	HM-10B	4M-104 Black + Brown	0	MM-094 Wellew Stripe	(	4M-084 Vapor Escrier	W-07B "	7-074 Clinder Elen	4H-06B Weidow Glazin	ID# Material/Location	Samples TEM: AHERA 7400	Mold: Bulk	Lead: Bulk	Asbestos: BulkX	<b>nes:</b> (Circle One) PLM EPA	Fax: (888) 448-8739	II 48901	16	Consulting
Date :AFR 2 7 2017	100000000000000000000000000000000000000	Q	ing Belown		Ginsleyen	÷	dimoleuse !			Ø Ø	to the contra	a. Main Rosma	ocation Volume	Bulk/NOB	Tape BioSIS	Wipe Air Pa	Wipe Point Count	600, PC all samples	rson	••	Project: 430 all	Date of Survey:
Date:	Received by:												Area	EPA Level II	Other Viable	Paint Soil	PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	Aaron Paquet		allen live	26-17
													Results		ble			sulting.net 5% ACM.	,		Report	Lab Use Only Log-In

Rev: 12/03 Work Forms: COC

THE TRUE STATES

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



Fax: 734-449-9991

Date: 4-26-17	Relinquished by: Alkaly letter Received by:	X 22 X	80 31 A		7 20 7		* 42 4	なみ	朱 25 4	をきな	\$23	Lab ID #	Outol : These	No.	ŭr	Rush 24 hour	Turn Around Times: (Circle One)	Phone: (888) 449-4566	City, St., Zip: Lar	Address: PO	Client Name: Red
Date :	Received by:	AA-145-02G	14. HS-02F	AA- 145-02E	AA. 45.02D	AA- 45-02C	AA- HS-02B	AA-45-02A	AA-145-01C	AA-45-01B	4A-HS-01A	Client ID#	All Samples				d Times: (Ci	566 Fax:	Lansing, MI 48901	Box 13216	Red Cedar Consulting
4-26-17	UPS							Plaster		0,,	Popeon Textured	Material/Location	TEM: AHERA 7400	Mold: Bulk	Lead: Bulk	Asbestos: Bulk X		(888) 448-8739			g
Date: APR 2 7 2017	Relinquished by:								,		red Surfacing		00Bulk/NOB	Tape Bi	Wipe Air	Wipe Po	PLM EPA 600, PC all samples	Contact Person	Project #:	Project:	Date of Survey
	B											Volume .	EPA Level II	BioSIS Other	Paint	Point Count		SOn: Aaron Paquet		430 allen	vey: 4-26
Date:	Received by:											Area   F		erViable	Soil	PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	uet		live	17
												Results					ing.net			Report	Lab Use Only

Rev: 12/03 Work Forms: COC

# Red Cedar Consulting

# **Tables**

Table 1 - Summary of Hazardous Materials, 430 Allen Ave., Muskegon Heights, Michigan

Hazardous Materials Description and Location										
Location	Location Material Description Quan									
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	М	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

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
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

= Miscellaneous building material

TSI = Thermal System Insulation

S = Surfacing Material

PC = Point Count Analysis

CH = Chrysotile Asbestos

**Abbreviations** 

 $\overline{NQ}$  = 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

A	Asbestos Containing Material Description a	nd Location					
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity		
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

<u>Abbreviations</u>

M = Miscellaneous building material TSI = Thermal System Insulation lin. ft. = linear feet

S = Surfacing Material

sq. ft. = square feet

Table 4 - Summary of All Asbestos Containing Materials, 430 Allen Ave., Muskegon, Michigan

Interior - Asbestos Containing Materials				
Location	<b>Material Description</b>		Friable	Approx. Quantity
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.
		Total		130 sq. ft.
Interior - Asbestos Containing Materials				
Location	<b>Material Description</b>		Friable	Approx. Quantity
Basement (12 in. dia. HVAC Wrapped Ductwork, 8 lin. ft.)	HVAC Duct Wrap		Yes	8 lin. ft.
		Total		8 lin. ft.
<b>Interior - Asbestos Containing Materials</b>				
Location	<b>Material Description</b>		Friable	Approx. Quantity
Basement (2 windows 29" wide x 14 tall)	Glazing		Yes	2 Windows
Basement (4 windows 29" wide x 20" tall)	Glazing		Yes	4 Windows
		Total		6 Windows

#### **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.

Muskegon County Land Bank Parcel ID: 24-205-090-0014-00

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.

Muskegon County Land Bank Parcel ID: 24-205-090-0014-00

#### **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 Cementatious "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.

Muskegon County Land Bank Parcel ID: 24-205-090-0014-00

#### 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 cementatious "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 cementatious (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.

Muskegon County Land Bank Parcel ID: 24-205-090-0014-00

#### 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 cementatious 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.

Muskegon County Land Bank Parcel ID: 24-205-090-0014-00

#### **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:

- 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

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

Raion Paguet

Aaron Paquet

Michigan/EPA Certified Asbestos Building Inspector (A30955)

# Red Cedar Consulting

# Attachment 1 APEX Research Laboratory Analytical Results



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 Reported: 05/11/17

Date Analyzed: 05/09/17

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

Lab ID #: 69942 - 01a

Cust. #: CT-HM-01A

Material: Black Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 69942 - 02

Material: Black Shingle

Location:

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

Layer: 1 of 2

Asbestos Present: **NO** 

Cellulose - 40%

No Asbestos Observed

Other - 60%

Asbestos Present: **NO** No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Cellulose - 40%

Cellulose - 40%

Other - 60%

Other - 60%

Cust. #: CT-HM-01B

Appearance: black,fibrous,homogenous

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.



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

Non-Asbestos

Lab ID #: 69942 - 02a

Cust. #: CT-HM-01B

Material: Black Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 2 of 2

Lab ID #: 69942 - 03

Cust. #: CT-HM-02A

Material: Felt Paper

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69942 - 04

Cust. #: CT-HM-02B

Material: Felt Paper

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 1

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Cellulose - 40%

Other - 60%

Asbestos Present: **NO** 

Cellulose - 50%

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 50%

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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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

Lab ID #: 69942 - 05

Cust. #: CT-HM-03A

Material: Grey Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 2

Lab ID #: 69942 - 05a

Cust. #: CT-HM-03A

Material: Black Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 69942 - 06

Cust. #: CT-HM-03B

Material: Grey Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 2

Asbestos Type/Percent Non-Asbestos

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Fiberglass - 30%

Fiberglass - 30% Other - 70%

Other - 70%

Asbestos Present: NO 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: 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

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Fiberglass - 30%

Other - 70%

Lab ID #: 69942 - 06a

Cust. #: CT-HM-03B

Material: Black Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 2 of 2

Asbestos Present: YES Chrysotile - 30%

Other - 70%

Lab ID #: 69942 - 07 Cust. #: CT-HM-04A

Material: Beige Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 2

Lab ID #: 69942 - 07a

Cust. #: CT-HM-04A

Material: Fiberboard

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Other - 30%

Cellulose - 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: 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:

NOT ANALYZED

Asbestos Present:

Appearance: Layer: 1 of 2

Lab ID #: 69942 - 08a

Cust. #: CT-HM-04B

Material: Fiberboard

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 69942 - 09

Cust. #: CT-HM-05A

Material: White Linoleum

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: **NO** No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Cellulose - 70%

Cellulose - 15%

Fiberglass - 5%

Other - 80%

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)

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 Reported: 05/11/17

Date Analyzed: 05/09/17

Sample Information

Asbestos Type/Percent

Non-Asbestos

Cellulose - 15%

Lab ID #: 69942 - 10

Cust. #: CT-HM-05B

Material: White Linoleum

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 69942 - 11

Cust. #: CT-HM-06A

Material: Drywall

Location:

Appearance: white, fibrous, homogenous

Layer: 1 of 2

Lab ID #: 69942 - 11a

Cust. #: CT-HM-06A

Material: Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Fiberglass - 5%

Other - 80%

Asbestos Present: **NO** 

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

Cellulose - 20%

Other - 80%

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: 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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 20%

Other - 80%

Lab ID #: 69942 - 12

Cust. #: CT-HM-06B

Material: Drywall

Location:

Appearance: white, fibrous, homogenous

Layer: 1 of 2

Asbestos Present: **NO** 

No Asbestos Observed

Other - 100%

Other - 90%

Lab ID #: 69942 - 12a Cust. #: CT-HM-06B

Material: Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Lab ID #: 69942 - 13

Cust. #: CT-HM-07A

Material: Glazing

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Chrysotile - 10%

Asbestos Present: YES

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.



# 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

Other - 98.50%

Lab ID #: 69942 - 14

Cust. #: CT-HM-07B Material: Glazing

Location:

NOT ANALYZED

Asbestos Present:

Appearance: Layer: of

Lab ID #: 69942 - 15

Cust. #: CT-HS-01A

Material: Plaster Finish Coat

Location:

Appearance: grey, fibrous, homogenous

Layer: 1 of 2

Asbestos Present: NO

Asbestos Present: YES

POINT COUNT RESULT

Chrysotile - 1.50%

No Asbestos Observed

Hair - 5% Other - 95%

Cust. #: CT-HS-01A Material: Plaster Base Coat

Lab ID #: 69942 - 15a

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

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.



# 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

Hair - 5%

Other - 95%

Lab ID #: 69942 - 16

Cust. #: CT-HS-01B

Material: Plaster Finish Coat

Location:

NOT ANALYZED

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present:

Appearance:

Layer: 1 of 2

Lab ID #: 69942 - 16a

Cust. #: CT-HS-01B

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 69942 - 17

2 - 17 Asbestos Present:

Cust. #: CT-HS-01C

Material: Plaster Finish Coat

Location:

NOT ANALYZED

Appearance:

Layer: 1 of 2

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.



# 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 # 1

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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Hair - 5%

Other - 95%

Lab ID #: 69942 - 17a Cust. #: CT-HS-01C

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: **NO**No Asbestos Observed

Cellulose - 1% Other - 99%

Lab ID #: 69942 - 18 Cust. #: CT-HS-02A

Material: Texture

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 69942 - 19

Cust. #: CT-HS-02B

Material: Texture

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO**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.



### Test Method, Polarized Light Microscopy (PLM)

Project: 618 Catawba Ave

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

ARI Report # Date Collected: 05/04/17

17-69942

Date Received: 05/05/17

Date Analyzed: 05/09/17

Date Reported: 05/11/17

#### Sample Information

#### Non-Asbestos

Lab ID #: 69942 - 20 Cust. #: CT-HS-02C

Material: Texture

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #:

Cust. #:

Material:

Location: Appearance:

Layer:

of

Lab ID #:

Cust. #:

Material:

Location: Appearance:

Layer:

of

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Cellulose - 1%

Other - 99%

Asbestos Present:

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.

# 69942

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

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APEX	

Rev: 12/03 Work Forms: COC	Date: 5-4-7 Date: 5	Relinquished by: Received by:	5	11 CT-HM-OFA	250-WH-170	9 ct-um-ost	 7 CT-HM-OHA	6 CI-4m-03B	5 a-14m-B3A	CT-HM-OB	3 CT-HM-024	510-W1-12. 6	CT-Itm-OIA	Lab ID # Client ID #	Curvi: Apples	<b>)</b>	48 hour 72 hour	Rush 24 hour	Turn Around Times: (Circle One)	Phone: (888) 449-4566 Fax:	City, St., Zip: Lansing, MI 48901	Address: PO Box 13216	Client Name: Red Cedar Consulting
	Date:	Relinquished by: Received by:		Dry well & Compound	١٠ ) ٢	White Lindeum	Beige Linoleum	N. C.	Cory Shingle	10 11	felt Paper		Black Shingle	Material/Location Volume Area Results	TEM: AHERA 7400 Bulk/NOB EPA Level II	Mold: Bulk Tape BioSIS Other Viable	Lead: Bulk Wipe Air Paint Soil	Asbestos: Bulk X Wipe Point Count PCM	H WTA	(888) 448-8739		Project: 618 Catawba Ave Remot	Date of Survey: 5-4-(7

# 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

Rev: 12/03 Work Forms: COC	Date: S-4-7 Date:	Relinquished by: Received by:		20-24-20 G	19 cx 145-025	120-5x0-17	17 CT-185-01C	16 CY-15018	B CT-48-01A	14 CX-Hon-67B	ら CY-WM-07A	13 CJ-HM-06B	Lab ID # Client ID #		Other: Down (IIP) All Samples	48 hour 72 hour	Rush 24 hour	Turn Around Times: (Circle One)	Phone: (888) 449-4566 Fax:	City, St., Zip: Lansing, MI 48901	Address: PO Box 13216	Client Name: Red Cedar Consulting
	5-4-17 Date:	V: Relinquished by:		<	-	reature	<b>K</b>		Plesto	5	6 (azing	Drum & Compound	Material/Location	TEM: AHERA 7400 Bulk/NOB	Mold: Bulk Tape	Lead: Bulk Wipe	Asbestos: Bulk Wipe	PLM EPA 600, PC all	148-8739	Project #:	Project: 618	ing Date of Survey
APX ALSTARCE		2											Volume Area Re	OB EPA Level II	BioSIS Other Viable	Air Paint Soil	Point Count PCM	apaquet@redcedarconsulting.net samples with a detection of <5% ACM.	Person: Aaron Paquet		2/1	Survey: <-4-(7)
	7017	The state of the s											Results		1			ing.net M.		Keport	Log-In	Lab Use Only

Work Forms: COC

# Red Cedar Consulting

# **Tables**

Table 1 - Summary of Hazardous Materials, 618 Catawba Ave., Muskegon Heights, Michigan

Hazardous Materials Description and Location									
Location	Material Description	Quantity							
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

. A	Asbestos Containing Material Description a	nd 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:**

<u>Material Types</u> <u>Abbreviations</u>

M = Miscellaneous building material TSI = Thermal System Insulation

S = Thermal System Insula S = Surfacing Material lin. ft. = linear feet sq. ft. = square feet

Table 4 - Summary of All Asbestos Containing Materials, 618 Catawba Ave., Muskegon Heights, Michigan

Location	Material Description		Friable	Approx. Quantity
Kitchen	Beige Linoleum		No	108 sq. ft.
Basement Stairwell	Beige Linoleum		No	48 sq. ft.
		Total		156 sq. ft.
Interior - Asbestos Containing Materials				
Location	<b>Material Description</b>		Friable	Approx. Quantity
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.)	HVAC Duct Wrap		Yes	80 sq. ft.
S Bedroom (1 register, 10 sq. ft.)	IIVAC Duct Wiap		1 03	80 Sq. 1t.
Basement (misc. HVAC wrap on Cold Air Return				
Ductwork, 25 sq. ft.)				
		Total		80 sq. ft.
Interior - Asbestos Containing Materials				
Location	<b>Material Description</b>		Friable	Approx. Quantity
Basement (12 in. dia. HVAC Wrapped Ductwork, 40 lin. ft.)	HVAC Duct Wrap		Yes	40 lin. ft.
		Total		40 lin. ft.
Interior - Asbestos Containing Materials				
Location	<b>Material Description</b>		Friable	Approx. Quantity
Kitchen (1 window 40" wide x 24" tall)	Glazing		Yes	1 Window
Basement Stairwell (1 window 20" wide x 14" tall)	Glazing		Yes	1 Window
S Bedroom (2 windows 28" wide x 62" tall)	Glazing		Yes	2 Windows
Attic (3 window 30" wide x 34" tall)	Glazing		Yes	3 Windows
		Total		7 Windows
Exterior - Asbestos Containing Materials				
Exterior - Aspestos Containing Waterials				
	<b>Material Description</b>		Friable	Approx. Quantity
Location  Building Exterior	<b>Material Description</b> Transite Siding		<b>Friable</b> No	Approx. Quantity 2,300 sq. ft.

Table 4 - Summary of All Asbestos Containing Materials, 618 Catawba Ave., Muskegon Heights, Michigan

Interior - Asbestos Containing Mater	ials			
Location	<b>Material Description</b>		Friable	Approx. Quantity
N Bedroom	Wall Plaster		No	450 sq. ft.
N Bedroom	Ceiling Plaster		No	150 sq. ft.
		Total		600 sq. ft.

#### **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.

Muskegon County Land Bank Parcel ID: 61-24-121-300-0089-00

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.

Muskegon County Land Bank Parcel ID: 61-24-121-300-0089-00

#### **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.

Muskegon County Land Bank Parcel ID: 61-24-121-300-0089-00

#### 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.

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

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

Raion Paguet

Aaron Paquet

Michigan/EPA Certified Asbestos Building Inspector (A30955)

# Red Cedar Consulting

# Attachment 1 APEX Research Laboratory Analytical Results



#### 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

Lab ID #: 69839 - 01

Cust. #: SS-HM-01A

Material: Vapor Barrier

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69839 - 02

Cust. #: SS-HM-01B

Material: Vapor Barrier

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69839 - 03

Cust. #: SS-HM-02A

Material: Roofing Materials

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Non-Asbestos

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 70%

Cellulose - 70%

Other - 30%

Other - 30%

Asbestos Present: NO No Asbestos Observed

Cellulose - 20%

Other - 80%

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

Robert T. Letarte Jr., Laboratory Director

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



#### 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 - 04

Cust. #: SS-HM-02B

Material: Roofing Materials

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 1

Lab ID #: 69839 - 05 Asbestos Present: **NO** 

Cust. #: SS-HM-03A

Material: Diamond Cream, Grey Vinyl

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Material: Diamond Cream, Grey Vinyl

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 20%

Other - 80%

No Asbestos Observed

Cellulose - 15%

Fiberglass - 5%

Other - 80%

Lab ID #: 69839 - 06 Asbestos Present: NO Cellulose - 15% Cust. #: SS-HM-03B No Asbestos Observed

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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#### 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 - 07

Cust. #: SS-HM-04A

Material: Foam

Location:

Appearance: yellow,nonfibrous,homogenous

Layer: 1 of 3

Asbestos Present: NO No Asbestos Observed

Asbestos Present: YES

Chrysotile - 5%

Other - 100%

Other - 95%

Lab ID #: 69839 - 07a

Cust. #: SS-HM-04A

Material: Glue

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 3

Asbestos Present: NO

Cellulose - 30%

Lab ID #: 69839 - 07b Cust. #: SS-HM-04A

No Asbestos Observed

Other - 70%

Material: Red/Brown Layered Linoleum

Location:

Appearance: grey,fibrous,nonhomogenous

Layer: 3 of 3

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: 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

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69839 - 08

Cust. #: SS-HM-04B

Material: Foam

Location:

Appearance: yellow,nonfibrous,homogenous

Layer: 1 of 3

Lab ID #: 69839 - 08a

Cust. #: SS-HM-04B

Material: Glue

Location:

Appearance:

Layer: 2 of 3

Asbestos Present:

NOT ANALYZED

Asbestos Present: NO

No Asbestos Observed

Lab ID #: 69839 - 08b

Cust. #: SS-HM-04B

Material: Red/Brown Layered Linoleum

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

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 3 of 3

Robert T. Letarte Jr., Laboratory Director

Cellulose - 30% Other - 70%

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#### Test Method, Polarized Light Microscopy (PLM)

Project: 862 Stevens St

**Report To:** 

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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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 15%

Fiberglass - 5%

Other - 80%

Lab ID #: 69839 - 09

Cust. #: SS-HM-05A

Material: 4" Square Cream/Grey Vinyl

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 69839 - 10

Asbestos Present: **NO** 

Cellulose - 15%

Cust. #: SS-HM-05B

Material: 4" Square Cream/Grey Vinyl

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

No Asbestos Observed

Fiberglass - 5%

Other - 80%

Other - 100%

Lab ID #: 69839 - 11

Cust. #: SS-HM-06A

Material: 12x12 Woodgrain VFT

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 1 of 4

Asbestos Present: NO No Asbestos Observed

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: 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 - 11a

Cust. #: SS-HM-06A

Material: Glue Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 4

Asbestos Present: **NO**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

Lab ID #: 69839 - 11c

Cust. #: SS-HM-06A

Material: Mastic

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 4 of 4

J.1

0.1 100

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Other - 95%

Asbestos Present: YES

Chrysotile - 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: 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

No Asbestos Observed

Non-Asbestos

Lab ID #: 69839 - 12

Cust. #: SS-HM-06B

Material: 12x12 Woodgrain VFT

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 1 of 4

Lab ID #: 69839 - 12a

Cust. #: SS-HM-06B

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 4

Lab ID #: 69839 - 12b

Cust. #: SS-HM-06B

Material: Floor Tile

Location:

Appearance: white, nonfibrous, homogenous

Layer: 3 of 4

Asbestos Present: NO

Other - 100%

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

Other - 100%

No Asbestos Observed

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

Robert T. Letarte Jr., Laboratory Director

Other - 100%

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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 - 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

Lab ID #: 69839 - 14

Cust. #: SS-HM-07B

Asbestos Present: NO

Asbestos Present: **NO** 

No Asbestos Observed

No Asbestos Observed

Cellulose - 40%

Cellulose - 40%

Other - 60%

Other - 60%

Material: White/Gold Linoleum

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

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: 862 Stevens St

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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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 70%

Other - 30%

Lab ID #: 69839 - 15

Cust. #: SS-HM-08A

Material: 1x1 White Smooth Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69839 - 16

Cust. #: SS-HM-08B

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 70%

Other - 30%

Material: 1x1 White Smooth Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

Cellulose - 20%

No Asbestos Observed

Other - 80%

Cust. #: SS-HM-09A Material: Drywall

Lab ID #: 69839 - 17

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 2

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: 862 Stevens St

**Report To:** 

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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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69839 - 17a

Cust. #: SS-HM-09A

Material: Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Asbestos Present: **NO**No Asbestos Observed

Cellulose - 20% Other - 80%

Lab ID #: 69839 - 18 Cust. #: SS-HM-09B

Material: Drywall

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 2

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Lab ID #: 69839 - 18a Cust. #: SS-HM-09B

Material: Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

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: 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

No Asbestos Observed

Non-Asbestos

Lab ID #: 69839 - 19

Cust. #: SS-HM-10A

Material: Window Glazing

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 1

Lab ID #: 69839 - 20

Cust. #: SS-HM-10B

Material: Window Glazing

Location:

Appearance: beige, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 69839 - 21

Cust. #: SS-HM-11A

Material: 12x12 Black Marble VFT

Location:

Appearance: black,nonfibrous,homogenous

Layer: 1 of 1

Asbestos Present: NO

Other - 100%

Other - 100%

Other - 100%

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

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: 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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69839 - 22

Cust. #: SS-HM-11B

Material: 12x12 Black Marble VFT

Location:

Appearance: black,nonfibrous,homogenous

Layer: 1 of 1

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 2%

Other - 98%

Other - 100%

Cust. #: SS-HM-12A Material: 9x9 Red VFT

Lab ID #: 69839 - 23

Location:

Appearance: red, fibrous, homogenous

Layer: 1 of 2

Lab ID #: 69839 - 23a

Cust. #: SS-HM-12A

Material: Glue

Location:

Appearance: beige,nonfibrous,homogenous

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

Layer: 2 of 2

Asbestos Present: NO No Asbestos Observed

Robert T. Letarte Jr., Laboratory Director

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#### 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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 2%

Other - 98%

Lab ID #: 69839 - 24

Cust. #: SS-HM-12B Material: 9x9 Red VFT

Location:

Appearance: red,fibrous,homogenous

Layer: 1 of 2

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: NO

Other - 100%

Cellulose - 2%

Other - 98%

Lab ID #: 69839 - 24a Cust. #: SS-HM-12B

Cust. #: SS-HM-12

Material: Glue Location:

Appearance: beige,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 69839 - 25

Cust. #: SS-HM-13A

Material: 9x9 Black VFT

Location:

Appearance: red,fibrous,homogenous

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

Layer: 1 of 2

Robert T. Letarte Jr., Laboratory Director

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Project: 862 Stevens St

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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

Other - 100%

Lab ID #: 69839 - 25a

Cust. #: SS-HM-13A

Material: Glue Location:

Appearance: beige,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 69839 - 26

Cust. #: SS-HM-13B

Material: 9x9 Black VFT

Location:

Appearance: red, fibrous, homogenous

Layer: 1 of 2

Lab ID #: 69839 - 26a

Cust. #: SS-HM-13B

Material: Glue

Location:

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

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Cellulose - 2%

Other - 100%

Other - 98%

Appearance: beige,nonfibrous,homogenous

Layer: 2 of 2

Robert T. Letarte Jr., Laboratory Director

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Test Method, Polarized Light Microscopy (PLM)

Project: 862 Stevens St

**Report To:** 

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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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69839 - 27

Cust. #: SS-HM-14A

Material: Basement Window Glazing

Location:

Appearance: beige, nonfibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO**No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Other - 100%

Lab ID #: 69839 - 28 Cust. #: SS-HM-14B

Cust. #. 55-111v1-14D

Material: Basement Window Glazing

Location:

Appearance: beige, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 69839 - 29

Cust. #: SS-HS-01A

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

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: 862 Stevens St

**Report To:** 

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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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 2%

Hair - 2%

Other - 96%

Lab ID #: 69839 - 29a

Cust. #: SS-HS-01A

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: **NO** 

No Asbestos Observed

Other - 100%

Lab ID #: 69839 - 30 Cust. #: SS-HS-01B

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69839 - 30a

Cust. #: SS-HS-01B

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

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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## 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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69839 - 31

Cust. #: SS-HS-01C

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69839 - 31a

Cust. #: SS-HS-01C

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 2%

Hair - 2%

Other - 96%

Other - 100%

Lab ID #: 69839 - 32

Cust. #: SS-HS-01D

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: NO
No Asbestos Observed

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: 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

Cellulose - 2%

Lab ID #: 69839 - 32a

Cust. #: SS-HS-01D Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

Asbestos Present: NO

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

No Asbestos Observed

Hair - 2%

Other - 96%

Other - 100%

Hair - 2%

Other - 98%

Lab ID #: 69839 - 33

Cust. #: SS-HS-01E

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69839 - 33a

Cust. #: SS-HS-01E

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

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

Layer: 2 of 2

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.

# Apex # 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



	pr					Rev: 12/03
	Date:		Date : 1045	4-26-17	) Date :	Date: 4-26-1
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•	PCM	Point Count	k Wipe	Asbestos: Bulk		Rush 24 hour
apaquet@redcedarconsulting.net with a detection of <5% ACM.	t@redcedarco etection of	apaque samples with a d	A 600, PC all		ind Times: (Circle One)	Turn Around
1	Paquet	Aaron	9	(888) 448-873	19-4566 Fax:	Phone: (888) 449-
	,	#:	Project #:		Lansing, MI 48901	City, St., Zip:
Report	ned do	: 862 Steve	Project: 862		PO Box 13216	Address:
Lab Use Only Log-In	26-17	Survey: 4-2	Date of Survey	ng	Red Cedar Consulting	Client Name:

Rev: 12/03 Work Forms: COC

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



Relinquished by: White Mate: Received by:  Date: 4-26-77 Date:	31 - WY - SS - HW-1/2 52 SS- HW-1/4 50 - SS- HW-1/8	1-WH-55 7-WH-55	12 - 45 MM - 55 - 41 MM - 55 - 41 MM	13 55-4M-06B	Lab ID#   Client ID#	Kush 24 hour  48 hour 72 hour  Other: 5 May (TTP) All Samples	Zip: Lansing, MI 41 (888) 449-4566  Around Time	Client Name: Red Cedar Consulting Address: PO Box 13216
by: UTS Relinquished by: APR 9 7	4 12×12 Black Mable VFT	5 Maywall of Joint Congound	4 1x White Smoth CT	White of Gold Luslaum	Material/Location	Lead:       Bulk       Wipe         Mold:       Bulk       Tape         TEM:       AHERA 7400       Bulk/NOB	Pro Col PLM EPA 600, PC os: Bulk × Wipe	
William Control					Volume	Air Paint BioSIS EPA Lev	ntact Person: Aaron I all samples with a de	Survey: 4-24
Received by:					Area		Report  Aaron Paquet  apaquet@redcedarconsulting.net  with a detection of <5% ACM.	1/-
					Results		Report  11 ting.net ACM.	Lab Use Only Log-In

Rev: 12/03 Work Forms: COC

FRANKES

69 839
APEX Research, Inc. 11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990 E-mail: apexresearch@chartermi.net Fax: 734-449-9991

Date: 4-26-17 Date: 4-26-17	Relinquished by: Medificated Received by: UTS	33 SS-HS-OIE V	32 55-45-0ID	31 55-45-610	30 55-H5-01B	29 55-45-01A Plater	28 55-44-145 "	27 SS-HM74A Basement C	26 SS-HM-BB : :	35 - 471-134 9×9 Blue	97 SS-48-128 :: ::	23 55-HM-124 GraRed VE	Lab ID #   Client ID #   Materi	Outer: (IIP) All Samples TEM: AH	KALL	48 hour 72 hour Lead: Bulk	Rush 24 hour Asbestos: Bulk	Turn Around Times: (Circle One)	Phone: (888) 449-4566 Fax: (888) 448-8739	City, St., Zip: Lansing, MI 48901	Address: PO Box 13216	
	Relinquished by:						., ,	findow Glassing		k VFT			Material/Location Volus	AHERA 7400 Bulk/NOB	Tape BioSIS	Wipe Air	Wipe Point Count	A 600, PC		Project #:	Project: 862	
Date :	Received by:	To the second se											me Area	EPA Level II	Other Viable	Paint Soil	nt PCM	apaquet@redcedarconsulting.net all samples with a detection of <5% ACM.	Aaron Paquet		Therena St	1 110 11
													Results		-			lting.net ACM.			Report	-   Dg-  n

Rev: 12/03 Work Forms: COC

### Red Cedar Consulting

### **Tables**

Table 1 - Summary of Hazardous Materials, 862 Stevens St., Muskegon, Michigan

	Hazardous Materials Description and Location	
Location	Material Description	Quantity
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

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
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 = Point Count Analysis CH = Chrysotile Asbestos

### Abbreviations

 $\overline{NQ}$  = Not quantified

NA = Not applicable ND = Not detected. I

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

A	sbestos Containing Material Description a	nd Location			
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity
No Presumed Asbestos Containing Materials Identified					

**Notes:** Material Types

M = Miscellaneous building material TSI = Thermal System Insulation

= Surfacing Material S

**Abbreviations** 

lin. ft. = linear feet

sq. ft. = square feet

Table 4 - Summary of All Asbestos Containing Materials, 862 Stevens St., Muskegon, Michigan

Interior - Asbestos Containing Ma	terials		-
Location	<b>Material Description</b>	Friable	Approx. Quantity
Dining Room	Red & Brown Layered Linoleum	No	182 sq. ft.
Bathroom	12x12 Woodgrain Vinyl Floor Tile/Layered	No	50 sq. ft.
	Total		232 sq. ft.

### **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.

Muskegon County Land Bank Parcel ID: 61-26-230-016-0018-00

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.

Muskegon County Land Bank Parcel ID: 61-26-230-016-0018-00

### **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.

Muskegon County Land Bank Parcel ID: 61-26-230-016-0018-00

### 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.

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

Muskegon County Land Bank Parcel ID: 61-26-230-016-0018-00

### **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

Raion Paguet

Aaron Paquet

Michigan/EPA Certified Asbestos Building Inspector (A30955)

### Red Cedar Consulting

### Attachment 1 APEX Research Laboratory Analytical Results



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

Asbestos Present: **NO** 

No Asbestos Observed

No Asbestos Observed

Asbestos Present: NO

Non-Asbestos

Fiberglass - 30%

Other - 70%

Lab ID #: 69584 - 01

Cust. #: VS-HM-01A

Material: Roofing Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 2

Asbestos Present: **NO** 

Cellulose - 50%

Other - 50%

Lab ID #: 69584 - 01a Cust. #: VS-HM-01A

Material: Tar Paper

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 69584 - 02

Cust. #: VS-HM-01B

Material: Roofing Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 2

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.



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 Reported: 04/18/17

Date Analyzed: 04/14/17

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

Lab ID #: 69584 - 03

Cust. #: VS-HM-02A

Material: Grey Multilayer Floor Tile

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 1 of 5

Lab ID #: 69584 - 03a

Cust. #: VS-HM-02A

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

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

Layer: 2 of 5

Asbestos Present: NO

Cellulose - 50%

No Asbestos Observed

Other - 50%

Other - 100%

Other - 100%

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO No Asbestos Observed

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.



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

Asbestos Present: YES

Chrysotile - 5%

Non-Asbestos

Other - 95%

Lab ID #: 69584 - 03b

Cust. #: VS-HM-02A

Material: Brown Floor Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 3 of 5

Asbestos Present: **NO** No Asbestos Observed

Asbestos Present: YES

Chrysotile - 30%

Other - 100%

Other - 70%

Lab ID #: 69584 - 03c Cust. #: VS-HM-02A

Material: Mastic

Location:

Appearance: black,nonfibrous,homogenous

Layer: 4 of 5

Lab ID #: 69584 - 03d

Cust. #: VS-HM-02A

Material: Linoleum

Location:

Appearance: red,fibrous,nonhomogenous

Layer: 5 of 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: 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 Reported: 04/18/17

Date Analyzed: 04/14/17

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

Lab ID #: 69584 - 04a

Cust. #: VS-HM-02B

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 5

Lab ID #: 69584 - 04b

Cust. #: VS-HM-02B

Material: Brown Floor Tile

Location:

Appearance:

Layer: 3 of 5

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Other - 100%

Asbestos Present: **NO** 

No Asbestos Observed

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: 2010 7th St

**Report To:** 

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 17-

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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 1%

Other - 99%

Lab ID #: 69584 - 04c

Cust. #: VS-HM-02B

Material: Mastic

Location:

Appearance: black,nonfibrous,homogenous

Layer: 4 of 5

Lab ID #: 69584 - 04d

Cust. #: VS-HM-02B Material: Linoleum

Location:

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: NO

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: 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

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Cellulose - 80%

Other - 20%

Lab ID #: 69584 - 06

Cust. #: VS-HM-03B

Material: 1x1 White Smooth Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

No Asbestos Observed

Asbestos Present: **NO** 

Fiberglass - 10%

Other - 90%

Cust. #: VS-HM-04A

Lab ID #: 69584 - 07

Material: Multilayer Bathroom Flooring

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69584 - 08

Cust. #: VS-HM-04B

Material: Multilayer Bathroom Flooring

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Fiberglass - 10%

Other - 90%

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: 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 - 09

Cust. #: VS-HM-05A Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

No Asbestos Observed

Cellulose - 20%

Other - 75%

Lab ID #: 69584 - 09a

Cust. #: VS-HM-05A

Material: Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Lab ID #: 69584 - 10

Cust. #: VS-HM-05B

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: NO

Asbestos Present: **NO** 

No Asbestos Observed

Fiberglass - 5%

Other - 100%

Asbestos Present: NO

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)

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 - 11

Cust. #: VS-HM-06A

Material: Dark Grey Layer Flooring/Floor Tile

Location: Hall

Appearance: brown,nonfibrous,homogenous Layer: 1 of 3

Asbestos Present: NO

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

Lab ID #: 69584 - 11b

Cust. #: VS-HM-06A

Material: Linoleum

Location: Hall

Appearance: green, fibrous, nonhomogenous

Asbestos Present: **NO** 

Other - 100%

Other - 75%

No Asbestos Observed

Asbestos Present: YES

Chrysotile - 25%

Layer: 3 of 3

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: 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

Other - 100%

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

Lab ID #: 69584 - 12a

Cust. #: VS-HM-06B

Material: Glue

Location: Hall

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 3

Lab ID #: 69584 - 12b

Cust. #: VS-HM-06B

Material: Linoleum

Location: Hall

Appearance:

Layer: 3 of 3

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Other - 100%

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: 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

Asbestos Present: YES

Chrysotile - 25%

Non-Asbestos

Other - 75%

Lab ID #: 69584 - 13

Cust. #: VS-HM-07A

Material: Gold Pebble Linoleum

Location:

Appearance: green, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 69584 - 14

Cust. #: VS-HM-07B

Material: Gold Pebble Linoleum

Location: Appearance:

Layer:

NOT ANALYZED

Asbestos Present: NO

No Asbestos Observed

Asbestos Present:

Lab ID #: 69584 - 15

Cust. #: VS-HM-08A

Material: Vapor Barrier

Location: House

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

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

Robert T. Letarte Jr., Laboratory Director

Cellulose - 70%

Other - 30%

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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 # 17-6

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

Asbestos Present: NO

Asbestos Present: YES

Chrysotile - 10%

No Asbestos Observed

Non-Asbestos

Cellulose - 80%

Other - 20%

Other - 90%

Lab ID #: 69584 - 16

Cust. #: VS-HM-08B

Material: Vapor Barrier

Location: House

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69584 - 17

Cust. #: VS-HM-09A

Material: Window Glazing

Location: House

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69584 - 18

Cust. #: VS-HM-09B

Material: Window Glazing

Location: House

Appearance:

Layer:

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: 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

Other - 100%

Lab ID #: 69584 - 19

Cust. #: VS-HM-10A

Material: Window Glazing Location: Sun Porch

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 69584 - 20

Cust. #: VS-HM-10B

Material: Window Glazing

Location: Sun Porch

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 69584 - 21

Cust. #: VS-HM-11A

Material: Red Linoleum

Location:

Appearance: red,fibrous,nonhomogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Chrysotile - 30%

Other - 100%

Asbestos Present: YES 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: 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

Asbestos Present:

Non-Asbestos

Lab ID #: 69584 - 22

Cust. #: VS-HM-11B Material: Red Linoleum

Location:

NOT ANALYZED

Appearance:

Layer: of

Asbestos Present: **NO** 

Cellulose - 1%

Lab ID #: 69584 - 23 Cust. #: VS-HS-01A

No Asbestos Observed

Hair - 2%

Material: Plaster Base Coat

Other - 97%

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: NO No Asbestos Observed

Other - 100%

Lab ID #: 69584 - 24 Cust. #: VS-HS-01B

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

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: 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

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Hair - 1%

Other - 99%

Lab ID #: 69584 - 24a Cust. #: VS-HS-01B

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Asbestos Present: **NO** No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Lab ID #: 69584 - 25 Cust. #: VS-HS-01C

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69584 - 25a

Cust. #: VS-HS-01C

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

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

Layer: 2 of 2

Other - 96%

Hair - 2%

Cellulose - 2%

Robert T. Letarte Jr., Laboratory Director

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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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69584 - 26

Cust. #: VS-HS-01D

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69584 - 26a

Cust. #: VS-HS-01D

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 1%

Hair - 1%

Other - 98%

Other - 100%

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Lab ID #: 69584 - 27

Cust. #: VS-HS-01E

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: NO No Asbestos Observed

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: 2010 7th St

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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 - 27a Cust. #: VS-HS-01E

Asbestos Present: NO No Asbestos Observed

Cellulose - 1% Hair - 2%

Material: Plaster Base Coat

Other - 97%

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Lab ID #:

Asbestos Present:

Cust. #: Material: Location: Appearance: Layer: of

Lab ID #:

Asbestos Present:

Cust. #: Material: Location: Appearance: of

Layer:

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

Robert T. Letarte Jr., Laboratory Director

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### 69584

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

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APEX	

Rev: 12/03 Work Forms: COC	Date: 4-11-1	Relinquished by:		6		D		0	(১১)	The state of the s	w	2	Stant CV	Lab ID#	D	Other: 5	48 hour 72 hour	Rush 24 hour			Phone: (888)	City, St., Zip:	Address:	Client Name:
	Date :	Relinquished by: MAAMa TEES Received by:	13-HM-Old Back Gray	80-44-cA	NS-44-05A	V3-HM-04B	US-11 M- Oct A	V5-HM-03B	V5-477-031	15. HM-02B	US-44-021	U5-HH-01B	V5-HM-01A	Client ID#		(TTP) All Samples	r	7	Asbest		(888) 449-4566 Fa	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
	4-11-17	by: UPS	1 Bark Gray Leyer		Dryex 11 =	11 7 1	Mult, Loyer Bat		1×1 white	,	Gray HINT Regel	, d. "0	Robin She	Material	TEM: AHER	Mold: Bulk			(Circle One) PLM  Asbestos: Bulk		Fax: (888) 448-8739			ing
	Date:	Relinquished by:	r flooring (Hall)		Da internal frais		Bathroom Floring		Superty C	9, 7, (	Regel Mornia		ight + Vegar Bellier	Material/Location	AHERA 7400 Bulk/NOB	Tape	wipe	1	X Wipe Point (	 	Contact Person	Project #:	Project:	Date of Survey
														Volume		BioSIS	AlfP		( )		Person: Aaron	#:	2010	Survey: 4
ACK	Date : AP	Received by:	,											Area	EPA Level II	Other V	PaintSoil_		PCM	apaquet@redcedarconsulting.net	on Paquet		7th St	-11-17
PEXAMONARCE	201	05												Results		Viable		'	<5% ACM.	msulting.net	,		Report	Lab Use Only Log-In

# APEX Research, Inc. 11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

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



Date : 4-11-17 Date :	Relinquished by: Abyle Medite Received by:	22 VS- HT-11B	21 V5- HH-11A	BOLLESA OF	10 NS.HH-10	8 50-4H-58	13-HH-09X	16 VS-HM-08B	B 15-HN-08A	14 US-HM-07B	13 V5-A77-07A	D VS. HA- &B	Lab ID# Client ID#	Other: Day (TIP) All Samples *** ********************************	N .	ŭ <b>r</b>	Rush 24 hour	Turn Around Times: (Circle One)	Phone: (888) 449-4566 F2	City, St., Zip: Lansing, MI 48901	Address: PO Box 13216	Client Name: Red Cedar Consulting
4-11-19 Date:	by: UPS Relinquished by:		Red Linolsum		Window Glazing (Sun Porch)	1.	Window Glazing (House)	7	Vapor Baria (House)		Cold Pebble Linaleur	Dark Gray Layer Flooring (##)	Material/Location	TEM: AHERA 7400 Bulk/NOB	Med Mold: Bulk Tape	Lead: Bulk Wipe	Asbestos: Bulk X Wipe	(Circle One) PLM EPA 600, PC all samples	Fax: (888) 448-8739 Contact Person		Project: 20/0	Date of Survey
	R												Volume	EPA Level II	BioSIS Other	Air Paint	Point Count		l: Aaron	•	2010 7th 5	rvey: 4.//
	Received by:												Area Re	I	ner Viable	Soil	PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	Paquet		4	1
2017	The state of the s												Results		I			ng.net I.			Report	Lab Use Only Log-In

Rev: 12/03 Work Forms: COC

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



Relinquished by Deate: 4-11-17			47	2	H	24	3	Lab ID#		N	Ě	Rush 24 hour	Turn Arou	Phone: (888) 449-456	City, St., Zip:	Address:	Client Name:
Relinquished by: Leater Received by:  Date: 4-11-17  Date:			V5-H5-01 E	VS - HS-01D	VS-15-01C	VS-HS-01B	V5-H5-01A	Client ID#	TALL SOUTH	TTP III CALL			Turn Around Times: (Circle One)	19-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
#-11-15 Relinquished by:			2				Plaster	Material/Location	TEM: AHERA 7400	Mold: Bulk Tape	Lead: Bulk Wipe	Asbestos: Bulk X Wipe	PLM EPA 600,	(888) 448-8739	Pr	Pr	
hed by:								Volume	Bulk/NOB EPA Level II	BioSIS	Air Paint	Point Count	apaque apaque with a d	Contact Person: Aaron			Date of Survey:
Received by:  APR  Date:								Area	vel II	Other Viable	soil	PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	Paquet		Th Atrest	-11-17
7007								Results			1		ilting.net ACM.		20000	Report	Lab Use Only

Rev: 12/03 Work Forms: COC

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### Red Cedar Consulting

### **Tables**

Table 1 - Summary of Hazardous Materials, 2010 7th St., Muskegon Heights, Michigan

	Hazardous Materials Description and Location	
Location	Material Description	Quantity
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

M	aterial Types	Abbrev	<u>viations</u>
M	= Miscellaneous building material	NQ	= Not quantified
TS	SI = Thermal System Insulation	NA	= Not applicable
S	= Surfacing Material	ND	= Not detected. Laboratory result is less than 1 % asbestos
PO	C = Point Count Analysis	lin. ft.	= linear feet
C1	H = Chrysotile Asbestos	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

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

**Notes:** Material Types

M = Miscellaneous building material TSI = Thermal System Insulation

= Surfacing Material S

**Abbreviations** 

lin. ft. = linear feet

sq. ft. = square feet

Table 4 - Summary of All Asbestos Containing Materials, 2010 7th St., Muskegon Heights, Michigan

Interior - Asbestos Containing Materials				
Location	<b>Material Description</b>		Friable	Approx. Quantity
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.
		Total		412 sq. ft.
Interior - Asbestos Containing Materials				
Location	<b>Material Description</b>		Friable	Approx. Quantity
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
		Total		3 Windows

#### 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.

Muskegon County Land Bank Parcel ID: 61-26-650-012-0017-00

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.

Muskegon County Land Bank Parcel ID: 61-26-650-012-0017-00

#### 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.

Muskegon County Land Bank Parcel ID: 61-26-650-012-0017-00

#### 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.

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)

(1130)33)

# Red Cedar Consulting

# Attachment 1 APEX Research Laboratory Analytical Results



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

No Asbestos Observed

Non-Asbestos

Lab ID #: 69713 - 01

Cust. #: ES-HM-01A

Material: Roofing Materials

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 3

Lab ID #: 69713 - 01a

Cust. #: ES-HM-01A

Material: Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 3

Lab ID #: 69713 - 01b

Cust. #: ES-HM-01A

Material: Tar Paper

Location:

Appearance: black,fibrous,homogenous

Layer: 3 of 3

Asbestos Present: NO

Fiberglass - 20%

Other - 80%

Asbestos Present: **NO** No Asbestos Observed

Fiberglass - 20%

Other - 80%

Asbestos Present: NO 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.



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

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Fiberglass - 20%

Other - 80%

Lab ID #: 69713 - 02

Cust. #: ES-HM-01B

Material: Roofing Materials

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 3

Asbestos Present: **NO** 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: NO

Cellulose - 35%

Lab ID #: 69713 - 02b Cust. #: ES-HM-01B

Material: Tar Paper

No Asbestos Observed

Other - 65%

Location:

Appearance: black,fibrous,homogenous

Layer: 3 of 3

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.



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: **NO**No Asbestos Observed

Asbestos Present: **NO** 

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

Lab ID #: 69713 - 05 Cust. #: ES-HM-03A Asbestos Present: NO

No Asbestos Observed

Cellulose - 15%

Cellulose - 20%

Fiberglass - 10%

Other - 70%

Fiberglass - 2%

Other - 83%

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

Material: Drywall

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: 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

Non-Asbestos

Lab ID #: 69713 - 05a

Cust. #: ES-HM-03A

Material: Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Lab ID #: 69713 - 06

Cust. #: ES-HM-03B

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

Lab ID #: 69713 - 06a

Cust. #: ES-HM-03B

Material: Joint Compound

Appearance: white, nonfibrous, homogenous

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

Layer: 2 of 2

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Cellulose - 15%

Fiberglass - 2%

Other - 83%

Other - 100%

Location:

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.



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:

Asbestos Present: **NO** Chrysotile - Trace

POINT COUNT RESULT

Wollastonite - 2%

Wollastonite - 2% Other - 98%

Other - 100%

Other - 98%

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Lab ID #: 69713 - 08

Cust. #: ES-HM-04B

Material: Window Glazing

Location:

Appearance: grey, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO** 

Chrysotile - Trace

POINT COUNT RESULT

No Asbestos Observed

Lab ID #: 69713 - 09

Cust. #: ES-HS-01A

Material: Surfacing Material/Texture

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: NO

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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 15%

Fiberglass - 2%

Other - 83%

Lab ID #: 69713 - 09a

Cust. #: ES-HS-01A Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 2 of 2

Asbestos Present: **NO** 

No Asbestos Observed

Other - 100%

Lab ID #: 69713 - 10 Cust. #: ES-HS-01B

Material: Surfacing Material/Texture

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69713 - 10a

Cust. #: ES-HS-01B

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 2 of 2

Asbestos Present: NO

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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69713 - 11

Cust. #: ES-HS-01C

Material: Surfacing Material/Texture

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Cellulose - 15%

Cust. #: ES-HS-01C

Material: Drywall

Lab ID #: 69713 - 11a

Location:

Appearance: white, fibrous, nonhomogenous

Asbestos Present: **NO** No Asbestos Observed

Fiberglass - 2% Other - 83%

Layer: 2 of 2

Lab ID #:

Asbestos Present:

Cust. #: Material: Location:

Appearance: Layer: of

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.

# APEX Research, Inc. 11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990 E-mail: apexresearch@chartermi.net

Fax: 734-449-9991

Phone: City, St., Zip: Address: Turn Around Times: (Circle One) Client Name: (888) 449-4566 Red Cedar Consulting Lansing, MI 48901 PO Box 13216 Fax: (888) 448-8739 Asbestos: Bulk PLM EPA 600, PC all samples with a detection of <5% ACM. × Wipe Contact Person: Aaron Paquet Date of Survey: 4-20-17 Project #:\_ Project: 2037 Point Count

Lab Use Only Log-In  Report		
	Report	Lab Use Only Log-In

	8	2	8	1	5	\sqr	+	<i>\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\</i>	در		Lab ID#	0	Other: Sday	48 hour 72 hour	Rush 24 hour
ES 45-010	ES-45-018	E5.48-014	Bro.WH-SZ	ES-UM-04A	ES-HM-03B	ES-4/4-03A	820-MH-53	E5-14M-024 White	E5-4M-01B	£5-411-014	Client ID #		(TTP) All Samples		
** ** ** **	O	Augual + Suspainal Meter	0	Window Hasing	der in the	Drewall Frint Brussey		White Genolum	; A	Roofing Materials	Material/Location	TEM: AHERA 7400 Bulk/NOB	Mold: Bulk Tape		Daile
											Volume Area	OB EPA Level II	BioSIS Other	Air Paint Soil	j
											Results	•	Viable		

7 Date: 4.20-17	Mastele Received by: 175
Date: 1000 APR 2 1 Date:	Relinquished by

ADDIX BESSEATOR

Relinquished by:

# Red Cedar Consulting

# **Tables**

Table 1 - Summary of Hazardous Materials, 2037 Elwood St., Muskegon Heights, Michigan

Hazardous Materials Description and Location								
Location	Location Material Description							
Exterior	2' Fluorescent Light (Fixture and Ballast Only)	1						
Exterior	2' Fluorescent Bulb	1						
Exterior	Automobile Tire							
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

#### 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

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

Material Types

M = Miscellaneous building material TSI = Thermal System Insulation

= Surfacing Material S

**Abbreviations** 

lin. ft. = linear feet

sq. ft. = square feet

Table 4 - Summary of All Asbestos Containing Materials, 2037 Elwood St., Muskegon Heights, Michigan

Exterior - Asbestos Containing Materials			
Location	Material Description	Friable	Approx. Quantity
No Asbestos Containing Materials Identified			

#### **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.

Muskegon County Land Bank Parcel ID: 61-26-650-013-0022-00

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.

Muskegon County Land Bank Parcel ID: 61-26-650-013-0022-00

#### **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.

Muskegon County Land Bank Parcel ID: 61-26-650-013-0022-00

#### 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.

Muskegon County Land Bank Parcel ID: 61-26-650-013-0022-00

#### **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:

- 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

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

Raion Paguet

Aaron Paquet

Michigan/EPA Certified Asbestos Building Inspector (A30955)

# Red Cedar Consulting

# Attachment 1 APEX Research Laboratory Analytical Results



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Fiberglass - 20%

Other - 80%

Lab ID #: 69714 - 01

Cust. #: SS-HM-01A

Material: Roofing Materials

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 2

No Asbestos Observed

Asbestos Present: **NO** 

Cellulose - 60%

Other - 40%

Lab ID #: 69714 - 01a Cust. #: SS-HM-01A

Material: Tar Paper

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Fiberglass - 20%

Other - 80%

Cust. #: SS-HM-01B

Lab ID #: 69714 - 02

Material: Roofing Materials

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 2

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: 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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 60%

Other - 40%

Lab ID #: 69714 - 02a

Cust. #: SS-HM-01B Material: Tar Paper

Location:

Appearance: black,fibrous,homogenous

Layer: 2 of 2

Asbestos Present: YES

Chrysotile - 30%

Asbestos Present: NO

No Asbestos Observed

Other - 70%

Cellulose - 35%

Other - 65%

Lab ID #: 69714 - 03 Cust. #: SS-HM-02A

Material: Brown Layered Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 2

Lab ID #: 69714 - 03a

Cust. #: SS-HM-02A

Material: Flooring

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 2 of 2

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.



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

Cellulose - 35%

Other - 65%

Lab ID #: 69714 - 04

Cust. #: SS-HM-02B

Cust. #. 55-11VI-02D

Material: Brown Layered Linoleum

Location:

NOT ANALYZED

Asbestos Present:

Appearance: Layer: 1 of 2

Lab ID #: 69714 - 04a

Cust. #: SS-HM-02B

Material: Flooring

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 2 of 2

Lab ID #: 69714 - 05

Cust. #: SS-HM-03A

Material: 12x12 Tan VFT

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 3

Asbestos Present: YES

Asbestos Present: **NO** 

No Asbestos Observed

Other - 95%

Chrysotile - 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.



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 - 05a

Cust. #: SS-HM-03A

Material: Mastic

Location:

Appearance: yellow,nonfibrous,homogenous

Layer: 2 of 3

Lab ID #: 69714 - 05b

Cust. #: SS-HM-03A

Material: Felt

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 3 of 3

Lab ID #: 69714 - 06

Cust. #: SS-HM-03B

Material: 12x12 Tan VFT

Location:

Appearance:

Layer: 1 of 3

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 85%

Other - 15%

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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69714 - 06a

Cust. #: SS-HM-03B

Material: Mastic

Location:

Appearance: yellow,nonfibrous,homogenous

Layer: 2 of 3

Lab ID #: 69714 - 06b

Asbestos Present: NO

No Asbestos Observed

Cellulose - 85%

Other - 15%

ed

Cust. #: SS-HM-03B Material: Felt

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 3 of 3

Lab ID #: 69714 - 07

Cust. #: SS-HM-04A

Material: Cream Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 2

Asbestos Present: NO

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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69714 - 07a

Cust. #: SS-HM-04A

Material: Mastic

Location:

Appearance: yellow,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 69714 - 08

Cust. #: SS-HM-04B

Material: Cream Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 2

Asbestos Present: **NO**No Asbestos Observed

No Asbestos Observed

Cellulose - 20%

Fiberglass - 10%

Other - 70%

Lab ID #: 69714 - 08a

Cust. #: SS-HM-04B

Material: Mastic

Location:

Appearance: yellow,nonfibrous,homogenous

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

Layer: 2 of 2

Asbestos Present: **NO** Other - 100%

Cut

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.



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 - 09

Cust. #: SS-HM-05A

Material: Blue/Cream Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 2

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 20% Fiberglass - 10%

Other - 70%

Other - 100%

Lab ID #: 69714 - 09a

Cust. #: SS-HM-05A

Material: Mastic

Location:

Appearance: yellow,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 69714 - 10

Cust. #: SS-HM-05B

Material: Blue/Cream Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 2

Asbestos Present: NO

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.



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

No Asbestos Observed

Non-Asbestos

Lab ID #: 69714 - 10a

Cust. #: SS-HM-05B

Material: Mastic

Location:

Appearance: yellow,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 69714 - 11

Cust. #: SS-HM-06A

Material: 1x1 White Smooth Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69714 - 12

Cust. #: SS-HM-06B

Material: 1x1 White Smooth Ceiling Tile

Location:

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

Layer: 1 of 1

Asbestos Present: NO

Other - 100%

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 95%

Other - 5%

Appearance: brown, fibrous, homogenous

Asbestos Present: NO Cellulose - 95% No Asbestos Observed Other - 5%

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.



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

Other - 100%

Lab ID #: 69714 - 13

Cust. #: SS-HM-07A

Material: Window Glazing

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 1

Lab ID #: 69714 - 14

Cust. #: SS-HM-07B

Material: Window Glazing

Location:

Appearance: beige, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 69714 - 15

Cust. #: SS-HS-01A

Material: Plaster Finish Coat

Appearance: white, nonfibrous, homogenous

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

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Other - 100%

Location:

Layer: 1 of 2

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.



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 - 15a

Cust. #: SS-HS-01A

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Lab ID #: 69714 - 16

Cust. #: SS-HS-01B

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69714 - 16a

Cust. #: SS-HS-01B

Material: Plaster Base Coat

Location:

Appearance: grey, fibrous, homogenous

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

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Cellulose - 2%

Other - 98%

Other - 100%

Cellulose - 2%

Other - 98%

Asbestos Present: **NO** No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69714 - 17

Cust. #: SS-HS-01C

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69714 - 17a

Cust. #: SS-HS-01C

Asbestos Present: **NO** 

Cellulose - 2%

No Asbestos Observed

Other - 98%

Other - 100%

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Lab ID #: 69714 - 18

Cust. #: SS-HS-01D

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: NO No Asbestos Observed

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.



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 - 18a

Cust. #: SS-HS-01D

Material: Plaster Base Coat

Location:

Appearance: grey, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: **NO**No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 2%

Other - 98%

Other - 100%

Lab ID #: 69714 - 19

Cust. #: SS-HS-01E

Material: Plaster Finish Coat

Location:

Location.

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69714 - 19a

Cust. #: SS-HS-01E

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Asbestos Present: NO

Cellulose - 2%

No Asbestos Observed

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.

# Apex # 69714

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



			2x/2 ten VFT  Green Biroleum  Buet Green Grioleum  (x   white amosth CT	Tei b	55-4M-028 55-4M-03A 55-4M-03B 55-4M-05A 55-4M-05A 55-4M-05A 55-4M-06A	20000000000000000000000000000000000000
Results	Area	Volume	Material/Location	Rosh ?	Client ID #  55-44-014	Lab ID#
Viable	PCMSoil_Other	Point Coun Air BioSIS _ The country of the cou	Asbestos:         Bulk         X         Wipe           Lead:         Bulk         Wipe	Asbeste Lead: Mold: TEM:	Client ID #	Rush 24 hour 48 hour 72 hour Other: 5 day  Lab ID #
Lab Use Only Log-in Report  Report  Report  Report  Report	Lab Use Log-In Log-In Log-In Report Report Aaron Paquet apaquet@redcedarconsulting.net with a detection of <5% ACM.	Project: 2045 de Project #:  Project #:  Contact Person: Aaron apaque PC all samples with a c	248-8739 PLM EPA 600,	.: (888) 4	ame: Red Cedar Consulting  PO Box 13216  Lansing, MI 48901  (888) 449-4566 Fax: (888) 4  Around Times: (Circle One)	Client Name: Red Condition Address: Po Bo City, St., Zip: Lansi Phone: (888) 449-456  Turn Around

Rev: 12/03 Work Forms: COC

Date:\_

4-20-17

Date : \_

4-20-17

Date: 1000

APR 2 1 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



Rev: 12/03 Work Forms: COC	Date: 4-20-17 Date:	Relinquished by: Whele MeeleT Beceived by:		319-54-55	16 8-45-01D	17 55- HS-01C	16 55-45-01B	15 55- 45-014	810-HH-55 H	10 SS-HH-074	12 SS-417-068	Lab ID # Client ID #	Ø	Other: 5deu (TTP) All Samples	48 hour 72 hour	Rush 24 hour	Turn Around Times: (Circle One)	Phone: (888) 449-4566 Fax:	City, St., Zip: Lansing, MI 48901	Address: PO Box 13216	Client Name: Red Cedar Consulting
	4-20-17	UPS Relinquished by		<b>K</b>				Flester		Window He	1x) white smooth ct	Material/Location	TEM: AHERA 7400 Bulk/NOB	Mold: Bulk Tape	Lead: Bulk Wipe	Asbestos: Bulk Wipe	PLM I	48-8739	Project # :	Project:	Date of Survey:
APEX PESEARCH	2 1 2017											Volume	B EPA Level II	BioSISOther	Air Paint	Point Count		Aaron	ļ	2045 Lucy	Survey:
	Date:	Received by:										Area		er Viable	Soil	PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	Paquet		The same of the sa	0 ' / 1
												Results			1		<pre>11ting.net ACM.</pre>		Zaport	Log-In	Lab Use Only

# Red Cedar Consulting

# **Tables**

Table 1 - Summary of Hazardous Materials, 2045 Superior St., Muskegon Heights, Michigan

Hazardous Materials Description and Location								
Location	Material Description	Quantity						
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

= Chrysotile Asbestos

PC = Point Count Analysis

#### **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

Asbestos Containing Material Description and Location										
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity					
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

Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Kitchen	Brown Layered Linoleum		No	117 sq. ft.
Bathroom	Tan 12x12 Vinyl Floor Tile		No	42 sq. ft.
		Total		159 sq. ft.
Interior - Asbestos Containing Materials				
Location	<b>Material Description</b>		Friable	Approx. Quantity
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.
		Total		55 sq. ft.

#### **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.

Muskegon County Land Bank Parcel ID: 61-26-185-059-0004-00

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.

Muskegon County Land Bank Parcel ID: 61-26-185-059-0004-00

#### **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.

Muskegon County Land Bank Parcel ID: 61-26-185-059-0004-00

#### 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)

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

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

Raion Paguet

Aaron Paquet

Michigan/EPA Certified Asbestos Building Inspector (A30955)

# Red Cedar Consulting

# Attachment 1 APEX Research Laboratory Analytical Results



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

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Cellulose - 40%

Other - 60%

Other - 60%

Lab ID #: 69695 - 01

Cust. #: HS-HM-01A

Material: Roofing Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: **NO**No Asbestos Observed

Cellulose - 40%

Cust. #: HS-HM-01B

Lab ID #: 69695 - 02

Material: Roofing Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 4

Asbestos Present: NO

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

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.



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

No Asbestos Observed

Non-Asbestos

Lab ID #: 69695 - 02b

Cust. #: HS-HM-01B

Material: Red Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 3 of 4

Lab ID #: 69695 - 02c

Cust. #: HS-HM-01B

Material: Green Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 4 of 4

Lab ID #: 69695 - 03

Cust. #: HS-HM-02A

Material: Layered Vinyl/Wood Linoleum

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 3

Asbestos Present: NO

Cellulose - 40%

Other - 60%

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 40%

Other - 60%

Asbestos Present: NO

No Asbestos Observed

Cellulose - 10%

Fiberglass - 10%

Other - 80%

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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

Other - 70%

Lab ID #: 69695 - 03a

Cust. #: HS-HM-02A

Material: Beige Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 2 of 3

Lab ID #: 69695 - 03b

Cust. #: HS-HM-02A

Material: Fiberboard

Location:

Appearance: brown, fibrous, homogenous

Layer: 3 of 3

Lab ID #: 69695 - 04

Cust. #: HS-HM-02B

Material: Layered Vinyl/Wood Linoleum

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 3

Asbestos Present: YES

Chrysotile - 30%

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 80%

Other - 20%

Asbestos Present: NO 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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Test Method, Polarized Light Microscopy (PLM)

Project: 2113 Howden St.

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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:

NOT ANALYZED

Appearance: Layer: 2 of 3

Lab ID #: 69695 - 04b

Cust. #: HS-HM-02B

Material: Fiberboard

Location:

Appearance: brown, fibrous, homogenous

Layer: 3 of 3

Lab ID #: 69695 - 05

Cust. #: HS-HM-03A

Material: Yellow Pebble Linoleum

Location:

Appearance: yellow,fibrous,nonhomogenous

Layer: 1 of 2

Asbestos Present:

Asbestos Present: **NO** 

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

Cellulose - 70%

Cellulose - 10%

Fiberglass - 10%

Other - 80%

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)

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

Lab ID #: 69695 - 06

Cust. #: HS-HM-03B

Material: Yellow Pebble Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 2

Lab ID #: 69695 - 06a

Cust. #: HS-HM-03B

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

Asbestos Present: NO

No Asbestos Observed

Cellulose - 80%

Other - 20%

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Cellulose - 10%

Fiberglass - 10%

Other - 80%

Material: Fiberboard

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Other - 20%

Cellulose - 80%

Robert T. Letarte Jr., Laboratory Director

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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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 40%

Other - 60%

Lab ID #: 69695 - 07

Cust. #: HS-HM-04A

Material: Green Vinyl Layered

Location:

Appearance: green, fibrous, nonhomogenous

Layer: 1 of 2

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 80%

Other - 20%

Lab ID #: 69695 - 07a Cust. #: HS-HM-04A

Material: Fiberboard

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 69695 - 08

Asbestos Present: NO

Cellulose - 40%

Cust. #: HS-HM-04B

Material: Green Vinyl Layered

No Asbestos Observed

Other - 60%

Location:

Appearance: green, fibrous, nonhomogenous

Layer: 1 of 2

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: 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 - 08a

Cust. #: HS-HM-04B

Material: Fiberboard

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 69695 - 09

Cust. #: HS-HM-05A

Material: 1x1 Textured White Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

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: NO

Cellulose - 80%

No Asbestos Observed

Other - 20%

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 80%

Other - 20%

Asbestos Present: NO

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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Project: 2113 Howden St.

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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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 20%

Other - 80%

Lab ID #: 69695 - 11

Cust. #: HS-HM-06A

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

Asbestos Present: **NO** 

Other - 99.00%

Cust. #: HS-HM-06A

Lab ID #: 69695 - 11a

Material: Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Chrysotile - 1.00%

POINT COUNT RESULT

Lab ID #: 69695 - 12

Cust. #: HS-HM-06B

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

Asbestos Present: NO

Cellulose - 20%

No Asbestos Observed

Other - 80%

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: 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

Other - 99.75%

Wollastonite - 1% Other - 99%

Lab ID #: 69695 - 12a

Cust. #: HS-HM-06B

Material: Joint Compound

Location:

Appearance: white,nonfibrous,homogenous

Layer: 2 of 2

Asbestos Present: **NO** 

Chrysotile - 0.75%

POINT COUNT RESULT

Lab ID #: 69695 - 13

Cust. #: HS-HM-07A

Material: Window Glazing

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 1

Lab ID #: 69695 - 14

Cust. #: HS-HM-07B

Material: Window Glazing

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 1

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

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: 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

No Asbestos Observed

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: NO

No Asbestos Observed

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 1% Other - 99%

Other - 100%

Lab ID #: 69695 - 15a Cust. #: HS-HM-08A

Material: Floor Tile

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 2 of 4

Lab ID #: 69695 - 15b

Cust. #: HS-HM-08A

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 3 of 4

Asbestos Present: NO

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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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

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Cellulose - 40%

Other - 60%

Lab ID #: 69695 - 15c

Cust. #: HS-HM-08A

Material: Sheet Flooring

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 4 of 4

Asbestos Present: **NO** 

Cellulose - 10%

Lab ID #: 69695 - 16 Cust. #: HS-HM-08B

Material: Vinyl Layered Wood Grain/Linoleum

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 4

No Asbestos Observed

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: NO

Cellulose - 1%

No Asbestos Observed

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: 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

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69695 - 16b

Cust. #: HS-HM-08B

Material: Glue Location:

Appearance: clear,nonfibrous,homogenous

Layer: 3 of 4

No Asbestos Observed

Asbestos Present: **NO** 

Cellulose - 40%

Other - 60%

Cust. #: HS-HM-08B

Lab ID #: 69695 - 16c

Material: Sheet Flooring

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 4 of 4

Asbestos Present: NO

No Asbestos Observed

Cellulose - 50%

Other - 50%

Lab ID #: 69695 - 17 Cust. #: HS-HM-09A

Material: Brown Leaf Linoleum

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 1

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: 2113 Howden St.

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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 - 18

Cust. #: HS-HM-09B

Material: Brown Leaf Linoleum

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 69695 - 19

Cust. #: HS-HM-10A

Material: White Linoleum

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 69695 - 20

Cust. #: HS-HM-10B

Material: White Linoleum

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Cellulose - 50%

Other - 50%

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 10%

Fiberglass - 10%

Other - 80%

Asbestos Present: NO Cellulose - 10% No Asbestos Observed

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.



# 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

Other - 100%

Lab ID #: 69695 - 21

Cust. #: HS-HS-01A

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69695 - 21a

Cust. #: HS-HS-01A

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Lab ID #: 69695 - 22

Cust. #: HS-HS-01B

Material: Plaster Finish Coat

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Cellulose - 2%

Hair - 5%

Other - 93%

Other - 100%

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

Location:

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.



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

Cellulose - 2%

Lab ID #: 69695 - 22a

Cust. #: HS-HS-01B

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Asbestos Present: NO No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

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

Lab ID #: 69695 - 23a Cust. #: HS-HS-01C Asbestos Present: NO

Cellulose - 2%

Other - 100%

No Asbestos Observed

Hair - 5% Other - 93%

Material: Plaster Base Coat

Location:

Appearance: grey, fibrous, homogenous

Layer: 2 of 2

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.



# 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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69695 - 24

Cust. #: HS-HS-01D

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: **NO** 

Cellulose - 1%

Lab ID #: 69695 - 24a Cust. #: HS-HS-01D

Material: Plaster Base Coat

No Asbestos Observed

Hair - 5% Other - 94%

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Asbestos Present: NO No Asbestos Observed

Other - 100%

Lab ID #: 69695 - 25 Cust. #: HS-HS-01E

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 3

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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 2%

Hair - 2%

Other - 96%

Lab ID #: 69695 - 25a

Cust. #: HS-HS-01E

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 3

Lab ID #: 69695 - 25b

Cust. #: HS-HS-01E

Material: Plaster Texture

Location:

Appearance: brown, fibrous, homogenous

Layer: 3 of 3

Asbestos Present: **NO** 

Other - 99.50%

Chrysotile - 0.50%

POINT COUNT RESULT

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.

# 69695

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

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Fax: 734-449-9991

Received by:

Rev: 12/03 Work Forms: COC

FORX REGISTER

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



Rev: 12/03 Work Forms: COC	Date: 4-19-17	Relinquished by	7	12	3	19	14	£1	31	2	4	T	75	Lab ID#	d	Other: 5 day	48 hour 72 hour	Nusii 24 iloui		Turn Arou	Phone: (888) 44	City, St., Zip:	Address:	Client Name: _
	-17 Date: 4	Relinquished by: Well Malter Received by:	H5- H5-01B	45-45-01A	45-4M-10B	H5- HM- 104 6	45- HM- 09B	45- HM- 09A	#5- HM- 08B	HS-HM-08A	45-HM-07B	45- HM- 07A	45.HM-068	Client ID#		(TTP) All Samples				Around Times: (Circle One)	(888) 449-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
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É	Date:	17 1. 3												Area	П	Other Viable_		Soil	PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	Paquet		endt	19.17
PEX RESEARCY													William I to the	Results						ting.net ACM.			Report	Lab Use Only Log-In

# APEX Research, Inc. 11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

E-mail: apexresearch@chartermi.net

Fax: 734-449-9991

O APEX

48 hour Rush Other: Salay Relinquished by: Della Mater Received by: UTS Phone: (888) 449-4566 City, St., Zip: Address: Client Name: Turn Around Times: (Circle One) Lab ID# 72 hour 24 hour Red Cedar Consulting Lansing, MI 48901 PO Box 13216 45-H5-01D 15-15-01E 45-45-010 (TTP) <u>All Samp</u>les Client ID# Date: Fax: 4-19-17 (888) 448-8739 TEM: Mold: Asbestos: Bulk Lead: Material/Location Bulk Bulk **AHERA 7400** PIM EPA 600, PC all samples with a detection of <5% ACM. Relinquished by: Wipe Wipe Contact Person: Aaron Paquet Date of Survey: 4-19-17 Project #: Project:\_ Bulk/NOB Point Count BioSIS Volume EPA Level II Other Received by: \_ Date: Area PCM. Soil Results Report\_ Log-In\_ Lab Use Only

Rev: 12/03 Work Forms: COC

THE PROPERTY

# Red Cedar Consulting

# **Tables**

Table 1 - Summary of Hazardous Materials, 2113 Howden St., Muskegon Heights, Michigan

Hazardous Materials Description and Location												
Location	Material Description											
Exterior	Automobile Tires	4										
Kitchen	2' Fluorescent Light (Fixture and Ballast Only)											
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:**

<u>N</u>	laterial Types	Abbrev	nations
N	f = Miscellaneous building material	NQ	= Not quantified
Τ	SI = Thermal System Insulation	NA	= Not applicable
S	= Surfacing Material	ND	= Not detected. Laboratory result is less than 1 % asbestos
P	C = Point Count Analysis	lin. ft.	= linear feet
C	H = Chrysotile Asbestos	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

A	Asbestos Containing Material Description a	nd Location			
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity
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:** 

<u>Material Types</u> <u>Abbreviations</u>

M = Miscellaneous building material

TSI = Thermal System Insulation

S = Surfacing Material

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

Table 4 - Summary of All Asbestos Containing Materials, 2113 Howden St., Muskegon Heights, Michigan

Interior - Asbestos Containing Materials				
Location	<b>Material Description</b>		Friable	Approx. Quantity
Bathroom	Layered Vinyl		No	54 sq. ft.
		Total		54 sq. ft.
Interior - Asbestos Containing Materials				
Location	<b>Material Description</b>		Friable	Approx. Quantity
Basement (misc. HVAC wrap on abandoned cold air return duct in crawl space, 25 sq. ft.)	HVAC Duct Wrap		Yes	25 sq. ft.
<u> </u>		Total		25 sq. ft.

### **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.

Muskegon County Land Bank Parcel ID: 61-26-185-052-0020-00

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.

Muskegon County Land Bank Parcel ID: 61-26-185-052-0020-00

### **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.

Muskegon County Land Bank Parcel ID: 61-26-185-052-0020-00

### 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.)

Muskegon County Land Bank Parcel ID: 61-26-185-052-0020-00

- 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.

Muskegon County Land Bank Parcel ID: 61-26-185-052-0020-00

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)

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# Red Cedar Consulting

# Attachment 1 APEX Research Laboratory Analytical Results



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

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Fiberglass - 15%

Other - 85%

Lab ID #: 69694 - 01

Cust. #: JS-HM-01A

Material: Roofing Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

Fiberglass - 15%

Lab ID #: 69694 - 02 Cust. #: JS-HM-01B

Material: Roofing Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

No Asbestos Observed

Other - 85%

t 1 C 1

Lab ID #: 69694 - 03

Cust. #: JS-HM-02A

Material: Cream Linoleum

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

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.



### 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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 15%

Fiberglass - 5%

Other - 80%

Lab ID #: 69694 - 04

Cust. #: JS-HM-02B

Material: Cream Linoleum

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69694 - 05

Cust. #: JS-HM-03A

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 15%

Fiberglass - 5%

Other - 80%

Location:

Material: Layered Vinyl/Linoleum/Glue

Appearance: grey,fibrous,nonhomogenous

Layer: 1 of 3

Lab ID #: 69694 - 05a Cust. #: JS-HM-03A Asbestos Present: NO

No Asbestos Observed

Cellulose - 15%

Fiberglass - 5%

Other - 80%

Material: Linoleum Location:

Appearance: white, fibrous, nonhomogenous

Layer: 2 of 3

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

Robert T. Letarte Jr., Laboratory Director

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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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 15%

Fiberglass - 5%

Other - 80%

Lab ID #: 69694 - 05b

Cust. #: JS-HM-03A

Material: Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 3 of 3

Asbestos Present: **NO** 

Cellulose - 15%

Lab ID #: 69694 - 06 Cust. #: JS-HM-03B

No Asbestos Observed

Fiberglass - 5% Other - 80%

Material: Layered Vinyl/Linoleum/Glue

Location:

Appearance: grey,fibrous,nonhomogenous

Layer: 1 of 3

Asbestos Present: NO

Cellulose - 15%

Cust. #: JS-HM-03B

Material: Linoleum

Lab ID #: 69694 - 06a

No Asbestos Observed

Fiberglass - 5%

Other - 80%

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 2 of 3

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

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Project: 2116 Jefferson St.

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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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 15%

Fiberglass - 5%

Other - 80%

Lab ID #: 69694 - 06b

Cust. #: JS-HM-03B Material: Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 3 of 3

Chrysotile - 2.00%

Asbestos Present: YES

Other - 98.00%

Other - 100%

Lab ID #: 69694 - 07 Cust. #: JS-HM-04A

Material: 9x9 Red VFT

Location:

Appearance: red,fibrous,homogenous

Layer: 1 of 3

POINT COUNT RESULT

Lab ID #: 69694 - 07a

Cust. #: JS-HM-04A

Material: Mastic

Location:

Appearance: black,nonfibrous,homogenous

Layer: 2 of 3

No Asbestos Observed

Asbestos Present: NO

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Robert T. Letarte Jr., Laboratory Director

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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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 60%

Other - 40%

Lab ID #: 69694 - 07b

Cust. #: JS-HM-04A

Material: Flooring/Felt

Location:

Appearance: green, fibrous, nonhomogenous

Layer: 3 of 3

Lab ID #: 69694 - 08

Cust. #: JS-HM-04B Material: 9x9 Red VFT

Location:

Appearance:

Layer: 1 of 3

Asbestos Present:

NOT ANALYZED

Asbestos Present: NO

No Asbestos Observed

Lab ID #: 69694 - 08a

Cust. #: JS-HM-04B

Material: Mastic

Location:

Appearance: black,nonfibrous,homogenous

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

Layer: 2 of 3

Robert T. Letarte Jr., Laboratory Director

Other - 100%

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Project: 2116 Jefferson St.

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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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 60%

Other - 98.50%

Other - 40%

Lab ID #: 69694 - 08b

Cust. #: JS-HM-04B

Material: Flooring/Felt

Location:

Appearance: green, fibrous, nonhomogenous

Layer: 3 of 3

Lab ID #: 69694 - 09

Cust. #: JS-HM-05A

Material: 9x9 Green VFT

Location:

Appearance: brown, fibrous, homogenous

POINT COUNT RESULT

Asbestos Present: YES

Chrysotile - 1.50%

Layer: 1 of 3

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Lab ID #: 69694 - 09a

Cust. #: JS-HM-05A

Material: Mastic

Location:

Appearance: black,nonfibrous,homogenous

Layer: 2 of 3

Asbestos Present: **NO** Other - 100%

No Asbestos Observed

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

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Project: 2116 Jefferson St.

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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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 60%

Other - 40%

Lab ID #: 69694 - 09b

Cust. #: JS-HM-05A

Material: Flooring

Location:

Appearance: green, fibrous, nonhomogenous

Layer: 3 of 3

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: NO

No Asbestos Observed

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

Robert T. Letarte Jr., Laboratory Director

Other - 100%

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Project: 2116 Jefferson St.

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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

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Cellulose - 60%

Other - 40%

Lab ID #: 69694 - 10b Cust. #: JS-HM-05B

Material: Flooring

Location:

Appearance: green, fibrous, nonhomogenous

Layer: 3 of 3

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 80% Other - 20%

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: NO

Cellulose - 80%

Lab ID #: 69694 - 12 Cust. #: JS-HM-06B

No Asbestos Observed

Other - 20%

Material: 1x1 White Smooth Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

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: 2116 Jefferson St.

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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

Other - 100%

Other - 100%

Other - 100%

Lab ID #: 69694 - 13

Cust. #: JS-HM-07A

Material: 12x12 Tan VFT

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 1 of 2

Lab ID #: 69694 - 13a

Cust. #: JS-HM-07A

Material: Glue

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 69694 - 14

Cust. #: JS-HM-07B

Material: 12x12 Tan VFT

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 1 of 2

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

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: 2116 Jefferson St.

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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

Other - 100%

Lab ID #: 69694 - 14a

Cust. #: JS-HM-07B

Material: Glue Location:

Appearance: brown,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 69694 - 15

Cust. #: JS-HM-08A

Material: Drywall

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 2

Lab ID #: 69694 - 15a

Cust. #: JS-HM-08A

Material: Joint Compound/Mesh

Appearance: white, fibrous, nonhomogenous

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

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Cellulose - 20%

Fiberglass - 1%

Fiberglass - 5%

Other - 95%

Other - 79%

Location:

Layer: 2 of 2

Robert T. Letarte Jr., Laboratory Director

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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 - 16

Cust. #: JS-HM-08B

Material: Drywall

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 2

Lab ID #: 69694 - 16a

Cust. #: JS-HM-08B

Material: Joint Compound

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 2 of 2

Lab ID #: 69694 - 17

Cust. #: JS-HM-09A

Material: Window Glazing

Location: House

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 20%

Other - 80%

Asbestos Present: **NO** 

No Asbestos Observed

Fiberglass - 5%

Other - 98.75%

Other - 95%

Asbestos Present: YES

Chrysotile - 1.25%

POINT COUNT RESULT

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

Robert T. Letarte Jr., Laboratory Director

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Project: 2116 Jefferson St.

**Report To:** 

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216

ARI Report # 17-69694

Date Collected: 04/19/17 Date Received: 04/20/17

Date Analyzed: 04/24/17 Date Reported: 04/27/17

Lansing, MI 48901

Sample Information

Asbestos Type/Percent

Non-Asbestos

Other - 95%

Lab ID #: 69694 - 18

Cust. #: JS-HM-09B

Material: Window Glazing

Location: House Appearance: Layer:

Asbestos Present:

NOT ANALYZED

Asbestos Present: YES

Chrysotile - 5%

Lab ID #: 69694 - 19

Cust. #: JS-HM-10A

Material: Window Glazing

Location: Basement

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69694 - 20

Asbestos Present:

Cust. #: JS-HM-10B Material: Window Glazing

Location: Basement

NOT ANALYZED

Appearance: Layer: of

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

Robert T. Letarte Jr., Laboratory Director

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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

Other - 100%

Other - 100%

Lab ID #: 69694 - 21

Cust. #: JS-HS-01A

Material: Plaster Texture

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 3

Lab ID #: 69694 - 21a

Cust. #: JS-HS-01A

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 3

Lab ID #: 69694 - 21b

Cust. #: JS-HS-01A

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

Layer: 3 of 3

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO No Asbestos Observed

Hair - 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 # 17-69694

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

Other - 100%

Lab ID #: 69694 - 22

Cust. #: JS-HS-01B

Material: Plaster Texture

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 3

Lab ID #: 69694 - 22a

Cust. #: JS-HS-01B

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 3

Lab ID #: 69694 - 22b

Cust. #: JS-HS-01B

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

Layer: 3 of 3

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Hair - 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: 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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Other - 100%

Lab ID #: 69694 - 23

Cust. #: JS-HS-01C

Material: Plaster Texture

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 3

Lab ID #: 69694 - 23a

Cust. #: JS-HS-01C

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 3

Lab ID #: 69694 - 23b

Cust. #: JS-HS-01C

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

Layer: 3 of 3

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

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.



### 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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69694 - 24

Cust. #: JS-HS-01D

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

No Asbestos Observed

Asbestos Present: **NO** 

Hair - 1% Other - 99%

Lab ID #: 69694 - 24a Cust. #: JS-HS-01D

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Lab ID #: 69694 - 25

Cust. #: JS-HS-01E

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

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.



Test Method, Polarized Light Microscopy (PLM)

Project: 2116 Jefferson St.

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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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Hair - 1%

Other - 99%

Lab ID #: 69694 - 25a Cust. #: JS-HS-01E

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 2

Lab ID #:

Cust. #: Material:

Location:
Appearance:

Layer:

Lab ID #:

Lao ID  $\pi$ .

Cust. #: Material:

Location: Appearance:

Layer:

of

of

Asbestos Present:

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.

# 69694

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

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0 2017	Date: APR 2		Date :	7-19-17	Date :	Date: 4-19-17
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D 08-11-	elan At	: 2116 Add	Project: 2		PO Box 13216	Address:
Lab Use Only	19-17	Date of Survey: 4-,	Date of	ng	Red Cedar Consulting	Client Name: _R

Rev: 12/03 Work Forms: COC

ROW THOUSAND

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



Relinquished by: AND MELLINE Received by: UTS  Date: 4-19-17  Date: 4-19-17	13 13 - HO-018 ::	100	100	19 55- HM-10A Window	18 JS-HH-09B	17 55-HM-094 Window	16 JS- AR-08B 0	6 JS-HM-08A Mayor	14 JS-HM-07B "	D 75- HM-074 12112		Lab ID # Client ID # N		Other: 5 de (TTP) 11 Samo Mold:	48 hour 72 hour Lead:	Rush 24 hour Asbes	Turn Around Times: (Circle One)	(888) 449-4566 Fax: (888)	City, St., Zip: Lansing, MI 48901	AUUIESS. PO Box 13216	,
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2 0 2017												Results		ole			sulting.net 5% ACM.		- velocit	0	

Rev: 12/03 Work Forms: COC

BUX PROPERTY

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



Relinquished by:					25	\$	73	Lab ID#	Ø	Other: Sday	48 hour 72 hour	Rush 24 hour	IUTH ATOL	Phone: (888) 449-4566	City, St., Zip:	Address:	Client Name:
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Date: 4-19-17

Date: 4-19-14

Date:

Date:

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ACITY DIMENTATION

# Red Cedar Consulting

# **Tables**

Table 1 - Summary of Hazardous Materials, 2116 Jefferson St., Muskegon Heights, Michigan

Hazardous Materials Description and Location								
Location	Material Description	Quantity						
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

Abbreviations

#### **Notes:**

Material Types

= Miscellaneous building material = Not quantified M NQ TSI = Thermal System Insulation NA = Not applicable = Surfacing Material ND = Not detected. Laboratory result is less than 1 % asbestos PC = Point Count Analysis = linear feet lin. ft. СН = Chrysotile Asbestos = square feet sq. ft.

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

A	Asbestos Containing Material Description and Location										
Location	Material Description	Material Type	Approx. Quantity								
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 materialTSI = 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

Interior - Asbestos Containing Materials				
Location	<b>Material Description</b>		Friable	Approx. Quantity
Kitchen	9"x9" Red Vinyl Tile		No	65 sq. ft.
Kitchen	9"x9" Green Vinyl Tile		No	65 sq. ft.
		Total		130 sq. ft.
Interior - Asbestos Containing Materials				
Location	<b>Material Description</b>		Friable	Approx. Quantity
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.)	HVAC Duct Wrap		Yes	105 sq. ft.
Basement (misc. HVAC on floor, 10 sq. ft.)		Total		105 ag ft
Late the Advantage Control of March		Total		105 sq. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Basement (12 in. dia. HVAC Wrapped Ductwork, 20 lin. ft.)	HVAC Duct Wrap		Yes	20 lin. ft.
		Total		20 lin. ft.
Interior - Asbestos Containing Materials				
Location	<b>Material Description</b>		Friable	Approx. Quantity
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
		Total		13 Windows

# 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.

Muskegon County Land Bank Parcel ID: 61-26-650-007-0027-00

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.

Muskegon County Land Bank Parcel ID: 61-26-650-007-0027-00

#### **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.

Muskegon County Land Bank Parcel ID: 61-26-650-007-0027-00

#### 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.

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

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

Raion Paguet

Aaron Paquet

Michigan/EPA Certified Asbestos Building Inspector (A30955)

# Red Cedar Consulting

# Attachment 1 APEX Research Laboratory Analytical Results



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

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Fiberglass - 30%

Other - 70%

Lab ID #: 69691 - 01

Cust. #: MS-HM-01A

Material: Roofing Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO**No Asbestos Observed

Fiberglass - 30%

Other - 70%

Cust. #: MS-HM-01B

Lab ID #: 69691 - 02

Material: Roofing Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Cellulose - 40%

Other - 60%

Cust. #: MS-HM-02A

Lab ID #: 69691 - 03

Material: Shingle Siding

Location:

Appearance: black,fibrous,nonhomogenous

Layer: 1 of 1

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.



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

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Cellulose - 60%

Other - 40%

Lab ID #: 69691 - 04

Cust. #: MS-HM-02B

Material: Shingle Siding

Location:

Appearance: black,fibrous,nonhomogenous

Layer: 1 of 1

Lab ID #: 69691 - 05

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Cellulose - 40% Other - 60%

Cellulose - 40%

Other - 60%

Cust. #: MS-HM-03A

Material: Brown Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 69691 - 06

Cust. #: MS-HM-03B

Material: Brown Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

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

Layer: 1 of 1

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

Other - 100%

Other - 100%

Other - 100%

Lab ID #: 69691 - 07

Cust. #: MS-HM-04A

Material: Tan 12x12 VFT

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69691 - 07a

Cust. #: MS-HM-04A

Material: Glue

Location:

Appearance: yellow,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 69691 - 08

Cust. #: MS-HM-04B

Material: Tan 12x12 VFT

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Non-Asbestos

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO No Asbestos Observed

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 Reported: 04/27/17

Date Analyzed: 04/24/17

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69691 - 08a

Cust. #: MS-HM-04B

Material: Glue Location:

Appearance: yellow,nonfibrous,homogenous

Layer: 2 of 2

Asbestos Present: **NO** 

Cellulose - 10%

Cust. #: MS-HM-05A

Lab ID #: 69691 - 09

Material: Cream Linoleum

No Asbestos Observed

Fiberglass - 10% Other - 80%

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 3

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Lab ID #: 69691 - 09a Cust. #: MS-HM-05A

Material: Floor Tile

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 3

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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69691 - 09b

Cust. #: MS-HM-05A

Material: Glue Location:

Appearance: yellow,nonfibrous,homogenous

Layer: 3 of 3

Lab ID #: 69691 - 10

Cust. #: MS-HM-05B

Material: Cream Linoleum

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 3

Asbestos Present: NO

No Asbestos Observed

Cellulose - 10%

Fiberglass - 10%

Other - 80%

Other - 100%

Lab ID #: 69691 - 10a

Cust. #: MS-HM-05B

Material: Floor Tile

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 3

Asbestos Present: **NO**No Asbestos Observed

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

No Asbestos Observed

Non-Asbestos

Lab ID #: 69691 - 10b

Cust. #: MS-HM-05B

Material: Glue Location:

Appearance: yellow,nonfibrous,homogenous

Layer: 3 of 3

Lab ID #: 69691 - 11

Cust. #: MS-HM-06A

Material: White 12x12 VFT

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69691 - 11a

Cust. #: MS-HM-06A

Material: Glue

Location:

Appearance: yellow,nonfibrous,homogenous

Layer: 2 of 2

Asbestos Present: NO

Other - 100%

Asbestos Present: **NO** No Asbestos Observed

Other - 100%

Asbestos Present: NO No Asbestos Observed

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

Robert T. Letarte Jr., Laboratory Director

Other - 100%

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.



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

Other - 100%

Lab ID #: 69691 - 12

Cust. #: MS-HM-06B

Material: White 12x12 VFT

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: NO No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: YES

Chrysotile - 30%

Other - 100%

Lab ID #: 69691 - 12a Cust. #: MS-HM-06B

Material: Glue Location:

Appearance: yellow,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 69691 - 13

Cust. #: MS-HM-07A

Material: Yellow Linoleum

Location:

Appearance: yellow,fibrous,nonhomogenous

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

Layer: 1 of 1

Robert T. Letarte Jr., Laboratory Director

Other - 70%

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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 - 14

Cust. #: MS-HM-07B

Material: Yellow Linoleum

Location:

NOT ANALYZED

Asbestos Present:

Appearance: Layer: of

Lab ID #: 69691 - 15

Cust. #: MS-HM-08A

Material: Grey 12x12 VFT

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 2

Lab ID #: 69691 - 15a

Material: Mastic

Location:

Appearance: black,nonfibrous,homogenous

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

Asbestos Present: YES

Asbestos Present: NO

No Asbestos Observed

Other - 95%

Cellulose - 1%

Other - 99%

Chrysotile - 5%

Cust. #: MS-HM-08A

Layer: 2 of 2

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 - 16

Cust. #: MS-HM-08B Material: Grey 12x12 VFT

Location:

Appearance: Layer: 1 of 2 Asbestos Present:

NOT ANALYZED

Asbestos Present: **NO** 

No Asbestos Observed

Lab ID #: 69691 - 16a

Cust. #: MS-HM-08B

Material: Mastic

Location:

Appearance: black,nonfibrous,homogenous

Layer: 2 of 2

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: NO

No Asbestos Observed

Cellulose - 80%

Cellulose - 1% Other - 99%

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

**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 - 18

Cust. #: MS-HM-09B

Material: 1x1 White Smooth Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69691 - 19

Cust. #: MS-HM-10A

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

Lab ID #: 69691 - 19a

Cust. #: MS-HM-10A

Material: Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 80%

Other - 20%

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 20%

Other - 80%

Other - 99.75%

Asbestos Present: NO

Chrysotile - 0.25%

POINT COUNT RESULT

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 - 20

Cust. #: MS-HM-10B

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

Lab ID #: 69691 - 20a

Cust. #: MS-HM-10B

Material: Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Asbestos Present: **NO** 

Cellulose - 20%

No Asbestos Observed

Other - 80%

Asbestos Present: **NO** 

POINT COUNT RESULT

Chrysotile - Trace

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: NO

Cellulose - 1%

No Asbestos Observed

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

Lab ID #: 69691 - 23

Cust. #: MS-HM-12A

Material: Window Glazing

Location: Basement

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69691 - 24

Cust. #: MS-HM-12B

Material: Window Glazing

Location: Basement

Appearance: Layer: of

Asbestos Present: NO

No Asbestos Observed

Cellulose - 1%

Other - 99%

Asbestos Present: YES

Chrysotile - 5%

Other - 95%

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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# 69691

# ALLA Kesearch, Inc. 11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

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



Date: 4-19-17	Relinquished by	S. Carlotte	0	2	8	7	0	0		U	ce	Whosan g	Lab ID#	4	N	Ĕ	Rush 24 hour	Turn Arou	Phone: (888) 449-456	City, St., Zip:	Address:	Client Name:
Date:	Meder	M5-HH-06A White	M5-HM-05B	MS-HM-05A	1844 - OFB	M5-HM-04A.	NS-44.038	M5-HM-03A	M5-HM-02B	MS-AH. 024	M5-HM-DIB	M5-HM-01A	Client ID#		TTP NII COMPAGE			Around Times: (Circle One)	49-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
4-19.17	Received by: UTS	White 12×12 VFT		Gean Sinoleum		Jan 12X12 VFT	,	Blown Linden	.,0 ' , . d	Shingle Sideri	. 0 0	Rooking Shen	Material/Location	TEM: AHERA 7400	Mold: Bulk	Lead: Bulk	Asbestos: Bulk X	Circle One) PLM EPA	: (888) 448-8739			gn
Date:	Relinquished by:	7		C				1				the second		00Bulk/NOB	Tape B	Wipe Air	Wipe Po	. 600, PC all samples	Contact Person:	Project #:	Project: 2/40	Date of Survey
													Volume	EPA Level II	BioSISC	r Paint	Point Count		Aaron		do mellurai	vev: 4./
Date: APR	Received by:												Area	IШ	Other Viable	Soil	PCM	apaquet@reddedarconsulting.net with a detection of <5% ACM.	Paquet		waith &	9.17
2 0 2017	1130												Results		0	I		ulting.net % ACM.		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Report	Lab Use Only

Rev: 12/03 Work Forms: COC

AND THURSDAY

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



Date: 4-19-17 Date:	Relinquished by: Alkhellatte Received by:	22 Mg- HM - #	M5-HM -11	20 MZ HM-11	Val-MH-SW D	18 M2-HM-09B	19 My 74 + 09A	16 M5-HM-08B	080 - WH-52M G	14 M5-144-07B	13 MS-HM-07A	7 MS- HM-06 B	Lab ID # Client ID #		Other: Ske (TTP) pli samples	48 hour 72 hour	Rush 24 hour	Turn Around Times	Phone: (888) 449-4566 I	City, St., Zip: Lansing, MI 48901	Address: PO Box 13216	Client Name: Red Cedar Consulting
4-19.77 Date:	red by: Relinquished by:	1B : " o o ( · · )	A Window Hazing (House)	10B	A Shippell + Frent Company		9A 1×1 white most CT	SB ., 0	A they 12×12 VFT	0	A Yellow Linden	B White 12x12 VFT	Material/Location	TEM: AHERA 7400 Bulk/NOB	Mold: Bulk Tape	Lead: Bulk Wipe	Asbestos: Bulk Wipe	A 600, PC all	Fax: (888) 448-8739 Contact Person:		Project: 214	Date of Survey
													Volume	DBEPA Level II	BioSIS	Air Paint	Point Count	apaquet samples with a de	Person: Aaron I	#:	2140 Mell	Survey: 4-/
Date: APR 2 0	Received by:												Area I	el II	Other Viable_	Soil	PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	Paquet		wreith St	7-17
2017													Results					ting.net CM.			Report	Lab Use Only Log-In

Rev: 12/03 Work Forms: COC

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

Rev: 12/03 Work Forms: COC	Date: 4-19-17	Relinquished by:				24	, 2	Lab ID#	0	Other: 5day	48 hour 72 hour	Rush 24 hour	Tirn Around	City, St., Zip:	Address:	Client Name:
	Date : 4	Melen Received by:				M5-HM-12B	M5-HM-12A	Client ID#		(TTP) <u>All</u> Samples		and Innes.	TAX: (888) 4	g, MI 4	PO Box 13216	Red Cedar Consulting
	19-17	UPS				,, 4,0	Wendow Hazing .	Material/Location	TEM: AHERA 7400_	Mold: Bulk	Lead: Bulk	os: Bulk _	48-8739			ng
	Date:	Relinquished by:					Basene )	ion Volume	Bulk/NOB E	Tape BioSIS	Wipe Air	x Wipe Point Count		Project #:	Project: 2/42/	Date of Survey · •
	Date: APR	Received by:						e Area	EPA Level II	Other Vi	PaintSoil	with a detection of <5% ACM.	Aaron Paquet		Wall with	2-19-17
h	2017							Results		Viable		<5% ACM.		Report	Log-In_	Lab Use Only

ATT TOTATO

# Red Cedar Consulting

# **Tables**

Table 1 - Summary of Hazardous Materials, 2140 Mcilwraith St., Muskegon Heights, Michigan

	Hazardous Materials Description and Location	
Location	Material Description	Quantity
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

Abbreviations

M = Miscellaneous building material

NQ = Not quantified

# Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2140 Mcilwraith St., Muskegon Heights, Michigan

TSI = Thermal System Insulation NA = Not applicable

S = Surfacing Material ND = Not detected. Laboratory result is less than 1 % asbestos PC = Point Count Analysis lin. ft. = linear feet

= Point Count Analysis lin. ft. = linear feet = Chrysotile Asbestos sq. ft. = square feet

CH

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

Asbestos Containing Material Description and Location										
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity					
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

Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
NW Bedroom	Yellow Linoleum		No	100 sq. ft.
SE Bedroom	Gray 12"x12" Vinyl Tile		No	100 sq. ft.
		Total		200 sq. ft.
Interior - Asbestos Containing Materials				
Location	<b>Material Description</b>		Friable	Approx. Quantity
Basement (misc. HVAC wrap on 7 Boot Joints, 7 sq. ft.)	HVAC Duct Wrap		Yes	7 sq. ft.
		Total		7 sq. ft.
Interior - Asbestos Containing Materials				
Location	<b>Material Description</b>		Friable	Approx. Quantity
Basement (6 windows 14" wide x 29" tall)	Glazing		Yes	6 Windows
		Total		6 Windows

#### **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.

Muskegon County Land Bank Parcel ID: 61-26-185-053-0012-00

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.

Muskegon County Land Bank Parcel ID: 61-26-185-053-0012-00

#### **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.

Muskegon County Land Bank Parcel ID: 61-26-185-053-0012-00

#### 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.)

Muskegon County Land Bank Parcel ID: 61-26-185-053-0012-00

- 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.

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

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

Raion Poquet

Aaron Paquet

Michigan/EPA Certified Asbestos Building Inspector (A30955)

# Red Cedar Consulting

# Attachment 1 APEX Research Laboratory Analytical Results



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

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Cellulose - 70%

Other - 30%

Other - 30%

Lab ID #: 69858 - 01

Cust. #: PT-HM-01A

Material: Vapor Barrier

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 70%

Cust. #: PT-HM-01B

Lab ID #: 69858 - 02

Material: Vapor Barrier

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO No Asbestos Observed

Fiberglass - 30%

Other - 70%

Lab ID #: 69858 - 03 Cust. #: PT-HM-02A

Material: Roofing Materials

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 3

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.



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

No Asbestos Observed

Non-Asbestos

Lab ID #: 69858 - 03a

Cust. #: PT-HM-02A

Material: Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 2 of 3

Lab ID #: 69858 - 03b

Cust. #: PT-HM-02A

Material: Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 3 of 3

Lab ID #: 69858 - 04

Cust. #: PT-HM-02B

Material: Roofing Materials

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 3

Asbestos Present: NO

Fiberglass - 30%

Other - 70%

Asbestos Present: **NO** No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Cellulose - 50%

Fiberglass - 30%

Other - 70%

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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Fiberglass - 30%

Other - 70%

Other - 50%

Lab ID #: 69858 - 04a

Cust. #: PT-HM-02B

Material: Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 2 of 3

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 50%

Cust. #: PT-HM-02B Material: Shingle

Lab ID #: 69858 - 04b

Location:

Appearance: black, fibrous, homogenous

Layer: 3 of 3

Lab ID #: 69858 - 05

Cust. #: PT-HM-03A

Material: Asphalt Vapor Barrier

Location:

Appearance: black,fibrous,nonhomogenous

Layer: 1 of 1

Asbestos Present: NO 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.



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 - 06

Cust. #: PT-HM-03B

Material: Asphalt Vapor Barrier

Location:

Appearance: black,fibrous,nonhomogenous

Layer: 1 of 1

Lab ID #: 69858 - 07

Cust. #: PT-HM-04A

Material: 9x9 Black VFT

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 3

Lab ID #: 69858 - 07a

Cust. #: PT-HM-04A

Material: Mastic

Location:

Appearance: black,nonfibrous,homogenous

Layer: 2 of 3

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: YES

Chrysotile - 10%

Cellulose - 40%

Other - 60%

Other - 90%

No Asbestos Observed

Asbestos Present: NO

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.



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 - 07b

Cust. #: PT-HM-04A

Material: Felt Location:

Appearance: black,fibrous,homogenous

Layer: 3 of 3

Lab ID #: 69858 - 08

Cust. #: PT-HM-04B Material: 9x9 Black VFT

Location:

Appearance: Layer: 1 of 3 Asbestos Present: NO

No Asbestos Observed

Cellulose - 50%

Other - 50%

Asbestos Present:

NOT ANALYZED

Asbestos Present: NO

No Asbestos Observed

Lab ID #: 69858 - 08a

Cust. #: PT-HM-04B

Material: Mastic

Location:

Appearance: black,nonfibrous,homogenous

Layer: 2 of 3

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

Robert T. Letarte Jr., Laboratory Director

Other - 100%

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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 Reported: 05/04/17

Date Analyzed: 05/03/17

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

Lab ID #: 69858 - 09

Cust. #: PT-HM-05A

Material: 9x9 Brown VFT

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 3

Lab ID #: 69858 - 09a

Cust. #: PT-HM-05A

Material: Mastic

Location:

Appearance: black,nonfibrous,homogenous

Layer: 2 of 3

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: YES

Cellulose - 60%

Other - 40%

Other - 90%

Chrysotile - 10%

Asbestos Present: NO

Other - 100%

No Asbestos Observed

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

**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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 60%

Other - 40%

Lab ID #: 69858 - 09b

Cust. #: PT-HM-05A

Material: Felt Location:

Appearance: black, fibrous, homogenous

Layer: 3 of 3

Lab ID #: 69858 - 10

Cust. #: PT-HM-05B Material: 9x9 Brown VFT

Location:

Appearance:

Layer: 1 of 3

Asbestos Present:

NOT ANALYZED

Asbestos Present: NO

No Asbestos Observed

Lab ID #: 69858 - 10a

Cust. #: PT-HM-05B

Material: Mastic

Location:

Location.

Appearance: black,nonfibrous,homogenous

Layer: 2 of 3

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

Robert T. Letarte Jr., Laboratory Director

Other - 100%

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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 - 10b

Cust. #: PT-HM-05B

Material: Felt Location:

Appearance: black,fibrous,homogenous

Layer: 3 of 3

Lab ID #: 69858 - 11

Cust. #: PT-HM-06A

Material: White/Grey Linoleum

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 69858 - 12

Cust. #: PT-HM-06B

Material: White/Grey Linoleum

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: NO

Cellulose - 50%

No Asbestos Observed

Other - 50%

Asbestos Present: **NO** 

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

Cellulose - 30%

Cellulose - 30% Other - 70%

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: 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

Lab ID #: 69858 - 14

Cust. #: PT-HM-07B

Material: Window Glazing

Location: Main Rooms

Appearance: Layer:

Asbestos Present: YES

Chrysotile - 5%

Other - 95%

Asbestos Present:

NOT ANALYZED

Chrysotile - 10%

Asbestos Present: YES

Lab ID #: 69858 - 15

Cust. #: PT-HM-08A

Material: 12x12 Tan VFT

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 2

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

Robert T. Letarte Jr., Laboratory Director

Other - 90%

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Test Method, Polarized Light Microscopy (PLM)

Project: 2145 Peck St

**Report To:** 

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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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69858 - 15a

Cust. #: PT-HM-08A

Material: Mastic

Location:

Appearance: black,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 69858 - 16

Cust. #: PT-HM-08B Material: 12x12 Tan VFT

Location:

NOT ANALYZED

Asbestos Present: NO

No Asbestos Observed

Asbestos Present:

Appearance:

Layer: 1 of 2

Lab ID #: 69858 - 16a

Cust. #: PT-HM-08B

Material: Mastic

Location:

Appearance: black,nonfibrous,homogenous

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

Layer: 2 of 2

Robert T. Letarte Jr., Laboratory Director

Other - 100%

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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 - 17

Cust. #: PT-HM-09A

Material: 12x12 Red VFT

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 2

Lab ID #: 69858 - 17a

Cust. #: PT-HM-09A

Material: Mastic

Location:

Appearance: black,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 69858 - 18

Cust. #: PT-HM-09B

Location:

Appearance:

Layer: 1 of 2

Asbestos Present: YES

Asbestos Present: **NO** 

No Asbestos Observed

Chrysotile - 10%

Other - 90%

Other - 100%

Material: 12x12 Red VFT

NOT ANALYZED

Asbestos Present:

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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ARI Report #

17-69858

Date Collected: 04/27/17 Date Received: 04/28/17

Date Reported: 05/04/17

Date Analyzed: 05/03/17

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

Lab ID #: 69858 - 19

Cust. #: PT-HM-10A

Material: Window Glazing

Location: 2nd Floor

Appearance: beige, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 69858 - 20

Cust. #: PT-HM-10B

Material: Window Glazing

Location: 2nd Floor

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 1

Asbestos Present: NO

Other - 100%

Wollastonite - 2%

Wollastonite - 1%

Other - 99%

Other - 98%

No Asbestos Observed

Asbestos Present: **NO** 

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

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

**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 - 21

Cust. #: PT-HM-11A

Material: 12x12 Black VFT

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 2

Lab ID #: 69858 - 21a

Cust. #: PT-HM-11A

Material: Mastic

Location:

Appearance: black,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 69858 - 22

Cust. #: PT-HM-11B

Material: 12x12 Black VFT

Location:

Appearance:

Layer: 1 of 2

Asbestos Present: YES

Chrysotile - 5%

Other - 95%

Other - 100%

Asbestos Present: **NO** 

No Asbestos Observed

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: 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

Non-Asbestos

Other - 100%

Lab ID #: 69858 - 22a

Cust. #: PT-HM-11B

Material: Mastic

Location:

Appearance: black,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 69858 - 23

Cust. #: PT-HS-01A

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69858 - 23a

Cust. #: PT-HS-01A

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Other - 100%

Asbestos Present: NO

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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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

Non-Asbestos

Lab ID #: 69858 - 24

Cust. #: PT-HS-01B

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 3

Lab ID #: 69858 - 24a

Cust. #: PT-HS-01B

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 3

Lab ID #: 69858 - 24b

Cust. #: PT-HS-01B

Material: Texture

Location:

Appearance: beige, fibrous, homogenous

Layer: 3 of 3

Asbestos Type/Percent

Asbestos Present: NO

Other - 100%

Hair - 2%

Other - 98%

Wollastonite - 2%

Other - 98%

No Asbestos Observed

Asbestos Present: **NO** 

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

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

**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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69858 - 25

Cust. #: PT-HS-01C

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69858 - 25a

Cust. #: PT-HS-01C

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 69858 - 26

Cust. #: PT-HS-01D

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 3

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Cellulose - 1%

Wollastonite - 2%

Other - 97%

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: 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 - 26a Cust. #: PT-HS-01D

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 3

Lab ID #: 69858 - 26b

Cust. #: PT-HS-01D

Material: Texture

Location:

Appearance: brown, fibrous, homogenous

Layer: 3 of 3

Lab ID #: 69858 - 27

Cust. #: PT-HS-01E

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: NO

Hair - 5%

No Asbestos Observed

Other - 95%

Asbestos Present: **NO** 

Wollastonite - 5%

No Asbestos Observed

Other - 95%

Other - 100%

Asbestos Present: NO No Asbestos Observed

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

**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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Hair - 2%

Other - 98%

Lab ID #: 69858 - 27a Cust. #: PT-HS-01E

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: **NO** 

No Asbestos Observed

Other - 100%

Lab ID #: 69858 - 28 Cust. #: PT-HS-02A

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 3

Lab ID #: 69858 - 28a

Cust. #: PT-HS-02A

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 3

Asbestos Present: NO

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

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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 Reported: 05/04/17

Date Analyzed: 05/03/17

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

Lab ID #: 69858 - 29

Cust. #: PT-HS-02B

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 3

Lab ID #: 69858 - 29a

Cust. #: PT-HS-02B

Material: Plaster Base Coat

Location:

Appearance: grey, fibrous, homogenous

Layer: 2 of 3

Asbestos Present: NO

No Asbestos Observed

Cellulose - 20%

Other - 80%

Asbestos Present: **NO** 

No Asbestos Observed

Other - 100%

Asbestos Present: NO

Chrysotile - 0.25%

Other - 99.75%

POINT COUNT RESULT

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

**Report To:** 

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

ARI Report # Date Collected: 04/27/17

17-69858

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 - 29b

Cust. #: PT-HS-02B Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 3 of 3

Lab ID #: 69858 - 30

Cust. #: PT-HS-02C

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 3

Lab ID #: 69858 - 30a

Cust. #: PT-HS-02C

Material: Plaster Base Coat

Location:

Appearance: grey, fibrous, homogenous

Layer: 2 of 3

Asbestos Present: NO

No Asbestos Observed

Cellulose - 20%

Other - 80%

Other - 100%

Asbestos Present: **NO** 

No Asbestos Observed

Other - 100%

Chrysotile - Trace

Asbestos Present: NO

POINT COUNT RESULT

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

**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 - 30b

Cust. #: PT-HS-02C

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 3 of 3

Lab ID #:

Cust. #: Material: Location: Appearance:

Layer:

Lab ID #:

Cust. #: Material: Location:

Appearance: Layer:

of

of

Asbestos Present: NO No Asbestos Observed

Cellulose - 20%

Other - 80%

Asbestos Present:

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.

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

Date: 4-27-17	Relinquished by: ALA			10	2	T	7)	0	5	-	w	C	MANAGEMENT AND ASSESSMENT ASSESSMENT AND ASSESSMENT ASS	Lab ID#	Sund . June	Y	48 hour 72 hour	Rush 24 hour	Turn Arou	Phone: (888) 449-4566	City, St., Zip:	Address:	Client Name:
Date :	Relinquished by: ASAMutter Received by: U75		14 + 11/1 1910 MAY 14	M- 4M- 05B		PT- HM- 04B	Nro-WH-14	77. HM-03B	PT- HM-034	PT- HM-028	77-MM-02A	PT-HM-018	PT-HM-01A	Client ID#	( <u>***)All Samp</u> les	THE			Around Times: (Circle One)	9-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
4-27-17	075	4		10	9×9 Brown VF7	***	9×9 Black VFT		Asphalt Vapor Berrier	), G'	Roding Materials		Vanor Burier	Material/Location	TEM: AHERA 7400	Mold: Bulk	Lead: Bulk	Asbestos: Bulk X	PLM EPA	(888) 448-8739			
Date: (030	Relinquished by:	Clum	0,0				7	) ·	Service		le			ation	Bulk/NOB	Tape	Wipe	_ Wipe	600, PC all san	Contact Person:	Project # :	Project: 2/4/5	Date of Survey
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Date :	Received by:													Area	111	Other Viable	Soil	PCM	@redcedarconsu cection of <5%	Paquet			. / 7
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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

Date: 4-27-19	Relinquished by:	F)	2	90	2	5	IF.	8	To	+	13	7	Lab ID #	P	Other: NA	48 hour 72 hour	Rush 24 hour	Turn Around	Phone: (888) 449-456	City, St., Zip:	Address:	Client Name: _R
Date : 4	Relinquished by: ARLy Latter Received by:	PT-44-11B	PT-48- 11A	M. 47 - 10R	PT- HM- 10A	PT-44-09B	PT-HM DGA	M-HM ORB	PT-11-08A	PT- HM-07B	PT- HM- 07A	77-HM-06B	Client ID#	- ( ) WITT DOUBLES	TTP 111 Samilar			nd Times: (Circle One)	9-4566 Fax	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
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Date:	Relinquished by:	•	127	;	(2nd Mary)					1	Main Rooms)	Lucieum		0Bulk/NOB	Tape Bic	Wipe Air		600, PC all samples	Contact Person:	Project #:	Project: 2145	Date of Survey
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Date:	Received by:												Area F		er Viable	Soil	PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	Paquet		T	14
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Rev: 12/03 Work Forms: COC

ATX TRUENCE

# APEX Research, Inc. 11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990 69858

Fax: 734-449-9991

E-mail: apexresearch@chartermi.net

Other: 5day Relinquished by: Affiliates Received by: \_\_\_\_ Rush Date:\_ 48 hour Phone: Address: Client Name: City, St., Zip: Lansing, MI 48901 Furn Around Times: (Circle One) Lab ID# 4-27-17 (888) 449-4566 72 hour 24 hour  $\mathcal{L}_{\mathcal{L}}$ Red Cedar Consulting PO Box 13216 KI-15:01B PT-45-02A M-45.01 A PT-HS-01E に、きっこ 71-45-02 C F-45-02 B Pr-HS-01D  $(TTP)_{All \ Samples}$ Client ID# Date : \_ Fax: (888) 448-8739 4-27-17 Plester over Planter Asbestos: Bulk TEM: Mold: Lead: Material/Location Bulk Bulk **AHERA 7400** PLM EPA 600, PC all samples with a detection of <5% ACM. × Date: Relinquished by Wipe Wipe Tape Date of Survey: 4-27-17 Contact Person: Aaron Paquet Project #:\_ Project: 2145 Peck Bulk/NOB Air BioSIS Point Count Volume EPA Level II **Paint** Other Received by: Date: PCM Area Soil Results Lab Use Only Log-In\_\_\_\_ Report \_

Rev: 12/03 Work Forms: COC

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# Red Cedar Consulting

# **Tables**

Table 1 - Summary of Hazardous Materials, 2145 Peck St., Muskegon Heights, Michigan

Hazardous Materials Description and Location									
Location	Material Description	Quantity							
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

Asbestos Containing Material Description and Location											
Location	Material Description	Condition	Material Type	Approx. Quantity							
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

**Abbreviations** 

M = Miscellaneous building materialTSI = Thermal System Insulation

lin. ft. = linear feet

S = Surfacing Material

sq. ft. = square feet

Table 4 - Summary of All Asbestos Containing Materials, 2145 Peck St., Muskegon Heights, Michigan

Location	<b>Material Description</b>		Friable	Approx. Quantity
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.
		Total		554 sq. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
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	85 sq. ft.
Basement (misc. 11vAC wrap on Ductwork, 23 sq. 1t.)		Total		85 sq. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Basement (12 in. dia. HVAC Wrapped Ductwork, 32 lin. ft.)	HVAC Duct Wrap		Yes	32 lin. ft.
		Total		32 lin. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
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
Ritelieli (2 willdows 34 wide x 44 tail)				
Basement (4 windows 30" wide x 20" tall)	Glazing		Yes	4 Windows

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)

Muskegon County Land Bank Parcel ID: 26-185-052-0012-00

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.

Muskegon County Land Bank Parcel ID: 26-185-052-0012-00

#### **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 Cementatious "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.

Muskegon County Land Bank Parcel ID: 26-185-052-0012-00

#### 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 cementatious "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 cementatious (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 cementatious 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

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

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

Raion Paguet

Aaron Paquet

Michigan/EPA Certified Asbestos Building Inspector (A30955)

# Red Cedar Consulting

# Attachment 1 APEX Research Laboratory Analytical Results



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

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Cellulose - 40%

Other - 60%

Lab ID #: 69625 - 01

Cust. #: AS-HM-01A

Material: Roofing Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 2

Lab ID #: 69625 - 01a

Cust. #: AS-HM-01A

Asbestos Present: **NO** 

Cellulose - 50%

No Asbestos Observed

Other - 50%

Material: Vapor Barrier

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 69625 - 02

Cust. #: AS-HM-01B

Material: Roofing Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 2

Asbestos Present: NO

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.



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: YES

Chrysotile - 10%

No Asbestos Observed

Other - 90%

Lab ID #: 69625 - 03

Cust. #: AS-HM-02A

Material: 9x9 Grey Floor Tile

Location:

Appearance: grey, fibrous, homogenous

Layer: 1 of 2

Lab ID #: 69625 - 03a

Cust. #: AS-HM-02A

Material: Mastic

Location:

Appearance: black,nonfibrous,homogenous

Layer: 2 of 2

Asbestos Present: NO

Cellulose - 50%

Other - 50%

Asbestos Present: NO

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: 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:

NOT ANALYZED

Asbestos Present:

Appearance:

Layer: 1 of 2

Lab ID #: 69625 - 04a

Cust. #: AS-HM-02B

Material: Mastic

Location:

Appearance: black,nonfibrous,homogenous

Layer: 2 of 2

Asbestos Present: **NO** 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: NO

Cellulose - 1%

No Asbestos Observed

Other - 99%

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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

Non-Asbestos

Other - 100%

Lab ID #: 69625 - 05a

Cust. #: AS-HM-03A

Material: Glue

Location: 1st Floor Kitchen

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 12

Lab ID #: 69625 - 05b

Cust. #: AS-HM-03A

Material: Wood Floor Tile Location: 1st Floor Kitchen

Appearance: brown, nonfibrous, homogenous

Layer: 3 of 12

Lab ID #: 69625 - 05c

Cust. #: AS-HM-03A

Material: Glue

Location: 1st Floor Kitchen

Appearance: clear,nonfibrous,homogenous

Layer: 4 of 12

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 1%

Other - 99%

Asbestos Present: NO Other - 100%

No Asbestos Observed

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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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 1%

Other - 99%

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: **NO** 

No Asbestos Observed

Other - 100%

Lab ID #: 69625 - 05e

Cust. #: AS-HM-03A

Material: Glue

Location: 1st Floor Kitchen

Appearance: clear, nonfibrous, homogenous

Layer: 6 of 12

Lab ID #: 69625 - 05f Cust. #: AS-HM-03A

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Material: Wood Floor Tile

Location: 1st Floor Kitchen

Appearance: brown,nonfibrous,homogenous

Layer: 7 of 12

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

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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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69625 - 05g

Cust. #: AS-HM-03A

Material: Glue

Location: 1st Floor Kitchen

Appearance: clear,nonfibrous,homogenous

Layer: 8 of 12

Asbestos Present: **NO** 

No Asbestos Observed

Other - 100%

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

Lab ID #: 69625 - 05i

Cust. #: AS-HM-03A

Material: Glue

Location: 1st Floor Kitchen

Appearance: clear,nonfibrous,homogenous

Layer: 10 of 12

Asbestos Present: NO No Asbestos Observed

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Project: 2145 Sanford

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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

Asbestos Present: NO

No Asbestos Observed

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: NO

No Asbestos Observed

Other - 99%

Other - 100%

Other - 99%

Cellulose - 1%

Lab ID #: 69625 - 05k

Cust. #: AS-HM-03A

Material: Glue

Location: 1st Floor Kitchen

Appearance: clear,nonfibrous,homogenous

Layer: 12 of 12

Asbestos Present: NO

No Asbestos Observed

Cellulose - 1%

Lab ID #: 69625 - 06 Cust. #: AS-HM-03B

Material: Multilayer Floor Tile Location: 1st Floor Kitchen

Appearance: black,nonfibrous,homogenous

Layer: 1 of 12

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

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Date Reported: 04/24/17

Sample Information

No Asbestos Observed

Non-Asbestos

Lab ID #: 69625 - 06a

Cust. #: AS-HM-03B

Material: Glue

Location: 1st Floor Kitchen

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 12

Lab ID #: 69625 - 06b

Cust. #: AS-HM-03B

Material: Wood Floor Tile Location: 1st Floor Kitchen

Appearance: brown,nonfibrous,homogenous

Layer: 3 of 12

Lab ID #: 69625 - 06c

Cust. #: AS-HM-03B

Material: Glue

Location: 1st Floor Kitchen

Appearance: clear,nonfibrous,homogenous

Layer: 4 of 12

Asbestos Type/Percent

Asbestos Present: NO

Other - 100%

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Cellulose - 1%

Other - 99%

Other - 100%

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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

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 1%

Other - 99%

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: **NO** 

Other - 100%

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

Lab ID #: 69625 - 06f

Cust. #: AS-HM-03B

Material: Wood Floor Tile

Location: 1st Floor Kitchen

Appearance: brown,nonfibrous,homogenous

Layer: 7 of 12

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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 - 06g

Cust. #: AS-HM-03B

Material: Glue

Location: 1st Floor Kitchen

Appearance: clear,nonfibrous,homogenous

Layer: 8 of 12

Lab ID #: 69625 - 06h

Cust. #: AS-HM-03B

Material: Beige Floor Tile Location: 1st Floor Kitchen

Appearance: beige, nonfibrous, homogenous

Layer: 9 of 12

Lab ID #: 69625 - 06i

Cust. #: AS-HM-03B

Material: Glue

Location: 1st Floor Kitchen

Appearance: clear,nonfibrous,homogenous

Layer: 10 of 12

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Asbestos Present: **NO** 

No Asbestos Observed

Other - 100%

Other - 100%

Asbestos Present: NO No Asbestos Observed

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

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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 - 06j

Cust. #: AS-HM-03B

Material: Brown Floor Tile Location: 1st Floor Kitchen

Appearance: brown,nonfibrous,homogenous

Layer: 11 of 12

Asbestos Present: NO 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: NO No Asbestos Observed

Other - 100%

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: NO

No Asbestos Observed

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

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Test Method, Polarized Light Microscopy (PLM)

Project: 2145 Sanford

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ARI Report #

17-69625

Date Collected: 04/14/17

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Date Analyzed: 04/18/17 Date Reported: 04/24/17

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

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

Lab ID #: 69625 - 08a

Cust. #: AS-HM-04B

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

Asbestos Present: NO

Asbestos Present: **NO** 

No Asbestos Observed

Other - 100%

Other - 100%

Asbestos Present: NO No Asbestos Observed

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

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Date Analyzed: 04/18/17 Date Reported: 04/24/17

Sample Information

Asbestos Type/Percent

Asbestos Present: YES

Chrysotile - 10%

Non-Asbestos

Other - 90%

Lab ID #: 69625 - 09

Cust. #: AS-HM-05A

Material: 9x9 Red VFT

Location:

Appearance: red,fibrous,homogenous

Layer: 1 of 2

Asbestos Present: **NO** 

Cellulose - 15%

Other - 85%

Lab ID #: 69625 - 09a Cust. #: AS-HM-05A

Material: Mastic

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 69625 - 10

Cust. #: AS-HM-05B

Material: 9x9 Red VFT

Location:

Appearance:

Layer: 1 of 2

Asbestos Present:

No Asbestos Observed

NOT ANALYZED

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Date Analyzed: 04/18/17

Date Reported: 04/24/17

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Cellulose - 15%

Other - 85%

Lab ID #: 69625 - 10a

Cust. #: AS-HM-05B

Material: Mastic

Location:

Appearance: black,fibrous,homogenous

Layer: 2 of 2

Asbestos Present: **NO** 

Cellulose - 10%

Cust. #: AS-HM-06A

Material: Tan Vinyl

Lab ID #: 69625 - 11

No Asbestos Observed

Fiberglass - 10% Other - 80%

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: NO

Cellulose - 10%

Lab ID #: 69625 - 12 Cust. #: AS-HM-06B

Material: Tan Vinyl

No Asbestos Observed

Fiberglass - 10% Other - 80%

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

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

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Date Reported: 04/24/17

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: NO 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

Lab ID #: 69625 - 14

Cust. #: AS-HM-07B

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

Asbestos Present: **NO** No Asbestos Observed

Other - 100%

Asbestos Present: NO

No Asbestos Observed

Cellulose - 20%

Other - 80%

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

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Date Analyzed: 04/18/17

Date Reported: 04/24/17

Sample Information

Asbestos Type/Percent

No Asbestos Observed

Non-Asbestos

Lab ID #: 69625 - 14a

Cust. #: AS-HM-07B

Material: Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Lab ID #: 69625 - 15

Cust. #: AS-HM-08A

Material: Texture

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 69625 - 16

Cust. #: AS-HM-08B

Material: Texture

Location:

Appearance: white, nonfibrous, homogenous

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

Layer: 1 of 1

Asbestos Present: NO

Other - 100%

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Other - 100%

Robert T. Letarte Jr., Laboratory Director

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Date Collected: 04/14/17 Date Received: 04/17/17

Date Analyzed: 04/18/17

Date Reported: 04/24/17

Sample Information

Non-Asbestos

Lab ID #: 69625 - 17

Cust. #: AS-HM-09A

Material: Floor Tile

Location:

Appearance: orange,nonfibrous,homogenous

Layer: 1 of 2

Lab ID #: 69625 - 17a

Cust. #: AS-HM-09A

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 69625 - 18

Cust. #: AS-HM-09B

Material: Floor Tile

Location:

Appearance: orange,nonfibrous,homogenous

Layer: 1 of 2

Asbestos Type/Percent

Asbestos Present: NO

Other - 100%

Other - 100%

Other - 100%

No Asbestos Observed

Asbestos Present: **NO** 

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69625 - 18a

Cust. #: AS-HM-09B

Material: Glue Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Other - 100%

Lab ID #: 69625 - 19 Cust. #: AS-HM-10A

Material: Brown Floor Tile

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 1 of 4

Lab ID #: 69625 - 19a

Cust. #: AS-HM-10A

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 4

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.



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

Lab ID #: 69625 - 19c

Cust. #: AS-HM-10A

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 4 of 4

Lab ID #: 69625 - 20

Cust. #: AS-HM-10B

Material: Brown Floor Tile

Location:

Appearance: brown,nonfibrous,homogenous

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

Layer: 1 of 4

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

Asbestos Present: NO

No Asbestos Observed

Cellulose - 1%

Other - 99%

Other - 100%

Other - 100%

No Asbestos Observed

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.



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

Lab ID #: 69625 - 20b

Cust. #: AS-HM-10B

Material: Black Floor Tile

Location:

Appearance: black,nonfibrous,homogenous

Layer: 3 of 4

Lab ID #: 69625 - 20c

Cust. #: AS-HM-10B

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 4 of 4

Asbestos Present: NO

Other - 100%

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 1%

Other - 99%

Other - 100%

Asbestos Present: NO

No Asbestos Observed

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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 10%

Fiberglass - 10%

Other - 80%

Lab ID #: 69625 - 21

Cust. #: AS-HM-11A

Material: Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

No Asbestos Observed

Cellulose - 10%

Cust. #: AS-HM-11B

Material: Linoleum

Lab ID #: 69625 - 22

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 69625 - 23

Cust. #: AS-HS-01A

Material: Plaster

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO** 

Fiberglass - 10%

Other - 80%

Asbestos Present: NO

Hair - 5%

No Asbestos Observed

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.



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

Lab ID #: 69625 - 25

Cust. #: AS-HS-01C

Material: Plaster

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69625 - 26

Cust. #: AS-HS-01D

Material: Plaster

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

Cellulose - 5%

No Asbestos Observed

Other - 95%

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Hair - 5%

Other - 95%

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.



Test Method, Polarized Light Microscopy (PLM)

Project: 2145 Sanford

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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

Lab ID #: 69625 - 27 Cust. #: AS-HS-01E

Material: Plaster

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #:

Cust. #: Material:

Location: Appearance: Layer: of

Lab ID #:

Cust. #: Material:

Location: Appearance:

Layer:

of

Non-Asbestos

Asbestos Present: NO

No Asbestos Observed

Hair - 5%

Other - 95%

Asbestos Present:

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.

# 69625

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

Relinquished by: Received by: UTS Relinquished by:
AS All CER Jan Vings
1 1 M
10 A5-HM-05B
9 AS-4M-05A 9x9Red VET
D 45-44-048 " " " " " " " " " " " " " " " " " " "
AS. HM-OHA 12x12 Know Peal + Stick NFT
6 AS:HM-03B
5 AS-HM-D3A 18 floor Kitchen Multi Leyer Floor
AS-4 M-028
3 AS-HM-024 9X9 Kley VET
AS-HN-018 " 0 " 0 " " "
AS-HM-OIA Rooking Shingle + Vapor Bassie
Lab ID # Client ID # Material/Location
a
Other: 5 day (TIP) All Samples Mold: Bulk Tape
Bulk
ā
449-4566 Fax (888) 448-8739
City, St., Zip: Lansing, MI 48901 Project #
Address: PO Box 13216 Project:
Client Name: Red Cedar Consulting Date of Survey
E-mail: apexresearch@chartermi.net
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Rev: 12/03 Work Forms: COC

ATTX TITING ATTO

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



7117	Date: APR		Date:	4-14-17	Date	Date: 4-14-17
	Received by:		Relinquished by:	eived by: UPS	Mater Rec	Relinquished by: Affellastere Received by: UPS
				#B	AS-HM-	22
				ILA	A5-AM-11A	9)
				108	AS- HM- 10B	B
				104	A5-HM-10A	2
				098	AS-HM-098	ふ
				160	A5-4M-09A	7
				08'B	A5-HM-08B	6
				08A	AS-HM-08A	(Jr
				27B	45-4M-07B	4.
				22	45.4K-074	び
				6 B	AS- HM-06B	<b>1</b>
Results	Area	Volume	Material/Location		Client ID#	Lab ID#
	vel II	OB EPA Level II	AHERA 7400 Bulk/NOB	les TEM:	(IIF) <u>All Samp</u> les	Onici - Oliver
le	Other Viable	BioSIS	Bulk Tape	Mold:		Char: N
1	t Soil	_ Air Paint	Bulk Wipe	Lead:		Ĭ
	PCM	Point Count	Bulk X Wipe	Asbestos: Bulk		Rush 24 hour
ulting.net % ACM.	apaquet@redcedarconsulting.net with a detection of <5% ACM.	apaque all samples with a d	A 600, PC	Around Times: (Circle One)		Turn Arou
	Paquet	Contact Person: Aaron	448-8739 Contact	Fax: (888) 448	19-4566	Phone: (888) 449-4566
			Project # :	48901	Lansing, MI 4	City, St., Zip:
Report	lad St	: 2/45 Jan	Project: 2/4		PO Box 13216	Address:
Lab Use Only	14-17	Survey: 4-	Date of Survey	Consulting	Red Cedar Cons	Client Name:

Rev: 12/03 Work Forms: COC

APEX PEOLARCE

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

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Relinquished by: White Matter Received by:  Date: 4-14-17  Date: 4-14-17		27 AS-H5-01E	2 45-45-018 810-54-54		Lab ID # Client ID #	Curci. Car III) All Samples	Ĕ			Phone: (888) 449-4566 Fax:	., Zip: Lansing, MI 48	Client Name: Red Cedar Consulting Address: PO Box 13216
Received by: $\frac{1}{1}$ Relinquished by: Date: $\frac{4 \cdot 14 \cdot 17}{1}$				Plaster	Material/Location	TEM: AHERA 7400 Bulk/NOB	Mold: Bulk Tape	Lead: Bulk Wipe	(Circle One)  PLM EPA 600, PC all samples  Asbestos: Bulk X Wipe Point(	48-8739		
					Volume	NOB EPA Level II	BioSISC	Air Paint _	1 1	Contact Person: Aaron P	Project #:	Date of Survey: 4-/4
Received by: The Date: APR 1 7 2017					Area Results	ΙШ	Other Viable	Soil	with a detection of <5% ACM.	Paquet	Report	Lab Use Only

Rev: 12/03 Work Forms: COC

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# Red Cedar Consulting

# **Tables**

Table 1 - Summary of Hazardous Materials, 2145 Sanford St., Muskegon Heights, Michigan

Hazardous Materials Description and Location									
Location	Material Description	Quantity							
Exterior	Automobile Tires	8							
1st Floor Living Room	Carbon Monoxide Detector	1							
1st Floor NW Bedroom	Smoke Detector	1							
1st 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	1st Floor Living Room	320 sq. ft.	
AS-HM-02B	Gray 9"x9" Vinyl Floor Tile	No	M	Category I	NA/ND	1st Floor Living Room	NA	
AS-HM-03A	1st Floor Kitchen Multi-Layer Floor	No	M	Category I	ND x 12 Layers	1st Floor Kitchen	NA	
AS-HM-03B	1st Floor Kitchen Multi-Layer Floor	No	M	Category I	ND x 12 Layers	1st Floor Kitchen	NA	
AS-HM-04A	Gray 12x12 Peel & Stick Vinyl Floor Tile	No	М	Category I	ND/ND	1st Floor Bathroom	NA	
AS-HM-04B	Gray 12x12 Peel & Stick Vinyl Floor Tile	No	М	Category I	ND/ND	1st Floor Bathroom	NA	
AS-HM-05A	Red 9"x9" Vinyl Floor Tile	No	M	Category I	10%CH/ND	1st Floor NE bedroom	114 sq. ft.	
AS-HM-05B	Red 9"x9" Vinyl Floor Tile	No	M	Category I	NA/ND	1st Floor NE Bedroom	NA	
AS-HM-06A	Tan Vinyl	No	M	Category I	ND	1st Floor Hallway	NA	
AS-HM-06B	Tan Vinyl	No	M	Category I	ND	1st Floor Hallway	NA	
AS-HM-07A	Drywall	No	M	Category II	ND/ND	1st Floor Kitchen Ceiling	NA	
AS-HM-07B	Drywall	No	M	Category II	ND/ND	1st 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	1st 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	1st Floor NW Bedroom Ceiling	NA	
AS-HS-01B	Plaster	No	S	Category II	ND	ND 1st Floor Living Room Ceiling		
AS-HS-01C	Plaster	No	S	Category II	ND	1st 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	1st Floor Kitchen Wall	NA

СН

= Chrysotile Asbestos

<u>Material Types</u> <u>Abbreviations</u>

M = Miscellaneous building material NQ = Not quantified TSI = Thermal System Insulation NA = Not applicable

S = Surfacing Material ND = Not detected. Laboratory result is less than 1 % asbestos PC = Point Count Analysis lin. ft. = linear feet

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

Asbestos Containing Material Description and Location											
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity						
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.						

Material Types

= 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

Interior - Asbestos Containing Materials				
Location	<b>Material Description</b>		Friable	Approx. Quantity
1st Floor Living Room	Gray 9"x9" Vinyl Floor Tile		No	320 sq. ft.
1st Floor NE Bedroom	Red 9"x9" Vinyl Floor Tile		No	114 sq. ft.
		Total		434 sq. ft.
Interior - Asbestos Containing Materials				
Location	<b>Material Description</b>		Friable	Approx. Quantity
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	75 sq. ft.
		Total		75 sq. ft.
Exterior - Asbestos Containing Materials				
Location	<b>Material Description</b>		Friable	Approx. Quantity
Building Exterior	Transite Siding		No	1,626 sq. ft.
		Total		1,626 sq. ft.

### **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.

Muskegon County Land Bank Parcel ID: 61-26-185-063-0017-00

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.

Muskegon County Land Bank Parcel ID: 61-26-185-063-0017-00

#### **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.

Muskegon County Land Bank Parcel ID: 61-26-185-063-0017-00

#### 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.

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

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

Raion Paguet

Aaron Paquet

Michigan/EPA Certified Asbestos Building Inspector (A30955)

# Red Cedar Consulting

# Attachment 1 APEX Research Laboratory Analytical Results



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-

17-69677

Date Collected: 04/18/17 Date Received: 04/19/17

Date Received: 04/19/17 Date Analyzed: 04/20/17

Date Reported: 04/25/17

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO** 

Asbestos Present: **NO** 

No Asbestos Observed

No Asbestos Observed

Non-Asbestos

Cellulose - 40%

Cellulose - 60%

Other - 40%

Other - 60%

Lab ID #: 69677 - 01

Cust. #: IS-HM-01A

Material: Shingle Siding

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 2

Lab ID #: 69677 - 01a

Cust. #: IS-HM-01A

Material: Vapor Paper

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 69677 - 02

Cust. #: IS-HM-01B

Asbestos Present: NO

No Asbestos Observed

Cellulose - 40%

Other - 60%

Material: Shingle Siding Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 2

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.



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 - 02a

Cust. #: IS-HM-01B

Material: Vapor Paper

Location:

Appearance: black,fibrous,homogenous

Layer: 2 of 2

Lab ID #: 69677 - 03

Cust. #: IS-HM-02A

Material: Shingle Roof

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 2

Lab ID #: 69677 - 03a

Cust. #: IS-HM-02A

Material: Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 2 of 2

Asbestos Present: NO

Cellulose - 60%

No Asbestos Observed

Other - 40%

Asbestos Present: **NO** No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Cellulose - 20%

Cellulose - 20%

Other - 80%

Other - 80%

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

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Lab ID #: 69677 - 04

Cust. #: IS-HM-02B

Material: Shingle Roof

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 2

Lab ID #: 69677 - 04a

Cust. #: IS-HM-02B Material: Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 69677 - 05

Cust. #: IS-HM-03A

Material: Cream Linoleum

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO** 

Cellulose - 20%

Cellulose - 20%

Other - 80%

Other - 80%

Asbestos Present: NO

No Asbestos Observed

Cellulose - 20%

Other - 80%

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

Robert T. Letarte Jr., Laboratory Director

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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 - 06

Cust. #: IS-HM-03B

Material: Cream Linoleum/Glue

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 69677 - 07

Cust. #: IS-HM-04A

Material: White Linoleum/Glue

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 69677 - 08

Cust. #: IS-HM-04B

Material: White Linoleum/Glue

Location:

Appearance: white, nonfibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Cellulose - 20%

Other - 80%

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Cellulose - 15%

Fiberglass - 5%

Other - 80%

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: 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

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Cellulose - 80%

Other - 20%

Lab ID #: 69677 - 09

Cust. #: IS-HM-05A

Material: 1x1 White Textured Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69677 - 10

Cust. #: IS-HM-05B

Asbestos Present: **NO** 

Cellulose - 80%

No Asbestos Observed

Other - 20%

Material: 1x1 White Textured Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

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: NO

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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Project: 2228 Riordan St

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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 - 12

Cust. #: IS-HM-06B

Material: 1x1 White/Gold Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69677 - 13

Cust. #: IS-HM-07A Material: Drywall

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 69677 - 14

Cust. #: IS-HM-07B

Material: Drywall

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 80%

Other - 20%

Asbestos Present: NO

No Asbestos Observed

Cellulose - 20%

Cellulose - 20%

Other - 80%

Other - 80%

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 - 15

Cust. #: IS-HM-08A

Material: Layered Gypsum

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69677 - 16

Cust. #: IS-HM-08B

Material: Layered Gypsum

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69677 - 17

Cust. #: IS-HM-09A

Material: Blue Cove Base

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 2

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: **NO** 

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

Cellulose - 30%

Cellulose - 30% Other - 70%

Other - 100%

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: 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 - 17a

Cust. #: IS-HM-09A

Material: Glue Location:

Appearance: beige,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 69677 - 18

Cust. #: IS-HM-09B

Material: Blue Cove Base

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 2

Lab ID #: 69677 - 18a

Cust. #: IS-HM-09B

Material: Glue

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 2 of 2

Asbestos Present: NO

Other - 100%

Other - 100%

Other - 100%

No Asbestos Observed

Asbestos Present: **NO** 

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

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

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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

Other - 100%

Lab ID #: 69677 - 19

Cust. #: IS-HM-10A

Material: Brown Cove Base

Location:

Appearance: green, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69677 - 19a

Cust. #: IS-HM-10A

Material: Glue

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 69677 - 20

Cust. #: IS-HM-10B

Material: Brown Cove Base

Location:

Appearance: green, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

No Asbestos Observed

Other - 100%

Asbestos Present: NO 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: 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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69677 - 20a

Cust. #: IS-HM-10B

Material: Glue Location:

Appearance: brown,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 69677 - 21

Cust. #: IS-HM-11A

Asbestos Present: **NO** Other - 99.50%

Chrysotile 0.50

Chrysotile - 0.50%

Location:

Material: Window Glazing

Location.

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

POINT COUNT RESULT

Asbestos Present: YES

Other - 98.75%

Lab ID #: 69677 - 22 Cust. #: IS-HM-11B

Material: Window Glazing

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

POINT COUNT RESULT

Chrysotile - 1.25%

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

Robert T. Letarte Jr., Laboratory Director

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# 69677

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

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APEX	

Date: 4-18.17	Relinquished by:	1/	0/	2	$\rightarrow$	4	6	5	All States	3	W		Lab ID#		Other:	48 hour 72 hour	Rush 24 hour	Turn Arou	Phone: (888) 449-4566	City, St., Zip:	Address: _	Client Name: _1
Date:	Martele Received by:	15- HM-06A	15- HM-05B	15- HM-05A	15-481-048	·	15 - HM-03B	15 - HM +34 Cream	15- HM-02B	15 - HM-02A	15. HM-01B	15-1917-014	Client ID#	- All Samples	TTP			Around Times: (Circle One)	9-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
4-18.17	073	1x1White + Gold	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	1×1 White Tex		White Linoleum	-	ream Linoleum	1,	Shingle Koop		Shingle Siding	Material/Location	TEM: AHERA 7400_	Mold: Bulk	Lead: Bulk	Asbestos: Bulk	PLM EPA	(888) 448-8739			T. C.
Date:	Relinquished by:	d CT	,	extured or								<b>.</b>	Vo	Bulk/NOB	Tape BioSIS	Wipe Air	Wipe Point Count	600, PC all samples v	rson	Project #:	Project: 2228	Date of Survey:
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Date: APR	Received by:												Area		er Viable	Soil	PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	Paquet		ion of	77
9 2017	16.15												Results			í		ulting.net ACM.			Report	Lab Use Only

Rev: 12/03 Work Forms: COC

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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



Relinquished by: Date: 4-18-17 Date: 4	40	21	90	23	8	7	16	O	74	13	2	Lab ID #	0	Other: 5 day (	48 hour 72 hour	Rush 24 hour	Turn Aroun	Phone: (888) 449-4566	, Zip:	Address: PO	Client Name: Red
Date : 4	15-HM-118	<u> </u>	15-HM-10B	_		_	15-HM-08B	15-414-0841	15-HM-07B	15-HM-07A	15-HM-06B	Client ID #		TTP) All Samples			Around Times: (Circle One)	4566 Fax:	Lansing, MI 48901	Box 13216	d Cedar Consulting
by: UPS Relinquished by: 4-/8-17		Window Glazina		Brown Cove Base & Clue	" "	Blue Cove Base+ Glue	7	syered Gupsum		Drywall (No Joint Confound	1x16hitex Gold C.T.	Material/Location	TEM: AHERA 7400 Bulk/NOB	Mold: Bulk Tape	Lead: Bulk Wipe	Asbestos: Bulk Wipe	PLM EPA 600, PC all	148-8739	Project # :	Project:	
												Volume	OB EPA Level II	BioSISC	Air Paint	Point Count	apaquet samples with a de	rson: Aaron	644	0.	Date of Survey · d.
Received by:												Area	! П	Other Viable	Soil	PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	Paquet	TRAN OC	D	8.11
												Results					lting.net ACM.		Report	Log-In	Lab Use Only

Rev: 12/03 Work Forms: COC

Date : 4-/

Date:

Date:

# Red Cedar Consulting

# **Tables**

Table 1 - Summary of Hazardous Materials, 2228 Riordan St., Muskegon Heights, Michigan

Hazardous Materials Description and Location										
Location	Location Material Description									
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

N	<u> Material Types</u>	Abbrev	nations
N	M = Miscellaneous building material	NQ	= Not quantified
T	SI = Thermal System Insulation	NA	= Not applicable
S	= Surfacing Material	ND	= Not detected. Laboratory result is less than 1 % asbestos
P	C = Point Count Analysis	lin. ft.	= linear feet
C	H = Chrysotile Asbestos	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

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

**Notes:** Material Types

M = Miscellaneous building material TSI = Thermal System Insulation

= Surfacing Material S

**Abbreviations** 

lin. ft. = linear feet

sq. ft. = square feet

Table 4 - Summary of All Asbestos Containing Materials, 2228 Riordan St., Muskegon Heights, Michigan

Interior - Asbestos Containing Materials				
Location	<b>Material Description</b>		Friable	Approx. Quantity
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 (1window 28" wide x 36" tall)	Glazing		Yes	1 Window
		Total		6 Windows

# **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.

Muskegon County Land Bank Parcel ID: 61-26-185-065-0013-00

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.

Muskegon County Land Bank Parcel ID: 61-26-185-065-0013-00

#### **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.

Muskegon County Land Bank Parcel ID: 61-26-185-065-0013-00

#### 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.

Muskegon County Land Bank Parcel ID: 61-26-185-065-0013-00

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).

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



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

Lab ID #: 69607 - 01a

Cust. #: ES-HM-01A

Material: Green Shingle

Location: House

Appearance: black,fibrous,homogenous

Layer: 2 of 2

Lab ID #: 69607 - 02

Cust. #: ES-HM-01B

Material: Shingle Roof

Location: House

Appearance: black,fibrous,homogenous

Layer: 1 of 2

Asbestos Present: NO

No Asbestos Observed

Fiberglass - 30%

Other - 70%

Asbestos Present: **NO** 

No Asbestos Observed

Fiberglass - 30%

Other - 70%

Asbestos Present: NO

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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Fiberglass - 30%

Other - 70%

Lab ID #: 69607 - 02a

Cust. #: ES-HM-01B Material: Green Shingle

Location: House

Appearance: black,fibrous,homogenous

Layer: 2 of 2

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 40%

Other - 60%

Cust. #: ES-HM-02A Material: Shingle Roof

Lab ID #: 69607 - 03

Location: Garage

Appearance: black,fibrous,homogenous

Layer: 1 of 2

Asbestos Present: NO

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

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.



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

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Cellulose - 40%

Other - 60%

Lab ID #: 69607 - 04

Cust. #: ES-HM-02B

Material: Shingle Roof Location: Garage

Appearance: black, fibrous, homogenous

Layer: 1 of 2

Asbestos Present: NO

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

Lab ID #: 69607 - 05

Cust. #: ES-HM-03A

Material: Black Layered Linoleum

Location:

Appearance: black,fibrous,nonhomogenous

Layer: 1 of 3

Asbestos Present: NO

No Asbestos Observed

Cellulose - 10% Fiberglass - 10%

0.1 000/

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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 40%

Other - 60%

Lab ID #: 69607 - 05a

Cust. #: ES-HM-03A

Material: Grey Linoleum

Location:

Appearance: grey,fibrous,nonhomogenous

Layer: 2 of 3

Lab ID #: 69607 - 05b

Cust. #: ES-HM-03A

Asbestos Present: NO

No Asbestos Observed

Cellulose - 80%

Other - 20%

material.

Material: Fiberboard

Location:

Appearance: brown, fibrous, homogenous

Layer: 3 of 3

Lab ID #: 69607 - 06

Cust. #: ES-HM-03B

Asbestos Present: NO

, 01 1

Cellulose - 10%

No Asbestos Observed

Fiberglass - 10%

Other - 80%

Location:

Appearance: black,fibrous,nonhomogenous

Material: Black Layered Linoleum

Layer: 1 of 3

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.



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

Lab ID #: 69607 - 06b

Cust. #: ES-HM-03B

Material: Fiberboard

Location:

Appearance: brown, fibrous, homogenous

Layer: 3 of 3

Lab ID #: 69607 - 07

Cust. #: ES-HM-04A

Material: 12x12 Tan VFT

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 1 of 2

Asbestos Present: NO

No Asbestos Observed

Cellulose - 40%

Other - 60%

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 80%

Other - 20%

Other - 100%

Asbestos Present: NO No Asbestos Observed

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.



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

Asbestos Present: YES

Chrysotile - 10%

Non-Asbestos

Other - 90%

Lab ID #: 69607 - 07a

Cust. #: ES-HM-04A

Material: Mastic

Location:

Appearance: black,fibrous,homogenous

Layer: 2 of 2

Asbestos Present: **NO** No Asbestos Observed

Other - 100%

Lab ID #: 69607 - 08 Cust. #: ES-HM-04B

Material: 12x12 Tan VFT

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 1 of 2

Lab ID #: 69607 - 08a

Cust. #: ES-HM-04B

Material: Mastic

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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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

Other - 100%

Other - 100%

Lab ID #: 69607 - 09

Cust. #: ES-HM-05A

Material: 12x12 Woodgrain VFT

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 1 of 4

Asbestos Present: **NO** 

No Asbestos Observed

Lab ID #: 69607 - 09a

Cust. #: ES-HM-05A

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 4

Lab ID #: 69607 - 09b

Cust. #: ES-HM-05A

Material: Grey Floor Tile

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 3 of 4

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

Asbestos Present: NO

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: 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 - 09c

Cust. #: ES-HM-05A

Material: Mastic

Location:

Appearance: black,fibrous,homogenous

Layer: 4 of 4

Lab ID #: 69607 - 10

Cust. #: ES-HM-05B

Material: 12x12 Woodgrain VFT

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 1 of 4

Lab ID #: 69607 - 10a

Cust. #: ES-HM-05B

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 4

Asbestos Present: YES

Asbestos Present: **NO** 

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

Chrysotile - 10%

Other - 90%

Other - 100%

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: 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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69607 - 10b

Cust. #: ES-HM-05B

Material: Grey Floor Tile

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 3 of 4

Lab ID #: 69607 - 10c

Cust. #: ES-HM-05B

Material: Mastic

Location: Appearance:

Layer: 4 of 4

Asbestos Present:

NOT ANALYZED

Lab ID #: 69607 - 11

Contact The EQUIDATOCA

Cust. #: ES-HM-06A

Material: 1x1 White Textured Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO** 

. .

Cellulose - 80%

No Asbestos Observed

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.



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

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Cellulose - 80%

Other - 20%

Lab ID #: 69607 - 12

Cust. #: ES-HM-06B

Material: 1x1 White Textured Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69607 - 13

Cust. #: ES-HM-07A

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 40%

Mineral Wool - 30%

Other - 30%

Material: 1x1 White Pitted Ceiling Tile

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69607 - 14

Cust. #: ES-HM-07B

Asbestos Present: NO

No Asbestos Observed

Cellulose - 40%

Mineral Wool - 30%

Other - 30%

Material: 1x1 White Pitted Ceiling Tile

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

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: 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

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Cellulose - 80%

Other - 20%

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: **NO** 

No Asbestos Observed

Other - 100%

Cust. #: ES-HM-08A Material: Glue Pod

Lab ID #: 69607 - 15a

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 2 of 2

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: NO

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: 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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69607 - 16a

Cust. #: ES-HM-08B

Material: Glue Pod

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 2 of 2

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 20%

Other - 80%

Lab ID #: 69607 - 17 Cust. #: ES-HM-09A

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

Asbestos Present: NO

Chrysotile - 0.75%

Other - 99.25%

Lab ID #: 69607 - 17a Cust. #: ES-HM-09A

Material: Joint Compound

Location:

POINT COUNT RESULT

Appearance: white, fibrous, homogenous

Layer: 2 of 2

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: 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

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Cellulose - 20%

Other - 80%

Lab ID #: 69607 - 18

Cust. #: ES-HM-09B

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

Asbestos Present: **NO** Chrysotile - 1.00%

Other - 99.00%

Lab ID #: 69607 - 18a Cust. #: ES-HM-09B

Material: Joint Compound

Location:

Appearance: white, fibrous, homogenous Layer: 2 of 2

POINT COUNT RESULT

Lab ID #: 69607 - 19

Asbestos Present: YES Chrysotile - 10%

Other - 90%

Cust. #: ES-HM-10A

Material: House Window Glazing

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

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: 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 - 20

Cust. #: ES-HM-10B

Material: House Window Glazing

Location:

NOT ANALYZED

Asbestos Present:

Appearance: Layer: of

Lab ID #: 69607 - 21

Cust. #: ES-HM-11A

Material: Porch Window Glazing

Location:

Location.

Appearance: white,nonfibrous,homogenous

Layer: 1 of 1

Lab ID #: 69607 - 22

Cust. #: ES-HM-11B

Material: Porch Window Glazing

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Wollastonite - 1%

Wollastonite - 1% Other - 99%

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.



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

Asbestos Present: YES

Chrysotile - 5%

Non-Asbestos

Other - 95%

Lab ID #: 69607 - 23

Cust. #: ES-HM-12A

Material: Basement Window Glazing

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Lab ID #: 69607 - 24

Cust. #: ES-HM-12B

Material: Basement Window Glazing

Location:

Appearance:

Layer:

NOT ANALYZED

Asbestos Present: NO

No Asbestos Observed

Asbestos Present:

Lab ID #: 69607 - 25

Cust. #: ES-HS-01A

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

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

Layer: 1 of 2

Robert T. Letarte Jr., Laboratory Director

Other - 100%

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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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Hair - 5%

Other - 95%

Lab ID #: 69607 - 25a Cust. #: ES-HS-01A

#: ES-HS-01A

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Lab ID #: 69607 - 26 Cust. #: ES-HS-01B

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69607 - 26a

Cust. #: ES-HS-01B

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

Hair - 2%

No Asbestos Observed

Other - 98%

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: 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

Other - 100%

Lab ID #: 69607 - 27

Cust. #: ES-HS-01C

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69607 - 27a Cust. #: ES-HS-01C

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 69607 - 28

Cust. #: ES-HS-01D

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Non-Asbestos

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Hair - 2%

Other - 98%

Other - 100%

Asbestos Present: NO

No Asbestos Observed

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: 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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Hair - 5%

Other - 95%

Lab ID #: 69607 - 28a Cust. #: ES-HS-01D

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: **NO** No Asbestos Observed

Other - 100%

Lab ID #: 69607 - 29 Cust. #: ES-HS-01E

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69607 - 29a

Cust. #: ES-HS-01E

Material: Plaster Base Coat

Location:

Appearance: grey, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO 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.

# 69607

# APEX Research, Inc. 11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

E-mail: apexresearch@chartermi.net

Fax: 734-449-9991

670

48 hour Rush Other: 5 day Phone: Client Name: Date: 4-12-17 Relinquished by City, St., Zip: Address: Turn Around Times: (Circle One) Lab ID# (888)449-4566 72 hour 24 hour 0 0  $\mathcal{Q}$ Red Cedar Consulting Lansing, MI 48901 PO Box 13216 E5-HM-01A Received by: アン・エメーの2人 E5-HM-81B N ES-HM-03B ES-AH-028 150 E5-414-04A E5-HM-05A ES- 414-04B 65- HM-03A (TTP) All Samples Except Client ID# HM-05B HX-OFA Date: Fax: 4-12-15 12 ×12 Tan VF7 Shing lo \ \ \ ' 12×12 Woodgrain Black Layered Limbleum Shingle (888) 448-8739 Asbestos: Bulk Mold: Lead: Material/Location White Texture CT Bulk Bulk Frost AHERA 7400 Non apaquet@redcedarconsulting.net PLM EPA 600, PC all samples with a detection of <5% ACM. × Date: HOUSE Relinquished by: Wipe VET Wipe Garage Tape Date of Survey: メー/ス・/フ Contact Person: Aaron Paquet Project #: Project: 2244 Raynolds St Bulk/NOB Air Point Count BioSIS Volume EPA Level II Paint Other Received by: A P Date: PCM Area I Soil Viable Results Lab Use Only Log-In\_\_\_\_ Report\_

Rev: 12/03 Work Forms: COC

PUNCHANCE AND THE PROPERTY OF THE PROPERTY OF

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

Date: 4-12-17	Relinquished by:	23	7	8	2		1	0	S.	J. L.	13	5	Lab ID#	Other: 2084	1	48 hour 72 hour	Rush 24 hour	Turn Arou	Phone: (888) 449-456	City, St., Zip:	Address: _	Client Name: _
Date :	Relinquished by: Affel Mastely Received by:	ES-HM- 118	ES-HM- 11A	ES-41M-10B	ES-44-10A	ES- HM-09B	ES-AM-09A	80-11×52	ES- HH- 08A	ES- HM-07B	ES-411-07A	F5-HM-06B	Client ID#	_ (IIP)All Samples Asset				Around Times: (Circle One)	9-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
1-12-17 Date:	275	**	Forch Window Glazing		House Window Glo		Drywall of Joint	1, 1, 1, 1,	1x1 white cTw/	**	1 x 1 white Titled	1 x 1 white Texture	Material/Location	TEM: AHERA 7400	Mold: Bulk	Lead: Bulk Wipe	Asbestos: Bulk W	H WIA	(888) 448-8739			ig
	Relinquished by:		759		G/GZING		Compound	;	Pinholes	,	C7	C7	n Volume	Bulk/NOBEPA I	Tape BioSIS	pe Air Paint	Wipe Point Count	all samples	Contact Person: Aaron		Project: 2244 72	Date of Survey: 4.
Date:	Received by:												Area	EPA Level II	Other Viable	int Soil	PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	n Paquet		eynolds St	12-17
													Results		To the second se	ľ		lting.net ACM.			Report	Lab Use Only Log-In

Rev: 12/03 Work Forms: COC

Date:

Date:

FOR AMOUNDARY

# APEX Research, Inc. 11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990



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

Relinquished by:			20	28	1	2	25	24	25	Lab ID#	Omei · Omei	r V	48 hour 72 hour	Rush 24 hour	Turn Aroui	Phone: (888)449-4566	City, St., Zip: L	Address: PO	Client Name: Re
Mater			£3-45-01E	ES-45-010	E5-45-01C	E5-45-018	ES-45-01A	ES-HM-12B	ES-HM-12A	Client ID#	AII Samples weep	7			Around Times: (Circle One)	-4566 Fax:	Lansing, MI 48901	O Box 13216	Red Cedar Consulting
Received by: UFS Relinquished by: Date:			×				Plaster		Basement Windows Glazing	Material/Location	TEM: AHERA 7400		Lead: Bulk Wipe	Asbestos: Bulk Wipe	H WIG	(888) 448-8739	Project #:	Proje	
									3	Volume	Bulk/NOB EPA Level II	BioSISO	Air Paint _	Point Count		Contact Person: Aaron Paquet		S.	Date of Survey: 4-7
[3]										Area   I		Other Viable	Soil	PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	aquet		sunolds St	12-17
4										Results					ting.net .CM.			Renort	Lab Use Only

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# Red Cedar Consulting

# **Tables**

Table 1 - Summary of Hazardous Materials, 2244 Reynolds St., Muskegon Heights, Michigan

На	Hazardous Materials Description and Location							
Location	Material Description	Quantity						
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:**

CH

= Chrysotile Asbestos

Material Types Abbreviations

M = Miscellaneous building material NQ = Not quantified TSI = Thermal System Insulation NA = Not applicable

S = Surfacing Material ND = Not detected. Laboratory result is less than 1 % asbestos PC = Point Count Analysis lin. ft. = linear feet

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

A	sbestos Containing Material Description a	nd Location			
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity
No Presumed Asbestos Containing Materials Identified					

**Notes:** Material Types

M = Miscellaneous building material TSI = Thermal System Insulation

= Surfacing Material S

**Abbreviations** 

lin. ft. = linear feet

sq. ft. = square feet

Table 4 - Summary of All Asbestos Containing Materials, 2244 Reynolds St., Muskegon Heights, Michigan

Location	<b>Material Description</b>		Friable	Approx. Quantity
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.
		Total		401 sq. ft.
Interior - Asbestos Containing Materials				
Location	<b>Material Description</b>		Friable	Approx. Quantity
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
			Yes	1 Window
NW Bedroom (1 window 28" wide x 46" tall)	Glazing		1 68	1 Williao W
	Glazing Glazing		Yes	1 Window
Bathroom (1 window 24" wide x 38" 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)	Glazing		Yes	1 Window

### **Notes:**

### <u>Abbreviations</u>

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.

Muskegon County Land Bank Parcel ID: 61-26-185-098-0006-00

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.

Muskegon County Land Bank Parcel ID: 61-26-185-098-0006-00

### **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.

Muskegon County Land Bank Parcel ID: 61-26-185-098-0006-00

### 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.

Muskegon County Land Bank Parcel ID: 61-26-185-098-0006-00

### **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)
- 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

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

Raion Paguet

Aaron Paquet

Michigan/EPA Certified Asbestos Building Inspector (A30955)

# Red Cedar Consulting

# Attachment 1 APEX Research Laboratory Analytical Results



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

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Cellulose - 65%

Other - 35%

Lab ID #: 69749 - 01

Cust. #: HS-HM-01A

Material: Vapor Barrier

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69749 - 02

Cust. #: HS-HM-01B

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 65%

Other - 35%

Material: Vapor Barrier

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69749 - 03

Cust. #: HS-HM-02A

Material: Roofing Material

Location:

Appearance: black,fibrous,homogenous

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

Layer: 1 of 5

Asbestos Present: NO

No Asbestos Observed

Fiberglass - 30%

Other - 70%

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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Fiberglass - 30%

Other - 70%

Lab ID #: 69749 - 03a

Cust. #: HS-HM-02A

Material: Grey Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 2 of 5

Asbestos Present: **NO** 

Fiberglass - 30%

Other - 70%

Cust. #: HS-HM-02A

Lab ID #: 69749 - 03b

Material: Green Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 3 of 5

Asbestos Present: NO No Asbestos Observed

No Asbestos Observed

Fiberglass - 30%

Other - 70%

Lab ID #: 69749 - 03c Cust. #: HS-HM-02A

Material: Green Shingle

Location:

Appearance: black,fibrous,homogenous

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

Layer: 4 of 5

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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 50%

Other - 50%

Lab ID #: 69749 - 03d

Cust. #: HS-HM-02A

Material: Tar Paper

Location:

Appearance: black,fibrous,homogenous

Layer: 5 of 5

Lab ID #: 69749 - 03

No Asbestos Observed

Asbestos Present: **NO** 

Fiberglass - 30%

Other - 70%

Cust. #: HS-HM-02B

Material: Roofing Material

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 5

Asbestos Present: NO No Asbestos Observed

Fiberglass - 30%

Other - 70%

Cust. #: HS-HM-02B

Lab ID #: 69749 - 03a

Material: Grey Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 2 of 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.



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

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Fiberglass - 30%

Other - 70%

Lab ID #: 69749 - 03b

Cust. #: HS-HM-02B

Material: Green Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 3 of 5

Lab ID #: 69749 - 03c

Cust. #: HS-HM-02B

Asbestos Present: **NO** 

No Asbestos Observed

Fiberglass - 30%

Other - 70%

Material: Green Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 4 of 5

Asbestos Present: NO

Cellulose - 50%

No Asbestos Observed

Other - 50%

Lab ID #: 69749 - 03d Cust. #: HS-HM-02B Material: Tar Paper

Location:

Appearance: black,fibrous,homogenous

Layer: 5 of 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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 10%

Fiberglass - 10%

Other - 80%

Lab ID #: 69749 - 05

Cust. #: HS-HM-03A

Material: Tan Vinyl

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Cellulose - 10%

Lab ID #: 69749 - 06 Cust. #: HS-HM-03B

Material: Tan Vinyl

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: **NO** No Asbestos Observed

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: NO

Cellulose - 40%

No Asbestos Observed

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.



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 - 08

Cust. #: HS-HM-04B

Material: Leaf Pattern Linoleum

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 69749 - 09

Cust. #: HS-HM-05A

Material: 16"x16" White Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

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: **NO** 

No Asbestos Observed

Cellulose - 40%

Other - 60%

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 75%

Other - 25%

Asbestos Present: NO

No Asbestos Observed

Cellulose - 75%

Other - 25%

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)

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

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Cellulose - 70%

Other - 30%

Other - 30%

Lab ID #: 69749 - 11

Cust. #: HS-HM-06A

Material: 1x1 White Textured Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69749 - 12

Asbestos Present: **NO**No Asbestos Observed

Cellulose - 70%

Cust. #: HS-HM-06B

Material: 1x1 White Textured Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69749 - 13

Asbestos Present: NO

No Asbestos Observed

Cellulose - 80%

Other - 20%

Cust. #: HS-HM-07A

Material: 1x1 White Smooth Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

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

Layer: 1 of 1

Robert T. Letarte Jr., Laboratory Director

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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 - 14

Cust. #: HS-HM-07B

Material: 1x1 White Smooth Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO**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: **NO** 

No Asbestos Observed

Mineral Wool - 70%

Other - 30%

Lab ID #: 69749 - 16

G . . . . HG IDA OOD

Cust. #: HS-HM-08B

Material: 2x2 White Textured Ceiling Tile

Location:

Appearance: white, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Mineral Wool - 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)

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 - 17

Cust. #: HS-HM-09A

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

Lab ID #: 69749 - 17a

Cust. #: HS-HM-09A

Material: Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Lab ID #: 69749 - 18

Cust. #: HS-HM-09B

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

Asbestos Present: NO

No Asbestos Observed

Cellulose - 20%

Other - 80%

Asbestos Present: **NO** 

No Asbestos Observed

Other - 100%

Asbestos Present: NO

No Asbestos Observed

Cellulose - 20%

Other - 80%

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

Robert T. Letarte Jr., Laboratory Director

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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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69749 - 18a

Cust. #: HS-HM-09B

Material: Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

1 4 01 1

Cellulose - 1%

No Asbestos Observed

Other - 99%

Material: House Window Glazing

Lab ID #: 69749 - 19

Cust. #: HS-HM-10A

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 69749 - 20

Cust. #: HS-HM-10B

Material: House Window Glazing

Location:

Appearance: white, nonfibrous, homogenous

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

Layer: 1 of 1

Asbestos Present: **NO** 

1

Cellulose - 1%

No Asbestos Observed

Other - 99%

Robert T. Letarte Jr., Laboratory Director

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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 - 21

Cust. #: HS-HM-11A

Material: Grey Linoleum

Location:

Appearance: grey,fibrous,nonhomogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 10%

Fiberglass - 10%

Cellulose - 10%

Fiberglass - 10%

Other - 80%

Other - 80%

Lab ID #: 69749 - 22

Cust. #: HS-HM-11B

Material: Grey Linoleum

Location:

Appearance: grey,fibrous,nonhomogenous

Layer: 1 of 1

Lab ID #: 69749 - 23 Cust. #: HS-HM-12A Asbestos Present: NO

No Asbestos Observed

Cellulose - 50%

Other - 50%

Material: Floral Linoleum

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 1

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)

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

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Cellulose - 50%

Other - 50%

Lab ID #: 69749 - 24

Cust. #: HS-HM-12B

Material: Floral Linoleum

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 69749 - 25

Cust. #: HS-HM-13A

Asbestos Present: **NO** 

Cellulose - 40%

No Asbestos Observed

Asbestos Present: NO

Other - 60%

Material: Green Linoleum

Location:

Appearance: green, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 69749 - 26

Cust. #: HS-HM-13B

Material: Green Linoleum

Location:

Appearance: green, fibrous, nonhomogenous

Layer: 1 of 1

No Asbestos Observed

Other - 60%

Cellulose - 40%

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)

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

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Cellulose - 40%

Other - 60%

Lab ID #: 69749 - 27

Cust. #: HS-HM-14A

Material: Red/Green Linoleum

Location:

Appearance: red,fibrous,nonhomogenous

Layer: 1 of 1

Lab ID #: 69749 - 28

Cust. #: HS-HM-14B

Asbestos Present: NO

No Asbestos Observed

Cellulose - 40%

Other - 60%

material.

Material: Red/Green Linoleum

Location:

Appearance: red,fibrous,nonhomogenous

Layer: 1 of 1

Lab ID #: 69749 - 29

Cust. #: HS-HM-15A

Material: Fiberboard

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO** 

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)

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

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Cellulose - 80%

Other - 20%

Lab ID #: 69749 - 30

Cust. #: HS-HM-15B Material: Fiberboard

iviateriai. Fide

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69749 - 31

. . .

No Asbestos Observed

Asbestos Present: **NO** 

Wollastonite - 1%

Other - 99%

Cust. #: HS-HM-16A

Material: Basement Window Glazing

Location:

Appearance: beige, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 69749 - 32

Cust. #: HS-HM-16B

Material: Basement Window Glazing

Location:

Appearance: beige, nonfibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

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)

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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69749 - 33

Cust. #: HS-HS-01A

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 1%

Other - 100%

Hair - 2% Other - 97%

Material: Plaster Base Coat

Lab ID #: 69749 - 33a

Cust. #: HS-HS-01A

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Lab ID #: 69749 - 34 Cust. #: HS-HS-01B Asbestos Present: NO

No Asbestos Observed

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

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)

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 - 34a

Cust. #: HS-HS-01B

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Asbestos Present: NO No Asbestos Observed

Cellulose - 1% Hair - 2%

Other - 97%

Asbestos Present: **NO** 

No Asbestos Observed

Other - 100%

Lab ID #: 69749 - 35 Cust. #: HS-HS-01C

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69749 - 35a

Cust. #: HS-HS-01C

Material: Plaster Base Coat

Location:

Appearance: grey, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

Cellulose - 2%

No Asbestos Observed

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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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

Other - 100%

Hair - 2%

Other - 98%

Other - 100%

Lab ID #: 69749 - 36

Cust. #: HS-HS-01D

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69749 - 36a

Cust. #: HS-HS-01D

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Lab ID #: 69749 - 37

Cust. #: HS-HS-01E

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

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)

ProjeCeiling Tile: 2321 Hoyt St

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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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 1%

Hair - 2%

Other - 97%

Lab ID #: 69749 - 37a

Cust. #: HS-HS-01E

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Lab ID #:

Cust. #:

Material: Location:

Appearance: Layer:

of

Lab ID #:

Cust. #: Material:

Location: Appearance:

Layer:

of

Asbestos Present:

Asbestos Present:

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

Robert T. Letarte Jr., Laboratory Director

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# 69749

# APEX Research, Inc. 11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990 E-mail: apexresearch@chartermi.net

APEX	1014
APEX	1

Fax: 734-449-9991

Rev: 12/03	Date: 4-21-19	Relinquished by: MANY Matter		10	-2)	S	4	6	(5	-	w	دو		Lab ID#	Outer: Justin	N	48 hour 72 hour	Rush 24 hour	Turn Arou	Phone: (888) 449-456	City, St., Zip: _	Address: _	Client Name:
	Date :	Metter Received by:	MS- HM-06A	145- HM-058		H5- HM-048	H5-141-04A	H5- HM-03B	145. HM-034	45- 4M-02B	45- HM-02A	810-MH-5H	45-4M-01A	Client ID#	_ ( <u> </u>	יייי ליייי			Around Times: (Circle One)	9-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
NO. PROSESSION CONTRACTOR	1.2/17	UPS	1x1 White ?	1 1	16 × 16 /14		Led Patter	0	an Vingl	0 - 0	Roofing In	1	Japan Bernier	Materia	TEM: AHE	Mold: Bulk	Lead: Bulk	S:	ircle One) PIM	(888) 448-873			Q
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ST AMORES	PTX N	1/2	arings Medicin											Volume	)B EPA Level II	BioSIS	Air Paint	Foint Count	apaque apaque all samples with a de	Person: Aaron Paquet	<i>‡</i> :	2321 Ha	Survey: 4
	Date:	Received by:												Area	el II	Other Viable	Soil	PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	Paquet	)	the	21-17
													The state of the s	Results			•		ACM.		,	Report	Lab Use Only

Rev: 12/03 Work Forms: COC

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



Date: 4-21-17 Date:	Relinquished by ILLL Hazter Received by:	411-44-5H C.	2) 45-411-114	801-WH-5H OF	10 HS- HM-10A	8 45- HM-09B	H5.	280-WH-54	780-WH-5H GI	14 HS- HM-07B	410-WH-54 G	820-WH-5H C	Lab ID # Client ID #	Tare Tare Tare	Other: 5day (TTP) 11 Service	48 hour 72 hour	Rush 24 hour	Turn Around Times: (Circle One)	Phone: (888) 449-4566 Fax:	City, St., Zip: Lansing, MI 48901	Address: PO Box 13216	Client Name: Red Cedar Consulting
4-21-17	y: UPS	; 0	Chay Sino Com		House Winder		Munual 4		2×2 /1/2		1×1 white	1×1 white	Materia	TEM: AH	Mold: Bulk	Lead: Bulk	Asbestos: Bulk	(Circle One) PIM	(888) 448-873			ing
Date:	Relinquished		eum	, o 0	our Klasing	· · · · · · · · · · · · · · · · · · ·	out busyand		testimal co	**	amost & cT	Extrese 07	Material/Location	AHERA 7400 Bulk/NOB	Tape	Wipe	Wipe	EPA 600, PC all	9	Project #:	Project:	Date of Survey
APR 2 4 2017	ANK TO THE PROPERTY OF THE PRO												Volume	B EPA Level II	BioSIS	Air Paint	Point Count	apaque samples with a d	rson:	<i>t</i> : <i>t</i>	2321 Har	Survey: 4.
Date:	Received by:												Area	vel II	Other Viable	t Soil	PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	Aaron Paquet		T Ay	2/-/7
												T	Results		ble			sulting.net 5% ACM.	, <b>'</b>		Report	Lab Use Only

Rev: 12/03 Work Forms: COC

APRICATION

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



Rev: 12/03 Work Forms: COC	Date: 4-21-17	Relinquished by: <b>JL De Mastin</b> Received by:	33 H5-H5	33 HS-4	31 45-4	H-5#	B #5-x	28 H5-H	H-5H 12	HS.	7.5H &	14-5H 45	73 HS-H	Lab ID # Client ID #	Q (	Other: 5day (TTP) All Samples	48 hour 72 hour	Rush 24 nout		Turn Around Ti	Phone: (888) 449-4566	City, St., Zip: Lansing,	Address: PO Box 13216	Client Name: Red Cedar
	Date: 4-21-17	Received by:	45-01A Plaster	<u> </u>	45-HM-16A Beament	├	HM15A Fiberboard	l	4M-14A Rod4 Kreen		4M-134 Theen Yun		4M-MA Flord &		TEM:	Samples I <b>viold:</b> Bulk		Lead: Bulk	Asbestos: Bulk	Around Times: (Circle One) P.	Fax: (888) 448-873	MI 48901	216	Red Cedar Consulting
	Date:	Relinquished by:			hidow Marina			,	Giroleum	,	steure	•	rolemon	Material/Location Volume	AHERA 7400 Bulk/NOB F	lape BioSIS	3	Wine	Wipe Point Count	PIM EPA 600, PC all samples wit	Contact Person:	• •	Project: 232/	Date of Survey:
	Date:	Received by:												e Area	EPA Level II	Other Viable		Paint Soil	PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	Aaron Paquet	0	Hout St	1-21-17
														Results		ble				sulting.net			Report	Lab Use Only

## 69749

### ANA

# APEX Research, Inc. 11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

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

Date: 4-2/-/7	Relinquished by:				37 45.				A CONTRACTOR OF THE CONTRACTOR		Other: 5 Men (TTP)	48 hour 72 hour	Rush 24 hour	Turn Around Times: (Circle One)	Phone: (888) 449-4566	City, St., Zip: Lansing,	PO	ame:
Date: 4-	Received by:				45-45-01E	45.75-01D	45-45-01C	45-45-013	Client ID#	יידד ממווים דכם	TTP) All Camples			Times: (Cir	Fax:	g, MI 48901	Box 13216	Red Cedar Consulting
4-21-17	UPS								Materi	TEM: AH	Mold: Bulk	Lead: Bulk	Asbestos: Bulk		(888) 448-8789			
Date: APEX SEAL	Relinquished by:								Material/Location	AHERA 7400 Bulk/NOB	Tape	Wipe	Wipe	A 600, PC all		Project #:	Project: 232	Date of Survey
	HAME								Volume	)B EPA Level II	BioSIS	Air Paint	Point Count	apaque apaque apaque	Person: Aaron	# : #	: 252/ //	Survev: 4-
Date:	Received by:								Area	vel II	Other Viable	t Soil	PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	Paquet		A	9/-/7
									Results		ile			sulting.net		repoil	Log-In	Lab Use Only

Rev: 12/03 Work Forms: COC

### Red Cedar Consulting

### **Tables**

Table 1 - Summary of Hazardous Materials, 2321 Hoyt St., Muskegon Heights, Michigan

	Hazardous Materials Description and Location	
Location	Material Description	Quantity
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	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	М	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

 $\overline{NQ}$  = 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

1	Asbestos Containing Material Description a	nd Location			
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity
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

<u>Abbreviations</u>

M = Miscellaneous building material TSI = Thermal System Insulation lin. ft. = linear feet

S = Surfacing Material

sq. ft. = square feet

Table 4 - Summary of All Asbestos Containing Materials, 2321 Hoyt St., Muskegon Heights, Michigan

Interior - Asbestos Containing Materials				
Location	<b>Material Description</b>		Friable	Approx. Quantity
Living (1 register, 10 sq. ft.)				
Dining (1 register, 10 sq. ft.)	INIACD AND		* 7	50 O
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.)				
Duschieff (1 register, 10 sq. ft.)		Total		50 ac 64
		Total		50 sq. ft.

### **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.

Muskegon County Land Bank Parcel ID: 61-26-185-095-0007-00

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.

Muskegon County Land Bank Parcel ID: 61-26-185-095-0007-00

### **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.

Muskegon County Land Bank Parcel ID: 61-26-185-095-0007-00

### 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.

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.

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



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 30%

Other - 70%

Lab ID #: 69748 - 01

Cust. #: MS-HM-01A

Material: Roofing Materials

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 3

Asbestos Present: NO

No Asbestos Observed

Cellulose - 30%

Other - 70%

Material: Shingle

Lab ID #: 69748 - 01a

Cust. #: MS-HM-01A

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Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 3

Asbestos Present: NO

No Asbestos Observed

Cellulose - 35%

Other - 65%

Lab ID #: 69748 - 01b

Cust. #: MS-HM-01A

Material: Tar Paper

Location:

Appearance: black, fibrous, homogenous

Layer: 3 of 3

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.



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: NO 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: **NO** 

No Asbestos Observed

Asbestos Present: NO No Asbestos Observed

Cellulose - 35%

Cellulose - 30% Other - 70%

Other - 65%

Cust. #: MS-HM-01B Material: Tar Paper

Lab ID #: 69748 - 02b

Location:

Appearance: black,fibrous,homogenous

Layer: 3 of 3

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.



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

Lab ID #: 69748 - 04

Cust. #: MS-HM-02B

Material: Vapor Barrier

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69748 - 05

Cust. #: MS-HM-03A

Material: Layered Flooring/Linoleum

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 3

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 95%

Other - 5%

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 95%

Other - 5%

Asbestos Present: NO

No Asbestos Observed

Fiberglass - 10%

Other - 90%

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

Robert T. Letarte Jr., Laboratory Director

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Project: 2327 Maffett St

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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

No Asbestos Observed

Non-Asbestos

Lab ID #: 69748 - 05a

Cust. #: MS-HM-03A

Material: Floor Tile

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 2 of 3

Lab ID #: 69748 - 05b

Cust. #: MS-HM-03A

Material: Mastic

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 3 of 3

Lab ID #: 69748 - 06

Cust. #: MS-HM-03B

Material: Layered Flooring/Linoleum

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 3

Asbestos Present: NO

Other - 100%

Asbestos Present: **NO** 

Other - 100%

Fiberglass - 10% Other - 90%

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

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.



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 - 06a

Cust. #: MS-HM-03B

Material: Floor Tile

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 2 of 3

Lab ID #: 69748 - 06b

Cust. #: MS-HM-03B

Material: Mastic

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 3 of 3

Lab ID #: 69748 - 07

Material: Tan Vinyl Layered

Location:

Appearance: beige, fibrous, nonhomogenous

Asbestos Present: NO

Asbestos Present: **NO** 

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

No Asbestos Observed

Other - 100%

Other - 100%

Fiberglass - 10% Other - 90%

Cust. #: MS-HM-04A

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

Layer: 1 of 2

Robert T. Letarte Jr., Laboratory Director

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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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Fiberglass - 20%

Other - 80%

Lab ID #: 69748 - 07a

Cust. #: MS-HM-04A

Material: Linoleum

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 69748 - 08

Cust. #: MS-HM-04B

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

Fiberglass - 10%

Other - 90%

Material: Tan Vinyl Layered

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 2

Lab ID #: 69748 - 08a

Cust. #: MS-HM-04B

Material: Linoleum

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 2

Fiberglass - 10% No Asbestos Observed

Other - 90%

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: 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

Asbestos Present: NO

Asbestos Present: **NO** 

No Asbestos Observed

No Asbestos Observed

Non-Asbestos

Cellulose - 20%

Cellulose - 20%

Other - 80%

Other - 100%

Other - 80%

Lab ID #: 69748 - 09

Cust. #: MS-HM-05A

Material: Drywall/Joint Compound

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 69748 - 10

Cust. #: MS-HM-05B

Material: Drywall/Joint Compound

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Lab ID #: 69748 - 11 Cust. #: MS-HM-06A

Material: Window Glazing

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 1

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: 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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69748 - 12

Cust. #: MS-HM-06B

Material: Window Glazing

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 1

Asbestos Present: **NO** 

No Asbestos Observed

Chrysotile - 2%

Other - 100%

Other - 98%

Lab ID #: 69748 - 13 Cust. #: MS-HS-01A

Material: Textured Surfacing Top Layer

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69748 - 13a

Asbestos Present: YES

Cust. #: MS-HS-01A

Material: Textured Surfacing Bottom Layer

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 2

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: 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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69748 - 14

Cust. #: MS-HS-01B

Material: Textured Surfacing Top Layer

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

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: NO

Other - 100% No Asbestos Observed

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: 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 - 15a

Cust. #: MS-HS-01C

Material: Textured Surfacing Bottom Layer

Location:

NOT ANALYZED

Asbestos Present:

Appearance: Layer: 2 of 2

Lab ID #: 69748 - 16

Asbestos Present: **NO** 

No Asbestos Observed

Other - 100%

Other - 100%

Cust. #: MS-HS-02A

Material: Popcorn Surfacing

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 69748 - 17

Asbestos Present: NO

Cust. #: MS-HS-02B

No Asbestos Observed

Material: Popcorn Surfacing

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

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: 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

Non-Asbestos

Other - 100%

Lab ID #: 69748 - 17a

Cust. #: MS-HS-02B

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Lab ID #: 69748 - 18

Cust. #: MS-HS-02C

Material: Popcorn Surfacing

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69748 - 18a

Cust. #: MS-HS-02C

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Other - 100%

Other - 100%

Asbestos Present: NO

No Asbestos Observed

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: 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

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Cellulose - 2%

Other - 98%

Lab ID #: 69748 - 19

Cust. #: MS-HS-03A

Material: Plaster Top Texture

Location:

Appearance: white, fibrous, homogenous

Layer: 1 of 4

Asbestos Present: YES

Chrysotile - 1.50%

Other - 98.50%

Lab ID #: 69748 - 19a Cust. #: MS-HS-03A

Material: Plaster Bottom Texture

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 4

Asbestos Present: NO

No Asbestos Observed

POINT COUNT RESULT

Other - 100%

Lab ID #: 69748 - 19b Cust. #: MS-HS-03A

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 3 of 4

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: 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

Asbestos Present: YES

Non-Asbestos

Cellulose - 2%

Other - 96%

Lab ID #: 69748 - 19c

Cust. #: MS-HS-03A

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 4 of 4

No Asbestos Observed

Chrysotile - 2%

Asbestos Present: **NO** 

Other - 100%

Lab ID #: 69748 - 20 Cust. #: MS-HS-03B

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69748 - 20a

Asbestos Present:

Cust. #: MS-HS-03B

Material: Plaster Base Coat Location:

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

NOT ANALYZED

Appearance: Layer: 2 of 2

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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69748 - 21

Cust. #: MS-HS-03C

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

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: NO No Asbestos Observed

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

Robert T. Letarte Jr., Laboratory Director

Other - 100%

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.



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 - 22a

Cust. #: MS-HS-03D Material: Plaster Base Coat

Location:

Appearance: Layer: 2 of 2

Lab ID #: 69748 - 23

Cust. #: MS-HS-03E

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69748 - 23a

Material: Plaster Base Coat

Location:

Layer: 2 of 2

Asbestos Present:

NOT ANALYZED

Asbestos Present: **NO** 

No Asbestos Observed

Other - 100%

Asbestos Present:

Cust. #: MS-HS-03E

Appearance:

NOT ANALYZED

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

Robert T. Letarte Jr., Laboratory Director

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# Apex # 69748

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

Date: 4-21-17	Relinquished by:	and the same	Q)	2	A	47	6	5		w	2)		Lab ID#	Outet: July	7	48 hour 72 hour	Rush 24 hour	Turn Arou	Phone: (888) 449-4566	City, St., Zip:	Address:	Client Name: _F
Date :	Relinquished by: Ash Justee Received by:	M5-HM-06A	45- HM-05B	MS- HM-05A	M5-H4404B	M5- HM-04A	M5- HM- 03B	M5- HM-034	M5-HM-02B	M5-HM-02A	M5-HM-01B	M5-HM-01A	Client ID#	_ (III) All Samples	TTT			Around Times: (Circle One)	)-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
1-21-17	UPS	Window Hegging	1,	August Tout a	0 0	Ton Ving Layere	o a	Lugered Floring	1	Vans Barrier	٠, ۵	Roshing Materia	Material/Location	TEM: AHERA 7400	Mold: Bulk	Lead: Bulk	Asbestos: Bulk X	Ada MTa	(888) 448-8739			3
Date: /I25 NOTE RESEARCE	Relinquished by: W. H.		\tag{\tau}	engound								il	on Volume	Bulk/NOB EP	Tape BioSIS	Wipe Air	Wipe Point Count _	ap 600, PC all samples with	rson:	. • •	Project: 2327	Date of Survey:
Date:	Received by:												Area	EPA Level II	Other Viable	Paint Soil	PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	Aaron Paquet	,	Mellett St	4-21-17
												(in the second of the second o	Results		e 	I		ulting.net % ACM.			Report	Lab Use Only Log-in

Rev: 12/03 Work Forms: COC

# APEX Research, Inc. 11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

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



Date: 4-21-19 Date: 4	Relinquished by: Alfallellallella Received by:	8 MS-45.03D	9 45- W5-03C	20 MS- HS-03B	19 MS- 15-03A	R M5-45-020	7 M5. HS-02B	145-45-02A	15 MS- HS-01C	M5- 45-01B	3 MS-H5-01A	12 M5-HM-06 B	Lab ID # Client ID #	Curvi : Read 111 Samples		Ĭ	Rush 24 hour	Turn Around Times: (Circle One)	Phone: (888) 449-4566 Fax:	City, St., Zip: Lansing, MI 48901	Address: PO Box 13216	Client Name: Red Cedar Consulting
Date : 4-21-17 Date : ADI	Relinquished by:	2			Plater		1 6	Toplora Surfacino		· · · · · · · · · · · · · · · · · · ·	Settiesed Suspacing	Window Glasing	Material/Location	TEM: AHERA 7400 Bulk/NOB	Mold: Bulk Tape	Lead: BulkWipe	Asbestos: Bulk Wipe	PLM EPA 600, PC	(888) 448-8739	Project # :	Project	
ADDA SIGNADAL Date:	The state of the s												Volume A	ЮВEPA Level II_	BioSIS Other	Air Paint	Point Count P	apaquet@recall samples with a detect	Contact Person: Aaron Paquet	#:	Project: 2327 Malles	Date of Survey: 4.21.
о́.	Received by:												Area Results		Viable	Soil	PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	let		Report	Z Lab Use Only

Rev: 12/03 Work Forms: COC

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	

Date : 4-2/-17 Rev: 12/03	Relinquished by:						2%	Lab ID#	J. S. C.	Other: 5	48 hour 72 hour	Rush 24 hour	Turn Arou	Phone: (888) 449-4566	City, St., Zip:	Address: _	Client Name: _
Date: 4-21-17	Relinquished by: 1946 Mater Received by: 1175						M5-45-03E	Client ID#		TTP All Samples			Turn Around Times: (Circle One)	9-4566 Fax	City, St., Zip: Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
	UPS Reliam Rad to C						Pluser	Material/Location	TEM: AHERA 7400 Bulk/NOB	Mold: Bulk Tape	Lead: Bulk Wipe	Asbestos: Bulk Wipe	PLM I	48-8739	Project #:	Project	
2017	A STATE OF THE STA							Volume	OB EPA Level II	BioSIS	Air Paint	Point Count	apaque samples with a d	Contact Person: Aaron	#:	Project: 2327 h	Date of Survey: 4.
Date :	Received hv:							Area	vel II	Other Viable	t Soil	PCM	etection of <5%	Paquet	78	allot 1	1-17
								Results			·		llting.net ACM.		roport	Post in	Lab Use Only

Rev: 12/03 Work Forms: COC

# Red Cedar Consulting

# **Tables**

Table 1 - Summary of Hazardous Materials, 2327 Maffett St., Muskegon Heights, Michigan

Hazardous Materials Description and Location										
Location	Material Description	Quantity								
Dining	Smoke Detector	2								
Dining	Thermostat									
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

= Surfacing Material S

Abbreviations

= Not quantified NQ = Not applicable NA

= Not detected. Laboratory result is less than 1 % asbestos ND

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2327 Maffett St., Muskegon Heights, Michigan

PC = Point Count Analysis lin. ft. = linear feet CH = Chrysotile Asbestos 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

	Asbestos Containing Material Description a	nd Location			
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity
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

**Abbreviations** 

M = Miscellaneous building material TSI = Thermal System Insulation lin. ft. = linear feet sq. ft. = square feet

S = Surfacing Material

Table 4 - Summary of All Asbestos Containing Materials, 2327 Maffett St., Muskegon Heights, Michigan

Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
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	95 sq. ft.
		Total		95 sq. ft.
Interior - Asbestos Containing Materials				
Location	<b>Material Description</b>		Friable	Approx. Quantity
Basement (12 in. dia. HVAC Wrapped Ductwork, 34 lin. ft.)	HVAC Duct Wrap		Yes	34 lin. ft.
		Total		34 lin. ft.
Interior - Asbestos Containing Materials				
Location	<b>Material Description</b>		Friable	Approx. Quantity
1st Floor	Wall Plaster		No	2,352 sq. ft.
1st Floor	Ceiling Plaster		No	799 sq. ft.
		Total		3,151 sq. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Living Room Ceiling	Textured Surfacing over Plaster		No	175 sq. ft.
Dining Room Ceiling	Textured Surfacing over Plaster		No	130 sq. ft.
		Total		305 sq. ft.

#### **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.

Muskegon County Land Bank Parcel ID: 61-26-185-098-0014-00

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.

Muskegon County Land Bank Parcel ID: 61-26-185-098-0014-00

#### **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.

Muskegon County Land Bank Parcel ID: 61-26-185-098-0014-00

#### 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.

Muskegon County Land Bank Parcel ID: 61-26-185-098-0014-00

#### **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.

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

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

Raion Paguet

Aaron Paquet

Michigan/EPA Certified Asbestos Building Inspector (A30955)

# Red Cedar Consulting

# Attachment 1 APEX Research Laboratory Analytical Results



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 40%

Other - 60%

Lab ID #: 69856 - 01

Cust. #: LS-HM-01A

Material: Roofing Materials

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 4

Asbestos Present: NO

No Asbestos Observed

Cellulose - 20%

Other - 80%

Lab ID #: 69856 - 01a Cust. #: LS-HM-01A

Material: Shingle

Location:

**A** .....

Appearance: black, fibrous, homogenous

Layer: 2 of 4

Asbestos Present: NO

No Asbestos Observed

0

Cellulose - 30%

Other - 70%

Lab ID #: 69856 - 01b Cust. #: LS-HM-01A

Material: Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 3 of 4

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.



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

Lab ID #: 69856 - 02

Cust. #: LS-HM-01B

Material: Roofing Materials

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69856 - 03

Cust. #: LS-HM-02A

Material: Asphalt Siding

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: NO

Cellulose - 20%

Cellulose - 40%

Other - 60%

No Asbestos Observed

Other - 80%

Asbestos Present: NO

Asbestos Present: **NO** 

No Asbestos Observed

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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Lab ID #: 69856 - 04

Cust. #: LS-HM-02B

Material: Asphalt Siding

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: **NO** 

No Asbestos Observed

No Asbestos Observed

Other - 70%

Other - 100%

Lab ID #: 69856 - 05

Cust. #: LS-HM-03A

Material: Black/White Linoleum/Floor Tile

Location:

Appearance: black,nonfibrous,homogenous

Layer: 1 of 2

Lab ID #: 69856 - 05a

Cust. #: LS-HM-03A

Material: Glue Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

Cellulose - 30%

Asbestos Present: NO 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.



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-

17-69856

Date Received: 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

Other - 100%

Lab ID #: 69856 - 06

Cust. #: LS-HM-03B

Material: Black/White Linoleum/Floor Tile

Location:

Appearance: black,nonfibrous,homogenous

Layer: 1 of 2

Lab ID #: 69856 - 06a

Cust. #: LS-HM-03B

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 69856 - 07

Cust. #: LS-HM-04A

Material: 12x12 Tan/Grey VFT

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 2

Aspestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Other - 100%

Asbestos Present: **NO**No Asbestos Observed

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.



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

Non-Asbestos

Lab ID #: 69856 - 07a

Cust. #: LS-HM-04A

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 69856 - 08

Cust. #: LS-HM-04B

Material: 12x12 Tan/Grey VFT

Location:

Appearance: beige, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69856 - 08a

Cust. #: LS-HM-04B

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

Asbestos Type/Percent

Asbestos Present: NO

Other - 100%

Other - 100%

Other - 100%

No Asbestos Observed

Asbestos Present: **NO** 

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

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: 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

Asbestos Present: YES

Non-Asbestos

Other - 80%

Lab ID #: 69856 - 09

Cust. #: LS-HM-05A

Material: Brown/Tan Linoleum

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 69856 - 10

Cust. #: LS-HM-05B

Material: Brown/Tan Linoleum

Location:

Appearance:

Layer:

Asbestos Present:

Chrysotile - 20%

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: NO

No Asbestos Observed

Other - 30%

Cellulose - 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: 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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 70% Other - 30%

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: **NO** 

Chrysotile - 1.75%

Other - 98.25%

Cust. #: LS-HM-07A

Lab ID #: 69856 - 13

Material: Window Glazing

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

POINT COUNT RESULT

Lab ID #: 69856 - 14

Cust. #: LS-HM-07B

Material: Window Glazing

Location:

Layer:

Appearance:

of

NOT ANALYZED

Asbestos Present:

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: 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

Lab ID #: 69856 - 16

Cust. #: LS-HM-08B

Material: Rainbow Linoleum

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69856 - 17

Cust. #: LS-HM-09A

Material: 12x12 Blue/White VFT

Location:

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

Layer: 1 of 2

Asbestos Present: NO

No Asbestos Observed

Cellulose - 60%

Other - 40%

No Asbestos Observed

Asbestos Present: **NO** 

Cellulose - 60%

Other - 40%

Appearance: blue,nonfibrous,homogenous

Asbestos Present: NO Other - 100% No Asbestos Observed

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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69856 - 17a

Cust. #: LS-HM-09A

Material: Glue Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

Other - 100%

Other - 100%

Lab ID #: 69856 - 18 Cust. #: LS-HM-09B

Material: 12x12 Blue/White VFT

Location:

Appearance: blue,nonfibrous,homogenous

Layer: 1 of 2

Lab ID #: 69856 - 18a

Cust. #: LS-HM-09B

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

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

Layer: 2 of 2

Robert T. Letarte Jr., Laboratory Director

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## 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 - 19

Cust. #: LS-HM-10A

Material: 1x1 White Textured Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Asbestos Present: **NO**No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 70% Fiberglass - 5%

Other - 25%

Cellulose - 70%

Fiberglass - 5%

Other - 25%

Layer: 1 of 1

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: NO

No Asbestos Observed

Cellulose - 20%

Other - 80%

Material: Drywall

Lab ID #: 69856 - 21 Cust. #: LS-HM-11A

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

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.



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 - 22

Cust. #: LS-HM-11B

Material: Drywall

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 69856 - 23

Cust. #: LS-HS-01A

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69856 - 23a

Cust. #: LS-HS-01A

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Cellulose - 20%

Other - 80%

Other - 100%

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO 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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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

No Asbestos Observed

Non-Asbestos

Lab ID #: 69856 - 24

Cust. #: LS-HS-01B

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69856 - 24a

Cust. #: LS-HS-01B

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 69856 - 25

Cust. #: LS-HS-01C

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: NO

Other - 100%

Asbestos Present: **NO** 

No Asbestos Observed

Hair - 2%

Other - 98%

Other - 100%

Asbestos Present: NO No Asbestos Observed

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: 2340 Leahy St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 17-6

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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Hair - 2%

Other - 98%

Lab ID #: 69856 - 25a Cust. #: LS-HS-01C

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 100%

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

Lab ID #: 69856 - 26a

Cust. #: LS-HS-01D

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

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

Layer: 2 of 2

Robert T. Letarte Jr., Laboratory Director

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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

Asbestos Present: NO

Asbestos Present: **NO** 

No Asbestos Observed

No Asbestos Observed

Non-Asbestos

Other - 100%

Hair - 2%

Other - 98%

Lab ID #: 69856 - 27

Cust. #: LS-HS-01E

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69856 - 27a

Cust. #: LS-HS-01E

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 2

Lab ID #:

Asbestos Present:

Cust. #: Material:

Location: Appearance: Layer: of

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

Robert T. Letarte Jr., Laboratory Director

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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



Rev. 12/03	Date: 4-27-17 Date: 4-27-17	Relinquished by: All Matter Received by: UPS	11 18-47-06A 1×1 white som	850-4H-St 0)	9 LS-12M-DSA Brown & Lance	8 L5-4M-04B	7 15-44. 844 12x12 tan 44		5 15-14M-03A Black & White.		3 25. 44-024 Makaet Sid	Z 15-HM-0/B 5	15-47-014 Roofing Ma	Lab ID # Client ID # Material/Location		V	48 hour 72 hour Lead: Bulk	Rush 24 hour	LUTH ATOUNG LIMES: (Circle One)  Ashesto: Built		Phone: (888) 449-4566 Fax: (888) 448-8739	City, St., Zip: Lansing, MI 48901	Address: PO Box 13216	Client Name: Red Cedar Consulting
APTX RINKING.	(	2	Smooth CT	`	Kirley	., 0 , .	May VET	'	E Resolven	, A	ling	•	cterials	Location Volume	1 7400 Bulk/NOB EPA Level II	Tape BioSIS	Wipe Air Paint		C all samples		reon. Aaron	Project #:	Project: 2340 Kg	Date of Survey:
	Date:	Received by:												Area Results	vel II	Other Viable	ıt Soil	1 C141	with a detection of <5% ACM.	et@redcedarconsulting net	Dame t	<i>d</i>	Report	27-17 Lab Use Only

Rev: 12/03 Work Forms: COC



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

	Date:	9 s 297	Date: APR 9 9	4-27-17	) Date :	Date: 4-27-17
	Received by:	CAN PROPERTY OF THE PROPERTY O	Relinquished by:	075	Relinquished by: IRde Mattee Received by:	Relinquished by:
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			No foint Compose	Injural (	15-144-114	り り
					15-14M-10B	S
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				11 11	15-47-09B	-S
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					15- 14H-08B	7
			milleum	Runbaux S	15- MM-08A	5
			; o 1	~	LS. HM-07B	F
			Hazing	Windows &	15-48-074	2
			smooth CT	1×1/white	890-WH-57	Q
Results	Area	Volume	Material/Location	Materia	Client ID#	Lab ID#
	vel II	OB EPA Level II	AHERA 7400 Bulk/NOB	TEM: AHE		
	Other Viable	BioSIS	Tape	Mold: Bulk	TTP All samples	Other: Shau
ı	ıt Soil	Air Paint	Wipe	Lead: Bulk		48 hour 72 hour
	PCM	Point Count	Wipe	Asbestos: Bulk		Rush 24 hour
ilting.net ACM.	apaquet@redcedarconsulting.net with a detection of <5% ACM.	apaqu samples with a c	EPA 600, PC all	ircle One) PLM	nd Times: (Circle One)	Turn Around
	Aaron Paquet	1	Contact Person	(888) 448-8739	9-4566 Fax:	Phone: (888) 449-456
	O	#:	Project #:		Lansing, MI 48901	City, St., Zip:
Report	shu St	Project: 2346 Kg	Project		PO Box 13216	Address:
Lab Use Only Log-In	-27-17	   	Date of Survey	g	Red Cedar Consulting	Client Name: _R

Rev: 12/03 Work Forms: COC

Date:

69 856
APEX Research, Inc. 11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990 E-mail: apexresearch@chartermi.net



Fax: 734-449-9991

Date: 4-27-19	Relinquished by:				から	Z	25	7	22	Lab ID#	Omer: Dasa	Colonia No.	48 hour 72 hour	Rush 24 hour	Turn Arou	Phone: (888) 449-456	., Zip:	1	Client Name:
Date:	Relinquished by: Mallo Marteta Received by:				LS-145-01E	LS - HS-O()	LS-45-01C	15-45-01B	LS-H5-01A	Client ID#	_ (117)All Samples	Type			Turn Around Times: (Circle One)	9-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
27.17 Date:	Relinquished by:				*				Pleater	Material/Location	TEM: AHERA 7400 Bulk/NOB	Mold: Bulk Tape	Lead: Bulk Wipe	Asbestos: Bulk Wipe	PLM I	: (888) 448-8739 Contact Person	Project #:	Project : 234	Date of Survey
APR 2 8 2017	ACA									Volume	OB EPA Level II	BioSIS(	Air Paint	Point Count		Aaron		2340 Sec	Survey: 4-2
Date:	Received by:									Area	9 П	Other Viable	Soil	PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	Paquet	<u>C</u> .	h	7-17
										Results		e	I		ulting.net % ACM.			Report	Lab Use Only

Rev: 12/03 Work Forms: COC

SPX MONASS

# Red Cedar Consulting

# **Tables**

Table 1 - Summary of Hazardous Materials, 2340 Leahy St., Muskegon Heights, Michigan

Hazaro	dous Materials Description and Location	
Location	Material Description	Quantity
1st Floor Living Room	Thermostat	1
1st Floor Living Room	Smoke Detector	1
1st Floor NW Bedroom	Smoke Detector	1
1st 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 & White12x12 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:**

<u>Material Types</u> <u>Abbreviations</u>

M = Miscellaneous building material

TSI = Thermal System Insulation

NQ = Not quantified

NA = Not applicable

S = Surfacing Material ND = Not detected. Laboratory result is less than 1 % asbestos

PC = Point Count Analysis lin. ft. = linear feet CH = Chrysotile Asbestos 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

A	Asbestos Containing Material Description a	nd Location			
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity
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

Interior - Asbestos Containing Materials				
Location	<b>Material Description</b>		Friable	Approx. Quantity
Hallway & Closet	Brown & Tan Linoleum		No	55 sq. ft.
		Total		55 sq. ft.
Interior - Asbestos Containing Materials				
Location	<b>Material Description</b>		Friable	Approx. Quantity
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.
		Total		120 sq. ft.
Interior - Asbestos Containing Materials				
Location	<b>Material Description</b>		Friable	Approx. Quantity
Basement (12 in. dia. HVAC Wrapped Ductwork, 1 lin. ft.)	HVAC Duct Wrap		Yes	1 lin. ft.
ne)		Total		1 lin. ft.
Interior - Asbestos Containing Materials				
Location	<b>Material Description</b>		Friable	Approx. Quantity
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
		Total		26 Windows

#### **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.

Muskegon County Land Bank Parcel ID: 61-26-185-102-0014-00

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.

Muskegon County Land Bank Parcel ID: 61-26-185-102-0014-00

#### 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)

Muskegon County Land Bank Parcel ID: 61-26-185-102-0014-00

- 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.

Muskegon County Land Bank Parcel ID: 61-26-185-102-0014-00

#### **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:

• 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

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

Raion Paguet

Aaron Paquet

Michigan/EPA Certified Asbestos Building Inspector (A30955)

# Red Cedar Consulting

# Attachment 1 APEX Research Laboratory Analytical Results



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

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Lab ID #: 69678 - 01

Cust. #: RS-HM-01A

Material: Roofing Materials

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 3

Lab ID #: 69678 - 01a

Cust. #: RS-HM-01A

Material: Red Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 3

Lab ID #: 69678 - 01b

Material: Tar Paper

Appearance: black,fibrous,homogenous

Layer: 3 of 3

Asbestos Present: NO

Fiberglass - 30%

Other - 70%

Cust. #: RS-HM-01A

Location:

Asbestos Present: NO

Cellulose - 60%

Cellulose - 40%

Other - 60%

No Asbestos Observed

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.



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

Lab ID #: 69678 - 02a

Cust. #: RS-HM-01B

Material: Red Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 3

Lab ID #: 69678 - 02b

Cust. #: RS-HM-01B

Material: Tar Paper

Location:

Appearance: black,fibrous,homogenous

Layer: 3 of 3

Asbestos Present: **NO** 

No Asbestos Observed

Fiberglass - 30%

Other - 70%

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 40%

Other - 60%

Asbestos Present: NO

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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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

Other - 100%

Lab ID #: 69678 - 03

Cust. #: RS-HM-02A

Material: Tan Square Linoleum

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 2

Asbestos Present: NO No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Other - 100%

Other - 100%

Cust. #: RS-HM-02A

Lab ID #: 69678 - 03a

Material: Glue

Location:

Appearance: yellow,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 69678 - 04

Cust. #: RS-HM-02B

Material: Tan Square Linoleum

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 2

Asbestos Present: NO No Asbestos Observed

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: 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

Lab ID #: 69678 - 05

Cust. #: RS-HM-03A

Material: Blue Linoleum

Location:

Appearance: blue, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 69678 - 06

Cust. #: RS-HM-03B

Material: Blue Linoleum

Location:

Appearance: blue, fibrous, nonhomogenous

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

Layer: 1 of 1

Asbestos Present: NO

Cellulose - 1%

No Asbestos Observed

Other - 99%

Asbestos Present: **NO** 

Asbestos Present: NO

No Asbestos Observed

Cellulose - 50%

Cellulose - 50%

Other - 50%

No Asbestos Observed

Other - 50%

Robert T. Letarte Jr., Laboratory Director

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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

Asbestos Present: NO

Asbestos Present: **NO** 

No Asbestos Observed

No Asbestos Observed

No Asbestos Observed

Non-Asbestos

Other - 100%

Other - 100%

Lab ID #: 69678 - 07

Cust. #: RS-HM-04A

Material: 12x12 Layered VFT

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 1 of 4

Lab ID #: 69678 - 07a

Cust. #: RS-HM-04A

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 4

Asbestos Present: NO

Other - 100%

Lab ID #: 69678 - 07b

Cust. #: RS-HM-04A

Material: Beige Floor Tile

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 3 of 4

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: 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 - 07c

Cust. #: RS-HM-04A

Material: Mastic

Location:

Appearance: black,nonfibrous,homogenous

Layer: 4 of 4

Lab ID #: 69678 - 08

Cust. #: RS-HM-04B

Material: 12x12 Layered VFT

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 1 of 4

Lab ID #: 69678 - 08a

Cust. #: RS-HM-04B

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

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

Layer: 2 of 4

Asbestos Present: NO

Cellulose - 1%

No Asbestos Observed

Other - 99%

Other - 100%

Other - 100%

Asbestos Present: **NO** No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

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.



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 - 08b

Cust. #: RS-HM-04B

Material: Beige Floor Tile

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 3 of 4

Lab ID #: 69678 - 08c

Cust. #: RS-HM-04B

Material: Mastic

Location:

Appearance: black,nonfibrous,homogenous

Layer: 4 of 4

Lab ID #: 69678 - 09

Cust. #: RS-HM-05A

Material: Black/Gold Linoleum

Location:

Appearance: black,fibrous,nonhomogenous

Layer: 1 of 1

Asbestos Present: NO

Other - 100%

Cellulose - 1%

Cellulose - 40%

Other - 60%

Other - 99%

No Asbestos Observed

Asbestos Present: **NO** 

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

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.



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

Asbestos Present: NO

Asbestos Present: YES

POINT COUNT RESULT

No Asbestos Observed

Non-Asbestos

Cellulose - 40%

Other - 98.50%

Other - 60%

Lab ID #: 69678 - 10

Cust. #: RS-HM-05B

Material: Black/Gold Linoleum

Location:

Appearance: black, fibrous, nonhomogenous

Layer: 1 of 1

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: YES Chrysotile - 5%

Chrysotile - 1.5%

Other - 95%

Cust. #: RS-HM-06A

Lab ID #: 69678 - 11a

Material: Mastic

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 2

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.



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 - 12

Cust. #: RS-HM-06B

Material: Leaf Pattern Linoleum/Mastic

Location:

Appearance: Layer:

of

NOT ANALYZED

Asbestos Present:

Asbestos Present: **NO** 

No Asbestos Observed

Lab ID #: 69678 - 13

Cust. #: RS-HM-07A

Material: 12x12 Tan VFT/Sheet Flooring

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 1

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: NO

No Asbestos Observed

Cellulose - 50%

Cellulose - 50% Other - 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.



## 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

Other - 90%

Lab ID #: 69678 - 15

Cust. #: RS-HM-08A

Material: Window Glazing

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69678 - 16

Cust. #: RS-HM-08B Material: Window Glazing

Location:

Appearance:

Layer:

Lab ID #: 69678 - 17

Cust. #: RS-HM-09A

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: YES

Chrysotile - 10%

Asbestos Present:

NOT ANALYZED

Asbestos Present: NO

Cellulose - 20%

Other - 80%

No Asbestos Observed

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.



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 - 18

Cust. #: RS-HM-09B

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 69678 - 19

Cust. #: RS-HS-01A

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69678 - 19a

Cust. #: RS-HS-01A

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 20%

Other - 80%

Other - 100%

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

Cellulose - 1%

No Asbestos Observed

Hair - 2%

Other - 97%

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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69678 - 20

Cust. #: RS-HS-01B

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69678 - 20a

Cust. #: RS-HS-01B

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 1%

Hair - 1%

Other - 98%

Other - 100%

Lab ID #: 69678 - 21

Cust. #: RS-HS-01C

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: NO No Asbestos Observed

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.



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 - 21a Cust. #: RS-HS-01C

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Cellulose - 2%

Other - 96%

Lab ID #: 69678 - 22

Cust. #: RS-HS-01D

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69678 - 22a

Cust. #: RS-HS-01D

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Hair - 2%

Asbestos Present: **NO** 

No Asbestos Observed

Other - 100%

Asbestos Present: NO

No Asbestos Observed

Cellulose - 1%

Hair - 2%

Other - 97%

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.



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 Reported: 04/25/17

Date Analyzed: 04/20/17

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

Asbestos Present: **NO** 

No Asbestos Observed

No Asbestos Observed

Non-Asbestos

Other - 100%

Cellulose - 2%

Hair - 2%

Other - 96%

Lab ID #: 69678 - 23

Cust. #: RS-HS-01E

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69678 - 23a

Cust. #: RS-HS-01E

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

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.

# 69678

# APEX Research, Inc. 11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990 E-mail: apexresearch@chartermi.net

Fax: 734-449-9991

48 hour Rush Other: 5 day Phone: Address: City, St., Zip: Client Name: Turn Around Times: (Circle One) Lab ID# (888) 449-4566 72 hour 24 hour 2 0 0 Red Cedar Consulting Lansing, MI 48901 PO Box 13216 85-141-024 Tan Spiese Smiler X5-44-01B RS-411-014 RS-HM-03A Ç/ RS-HM-04A R5-HM-03B R5-HM-02B (TTP) All Samples 25-HM-05A 3. HM-DOA Sed Pater & moleur 82-4M-04B Client ID# Fax: (888) 448-8739 Elin Genelum 12x12 Degened VITT Black + Keld Sinden tokung **>**, TEM: Asbestos: Bulk Mold: Lead: Material/Location Bulk Bulk **AHERA 7400** Meteriala PLM EPA 600, PC all samples with a detection of <5% ACM. × Wipe Wipe Tape Contact Person: Aaron Paquet Date of Survey: 🖇 – Project #: Project: 2342 Bulk/NOB Air Point Count BioSIS Volume EPA Level II Paint Other Area PCM Soil Viable Results Log-In\_ Report. Lab Use Only

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Rev: 12/03 Work Forms: COC

# APEX Research, Inc. 11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990 E-mail: apexresearch@chartermi.net



Fax: 734-449-9991

Rush Other Shak 48 hour Phone: Relinquished by: Address: City, St., Zip: Client Name: Turn Around Times: (Circle One) Lab ID# (888)449-4566 72 hour 24 hour 8 0 F 8 ء Red Cedar Consulting Lansing, MI 48901 PO Box 13216 なーナン-old R5.45.01D RS-45-010 R5-12-01B RS-HM-09B RS-HM-29A RG-HM-27B X5-44-014 12x12 to R5-HM-4B Sey TTP) All Samples 25-HM-08B R5-HM-08A Mediua Received by: Client ID# Date: Fax: (888) 448-8739 TEM: Mold: Asbestos: Bulk Lead: Material/Location Fattern Lunder Bulk Bulk **AHERA 7400** apaquet@redcedarconsulting.net PLM EPA 600, PC all samples with a detection of <5% ACM. VE7 × Relinquished by: Wipe Wipe Contact Person: Aaron Paquet Date of Survey: ・ゲーターフ Project #: Project: 2340 Rusdan Bulk/NOB Air Point Count **BioSIS** Volume EPA Level II Paint Other Received by: Area PCM Soil Results Lab Use Only Log-In\_\_\_\_ Report\_

Rev: 12/03 Work Forms: COC

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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

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	Date:	Received by:						Area	vel II	Other Viable	t Soil	PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	Paquet		The state of the s	18-17
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# Red Cedar Consulting

# **Tables**

Table 1 - Summary of Hazardous Materials, 2340 Riordan St., Muskegon Heights, Michigan

Hazardous Materials Description and Location							
Location	Material Description	Quantity					
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:**

M	laterial Types	Abbrev	<u>viations</u>
N	= Miscellaneous building material	NQ	= Not quantified
T	SI = Thermal System Insulation	NA	= Not applicable
S	= Surfacing Material	ND	= Not detected. Laboratory result is less than 1 % asbestos
P	C = Point Count Analysis	lin. ft.	= linear feet
C	H = Chrysotile Asbestos	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

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

**Notes:** Material Types

M = Miscellaneous building material TSI = Thermal System Insulation

= Surfacing Material S

**Abbreviations** 

lin. ft. = linear feet

sq. ft. = square feet

Table 4 - Summary of All Asbestos Containing Materials, 2340 Riordan St., Muskegon Heights, Michigan

Interior - Asbestos Containing Materials				
Location	<b>Material Description</b>		Friable	Approx. Quantity
NW Bedroom	Leaf Pattern Linoleum		No	160 sq. ft.
		Total		160 sq. ft.
Interior - Asbestos Containing Materials				
Location	<b>Material Description</b>		Friable	Approx. Quantity
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
		Total		11 Windows

#### **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.

Muskegon County Land Bank Parcel ID: 61-26-185-099-0011-00

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.

Muskegon County Land Bank Parcel ID: 61-26-185-099-0011-00

#### **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.

Muskegon County Land Bank Parcel ID: 61-26-185-099-0011-00

#### 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.

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

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

Raion Poquet

Aaron Paquet

Michigan/EPA Certified Asbestos Building Inspector (A30955)

# Red Cedar Consulting

# Attachment 1 APEX Research Laboratory Analytical Results



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 40%

Other - 60%

Other - 50%

Lab ID #: 69940 - 01

Cust. #: RS-HM-01A Material: Green Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 2

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 50%

Lab ID #: 69940 - 01a Cust. #: RS-HM-01A

Material: Felt Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Cellulose - 40%

Other - 60%

Lab ID #: 69940 - 02 Cust. #: RS-HM-01B

Material: Green Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 2

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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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 - 02a

Cust. #: RS-HM-01B

Material: Felt Location:

Appearance: black,fibrous,homogenous

Layer: 2 of 2

Lab ID #: 69940 - 03

Cust. #: RS-HM-02A

Material: Grey Shingle

Location:

Appearance: green, fibrous, homogenous

Layer: 1 of 2

Lab ID #: 69940 - 03a

Cust. #: RS-HM-02A

Material: Brown Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Cellulose - 50%

Other - 50%

Asbestos Present: **NO** 

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

Cellulose - 40%

Cellulose - 40%

Other - 60%

Other - 60%

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: 2341 Reynolds St.

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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

Lab ID #: 69940 - 04

Cust. #: RS-HM-02B Material: Grey Shingle

Location:

Appearance: green, fibrous, homogenous

Layer: 1 of 2

Lab ID #: 69940 - 04a

Cust. #: RS-HM-02B

Material: Brown Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 69940 - 05

Cust. #: RS-HM-03A

Material: Beige 12x12 VFT

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 2

Non-Asbestos

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 40%

Cellulose - 40%

Other - 60%

Other - 60%

Asbestos Present: NO No Asbestos Observed

Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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Test Method, Polarized Light Microscopy (PLM)

Project: 2341 Reynolds St.

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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

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

Non-Asbestos

Lab ID #: 69940 - 05a

Cust. #: RS-HM-03A

Material: Glue Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 69940 - 06

Asbestos Present: **NO** 

Cust. #: RS-HM-03B No Asbestos Observed

Material: Beige 12x12 VFT

Location:

Appearance: beige, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69940 - 06a

Cust. #: RS-HM-03B

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

Other - 100%

Other - 100%

Asbestos Present: NO Other - 100%

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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

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69940 - 07

Cust. #: RS-HM-04A

Material: White 12x12 VFT

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: **NO** 

Other - 100%

Other - 100%

Lab ID #: 69940 - 07a

Cust. #: RS-HM-04A

Material: Glue Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 69940 - 08

Cust. #: RS-HM-04B

Material: White 12x12 VFT

Location:

Appearance: white, nonfibrous, homogenous

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

Layer: 1 of 2

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# 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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69940 - 08a

Cust. #: RS-HM-04B

Material: Glue Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

Asbestos Present: **NO** 

No Asbestos Observed

Other - 100%

Other - 100%

Lab ID #: 69940 - 09 Cust. #: RS-HM-05A

Material: Slate 12x12 VFT

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 1 of 2

Lab ID #: 69940 - 09a

Cust. #: RS-HM-05A

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

Asbestos Present: NO No Asbestos Observed

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Robert T. Letarte Jr., Laboratory Director

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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

Other - 100%

Other - 100%

Other - 100%

Lab ID #: 69940 - 10

Cust. #: RS-HM-05B

Material: Slate 12x12 VFT

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 1 of 2

Lab ID #: 69940 - 10a

Cust. #: RS-HM-05B

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 69940 - 11

Cust. #: RS-HM-05B

Material: Beige Mottled 12x12 VFT

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 2

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

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: 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 - 11a

Cust. #: RS-HM-06B

Material: Glue Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

Asbestos Present: **NO**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: **NO**No Asbestos Observed

Other - 100%

Other - 100%

Lab ID #: 69940 - 12a

C + // DC ID ( OCD

Cust. #: RS-HM-06B

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

Asbestos Present: **NO**No Asbestos Observed

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: 2341 Reynolds St.

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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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 80%

Other - 20%

Lab ID #: 69940 - 13

Cust. #: RS-HM-07A

Material: White 1x1 Ceiling Tile

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 69940 - 14

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 80%

Other - 20%

Cust. #: RS-HM-07B

Material: White 1x1 Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

Cellulose - 20%

Lab ID #: 69940 - 15 Cust. #: RS-HM-08A

Material: Drywall

No Asbestos Observed

Other - 80%

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

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Test Method, Polarized Light Microscopy (PLM)

Project: 2341 Reynolds St.

**Report To:** 

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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

Asbestos Present: **NO** 

POINT COUNT RESULT

Chrysotile - 0.50%

Non-Asbestos

Other - 99.50%

Lab ID #: 69940 - 15a

Cust. #: RS-HM-08A

Material: Joint Compound

Lab ID #: 69940 - 16

Cust. #: RS-HM-08B

Location:

Appearance: beige, fibrous, homogenous Layer: 2 of 2

Asbestos Present: **NO** 

Cellulose - 20%

No Asbestos Observed

Other - 80%

Material: Drywall Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

Lab ID #: 69940 - 16a

Cust. #: RS-HM-08B Material: Joint Compound

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

Chrysotile - 0.50%

Other - 99.50%

POINT COUNT RESULT

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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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

Non-Asbestos

Other - 100%

Other - 99.50%

Lab ID #: 69940 - 17

Cust. #: RS-HM-09A

Material: Glazing

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 1

Lab ID #: 69940 - 18

Cust. #: RS-HM-09B

Material: Glazing

Location:

Layer: 1 of 1

Asbestos Type/Percent

Asbestos Present: **NO** 

Other - 99.75%

POINT COUNT RESULT

Appearance: beige, nonfibrous, homogenous

Lab ID #: 69940 - 19

Cust. #: RS-HM-10A

Material: Glazing

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 1

Asbestos Present: **NO** 

Chrysotile - 0.25%

Chrysotile - Trace

POINT COUNT RESULT

POINT COUNT RESULT

Asbestos Present: NO

Chrysotile - 0.50%

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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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

Lab ID #: 69940 - 20

Cust. #: RS-HM-10B

Material: Glazing

Location:

Layer: 1 of 1

Asbestos Present: **NO** Chrysotile - 0.25%

POINT COUNT RESULT

Asbestos Present: **NO** 

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

Appearance: beige,nonfibrous,homogenous

Lab ID #: 69940 - 21 Cust. #: RS-HS-01A

Material: Plaster

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Lab ID #: 69940 - 22

Cust. #: RS-HS-01B

Material: Plaster

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Non-Asbestos

Other - 99.75%

Hair - 2%

Other - 98%

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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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 - 23

Cust. #: RS-HS-01C

Material: Plaster

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Lab ID #: 69940 - 24

Cust. #: RS-HS-01D

Material: Plaster

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Lab ID #: 69940 - 25

Cust. #: RS-HS-01E

Material: Plaster

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Hair - 2%

Other - 98%

Asbestos Present: **NO** No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Hair - 5%

Other - 95%

Hair - 2%

Other - 98%

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

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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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69940 - 26

Cust. #: RS-HS-02A

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: **NO** 

Hair - 2%

Lab ID #: 69940 - 26a Cust. #: RS-HS-02A

Material: Plaster Base Coat

No Asbestos Observed

Other - 98%

Other - 100%

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Lab ID #: 69940 - 27

Cust. #: RS-HS-02B

Asbestos Present: NO No Asbestos Observed

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Hair - 2%

Other - 98%

Lab ID #: 69940 - 27a Cust. #: RS-HS-02B

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** Other - 100%

Lab ID #: 69940 - 28 Cust. #: RS-HS-02C

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69940 - 28a

Cust. #: RS-HS-02C

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

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

Robert T. Letarte Jr., Laboratory Director

Hair - 2%

Other - 98%

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.



# 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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69940 - 29

Cust. #: RS-HS-02D

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: **NO** No Asbestos Observed

Hair - 5% Other - 95%

Other - 100%

Lab ID #: 69940 - 29a Cust. #: RS-HS-02D

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Lab ID #: 69940 - 30

Cust. #: RS-HS-02E

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: NO No Asbestos Observed

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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Hair - 5%

Other - 95%

Lab ID #: 69940 - 30a Cust. #: RS-HS-02E

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Asbestos Present: **NO** 

Cellulose - 80%

Cust. #: RS-HM-11A

Lab ID #: 69940 - 31

Material: White 1x1 Pinhole Ceiling Tile

No Asbestos Observed

Other - 20%

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

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: NO

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.

# 69940

APEX Research, Inc. 11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990 E-mail: apexi

research@chartermi.net
Fax:
734-449-9991



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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

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	Date :	Received by:												Volume Area	)B EPA Level II	BioSIS Other Viable	Air Paint Soil	Point Count PCM	apaquet@redcedarconsulting.net all samples with a detection of <5% ACM.	Person: Aaron Paquet		1	Survey: K-4-17
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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



Rev: 12/03 Work Forms: COC	Date: 5-4-17	Relinquished by:	6)	2	30		F	T	25	25	75	35	Lab ID#		Other: 504	48 hour 72 hour	Rush 24 hour	Turn Arou	Phone: (888) 449-4566	City, St., Zip:	Address: P	Client Name: R
	Date:	Received by:	25-HM-115	RS-Hm-11A	RS-45-02E	できって	RS-45-02C	120-14-52	25-45-024	スースーのド	RS-185-01D	RS-18-OK	Client ID#		(TTP) All Samples			Around Times: (Circle One)	-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
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# Red Cedar Consulting

# **Tables**

Table 1 - Summary of Hazardous Materials, 2341 Reynolds St., Muskegon Heights, Michigan

Hazardous Materials Description and Location												
Location	Material Description	Quantity										
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

CH

= Chrysotile Asbestos

<u>Material Types</u> <u>Abbreviations</u>

M = Miscellaneous building material NQ = Not quantified
TSI = Thermal System Insulation NA = Not applicable

S = Surfacing Material ND = Not detected. Laboratory result is less than 1 % asbestos PC = Point Count Analysis lin. ft. = linear feet

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

Asbestos Containing Material Description and Location												
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity							
Attic (484 sq. ft. at 1" depth)	Vermiculite	Yes	Fair	M	484 sq. ft. at 1" depth							

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

Interior - Asbestos Containing Mater	ials			_
Location	<b>Material Description</b>		Friable	Approx. Quantity
Building Attic	Vermiculite		Yes	484 sq. ft. at 4" depth
		Total		484 sq. ft. at 4" depth

# **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

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.

Muskegon County Land Bank Parcel ID: 61-26-185-099-0012-00

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.

Muskegon County Land Bank Parcel ID: 61-26-185-099-0012-00

# 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.

Muskegon County Land Bank Parcel ID: 61-26-185-099-0012-00

# 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).

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



# 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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Fiberglass - 20%

Other - 80%

Lab ID #: 69943 - 01

Cust. #: ST-HM-01A

Material: Grey Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 2

Asbestos Present: **NO** 

No Asbestos Observed

Fiberglass - 20%

Lab ID #: 69943 - 01a Cust. #: ST-HM-01A

Material: Grey Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

Fiberglass - 20%

Lab ID #: 69943 - 02 Cust. #: ST-HM-01B

Material: Grey Shingle

No Asbestos Observed

Other - 80%

Other - 80%

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 2

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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Fiberglass - 20%

Other - 80%

Lab ID #: 69943 - 02a

Cust. #: ST-HM-01B

Material: Grey Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 2 of 2

Asbestos Present: **NO** 

Cellulose - 15%

Cust. #: ST-HM-02A

Material: Drywall

Lab ID #: 69943 - 05

No Asbestos Observed

Fiberglass - 2% Other - 83%

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: NO

Cellulose - 15%

Lab ID #: 69943 - 06 Cust. #: ST-HM-02B

Material: Drywall

No Asbestos Observed

Fiberglass - 2%

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 1

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.

# 69943

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

Fax: 734-449-9991

Relinquished by: Received by: L  Date: 5-4-17 Date: 5-4  Rev: 12/03  Work Forms: COC			ST-HM-OLLS	3 ST- HM-02A	ST-Harols	SI-14m-014	Lab ID# Client ID#	Office: S www (11P) All Samples		48 hour 72 hour	Risch 24 hour	Turn Around Times: (Circle One)	449-4566	, Zip:	Client Name: Red Cedar Consulting Address: PO Box 13216
by: US  Relinquished by:  5 -4-77  Date:			),	Dogwood - NO JC.	در من	Gry Shingle	Material/Location Vol	TEM: AHERA 7400 Bulk/NOB	Mold: Bulk Tape BioSIS	Lead: Bulk Wipe Air	os: Bulk Wipe _	PLM EPA 600,	rso	Project #:	
Received by: 1035  Date:	District Leading After Assist						olume Area Results	EPA Level II	OtherViable	Paint Soil	Count PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	n: Aaron Paquet	Report	Lab Use Only Log-In

Work Forms: COC

# Red Cedar Consulting

# **Tables**

Table 1 - Summary of Hazardous Materials, 2345 Reynolds St., Muskegon Heights, Michigan

Hazardous Materials Description and Location				
Location Material Description		Quantity		
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

**Abbreviations** 

# **Notes:**

Material Types

M = Miscellaneous building material

NQ = Not quantified

TSI = Thermal System Insulation

NA = Not applicable

S = Surfacing Material ND = Not detected. Laboratory result is less than 1 % asbestos

PC = Point Count Analysis lin. ft. = linear feet CH = Chrysotile Asbestos 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

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

**Notes:** Material Types

M = Miscellaneous building material TSI = Thermal System Insulation

= Surfacing Material S

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

# **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

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.

Muskegon County Land Bank Parcel ID: 61-26-185-145-0006-00

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.

Muskegon County Land Bank Parcel ID: 61-26-185-145-0006-00

# **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.

Muskegon County Land Bank Parcel ID: 61-26-185-145-0006-00

# 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

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

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

Raion Paguet

Aaron Paquet

Michigan/EPA Certified Asbestos Building Inspector (A30955)

# Red Cedar Consulting

# Attachment 1 APEX Research Laboratory Analytical Results



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

Lab ID #: 69751 - 01a

Cust. #: FS-HM-01A

Material: Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 3

Lab ID #: 69751 - 01b

Cust. #: FS-HM-01A

Material: Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 3 of 3

Asbestos Present: NO

No Asbestos Observed

Fiberglass - 15%

Other - 85%

Asbestos Present: **NO** 

No Asbestos Observed

Fiberglass - 15%

Other - 85%

Asbestos Present: NO

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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Fiberglass - 15%

Other - 85%

Lab ID #: 69751 - 02

Cust. #: FS-HM-01B

Material: Roofing Materials

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 3

No Asbestos Observed

Asbestos Present: **NO** 

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: NO

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

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: 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

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Cellulose - 95%

Other - 5%

Lab ID #: 69751 - 03

Cust. #: FS-HM-02A

Material: Vapor Barrier

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69751 - 04

Cust. #: FS-HM-02B

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 95%

Other - 5%

Material: Vapor Barrier

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69751 - 05

Cust. #: FS-HM-03A

Material: Tan Vinyl

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: NO

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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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: NO

Other - 85%

Lab ID #: 69751 - 07 Cust. #: FS-HM-04A

Material: Yellow Pebble Linoleum

Location:

Appearance: yellow,fibrous,nonhomogenous

Layer: 1 of 1

Lab ID #: 69751 - 08

Cust. #: FS-HM-04B

Material: Yellow Pebble Linoleum

Location:

Appearance: yellow,fibrous,nonhomogenous

Layer: 1 of 1

No Asbestos Observed

Cellulose - 10% Fiberglass - 5%

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 50%

Other - 50%

Asbestos Present: NO Cellulose - 50% No Asbestos Observed 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.



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

Lab ID #: 69751 - 09a

Cust. #: FS-HM-05A

Material: Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Lab ID #: 69751 - 10

Cust. #: FS-HM-05B

Material: Drywall

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 2

Asbestos Present: NO

No Asbestos Observed

Cellulose - 20%

Fiberglass - 2%

Other - 78%

Other - 100%

Cellulose - 20%

Fiberglass - 2%

Other - 78%

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

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.



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 # Date Collected: 04/21/17

17-69751

Date Received: 04/24/17

Date Analyzed: 04/28/17

Date Reported: 05/01/17

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69751 - 10a

Cust. #: FS-HM-05B

Material: Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Other - 100%

Lab ID #: 69751 - 11 Cust. #: FS-HS-01A

Material: Surfacing Material

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 69751 - 12

Cust. #: FS-HS-01B

Material: Surfacing Material

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

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.



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

No Asbestos Observed

Non-Asbestos

Lab ID #: 69751 - 13

Cust. #: FS-HS-01C

Material: Surfacing Material

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 69751 - 14

Cust. #: FS-HS-02A

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69751 - 14a

Cust. #: FS-HS-02A

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Asbestos Present: NO

Other - 100%

Asbestos Present: **NO** 

No Asbestos Observed

Other - 100%

Asbestos Present: NO

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.



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

Other - 100%

Lab ID #: 69751 - 15

Cust. #: FS-HS-02B

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69751 - 15a

Cust. #: FS-HS-02B

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Lab ID #: 69751 - 16

Cust. #: FS-HS-02C

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

Hair - 2%

No Asbestos Observed

Other - 98%

Other - 100%

Asbestos Present: NO No Asbestos Observed

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.



Test Method, Polarized Light Microscopy (PLM)

Project: 2521 Maffett St

R	enor	• <b>+</b> "	$\Gamma \alpha \cdot$

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

Lab ID #:

Cust. #: Material:

Location: Appearance: Layer:

Lab ID #:

Cust. #:

Material: Location:

Appearance: Layer:

of

of

Asbestos Present: NO

Hair - 2%

No Asbestos Observed

Other - 98%

Asbestos Present:

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.

# Apex # 69751

APEX Research, Inc. 11054 Hi Fech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990 E-mail: apexresearch@chartermi.net

Fax: 734-449-9991

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	t Soil	Air Paint	Wipe	Lead: Bulk		
í	PCM	Point Count	Wipe	Asbestos: Bulk		Riich 24 hour
apaquet@redcedarconsulting.net with a detection of <5% ACM.	t@redcedarccetection of	apaque samples with a d	EPA 600, PC all	Circle One) PIM	Around Times: (Circle One)	Turn Arou
<b>j</b> 1	Aaron Paquet	<u>ب</u>	Contact Persor	(888) 448-873	-4566 Fax:	Phone: (888) 449-456
		# :	Project #:		Lansing, MI 48901	City, St., Zip:
Report	extist	Mah	Project: 152/		0 Box 13216	Address: Po
Lab Use Only	2/-17	Survey: ✓	Date of Survey	īā	Red Cedar Consulting	Client Name: R

Rev: 12/03 Work Forms: COC

# 15489

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

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APEX	
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Relinquished by: Della Meceived by:					16 F3.45-02C	S FS-145-02B	14 F5- H5-02 A	7 FS- H5-01 C	(0 F5-45-01B	Lab ID # Client ID #		Other: 5day (TTP) All Samples	48 hour 72 hour	Rush 24 hour	Turn Around Times: (Circle One)	Phone: (888) 449-4566 Fax:	City, St., Zip: Lansing, MI 48901	Address: PO Box 13216	Client Name: Red Cedar Consulting
SAN					11		Plester	J 0	Surfacing	Materi	TEM: AH	Mold: Bulk	Lead: Bulk	Asbestos: Bulk		48-87			Đ.
APR 2									Material	Material/Location	AHERA 7400 Bulk/NOB	Tape	Wipe	Wipe	PLM EPA 600, PC all	Contact Person:	Project #:	Project: 25	Date of
All the state of t	RECEIVE	O STATE OF THE PARTY OF THE PAR								Volume	OB EPA Level II	BioSIS	Air Paint	Point Count	all samples with a	Person: Aaron	#:	July 1	Date of Survey:
Received by:									, a	Area	vel II	Other Viable	ıt Soil	PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	Paquet	then in.	Matter	21-17
										Results		CD	Ī		ulting.net k ACM.		Report	Log-In	Lab Use Only

Rev: 12/03 Work Forms: COC

Date: 4-21-17

Date:\_

4-21-17

Date: APEX RESEARCH

Date:

# Red Cedar Consulting

# **Tables**

Table 1 - Summary of Hazardous Materials, 2521 Maffett St., Muskegon Heights, Michigan

	Hazardous Materials Description and Location	
Location	Material Description	Quantity
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

Material Types

M = Miscellaneous building material

TSI = Thermal System Insulation

S = Surfacing Material

PC = Point Count Analysis CH = Chrysotile Asbestos

## Abbreviations

 $\overline{NQ}$  = 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

A	Asbestos Containing Material Description a	nd Location				
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity	
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.	

Material Types

M = Miscellaneous building material TSI = Thermal System Insulation

= Surfacing Material S

Abbreviations

lin. ft. = linear feet

= square feet sq. ft.

Table 4 - Summary of All Asbestos Containing Materials, 2521 Maffett St., Muskegon Heights, Michigan

Interior - Asbestos Containing Materials				
Location	<b>Material Description</b>		Friable	Approx. Quantity
Basement (6 in. dia. Transite Pipe, 10 lin. ft.)	Transite Pipe		Yes	10 lin. ft.
		Total		10 lin. ft.
<b>Interior - Asbestos Containing Materials</b>				
Location	<b>Material Description</b>		Friable	Approx. Quantity
Basement (Galvanized Water Line with HVAC Wrap, 8 lin. ft.)	HVAC Duct Wrap		Yes	8 lin. ft.
		Total		8 lin. ft.

## **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.

Muskegon County Land Bank Parcel ID: 61-26-185-159-0008-00

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.

Muskegon County Land Bank Parcel ID: 61-26-185-159-0008-00

#### **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.

Muskegon County Land Bank Parcel ID: 61-26-185-159-0008-00

#### 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

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

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

Raion Paguet

Aaron Paquet

Michigan/EPA Certified Asbestos Building Inspector (A30955)

# Red Cedar Consulting

# Attachment 1 APEX Research Laboratory Analytical Results



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

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

Lab ID #: 69722 - 01a

Cust. #: RS-HM-01A

Material: Green Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 4

Lab ID #: 69722 - 01b

Cust. #: RS-HM-01A

Material: Black Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 3 of 4

31

Asbestos Present: **NO**No Asbestos Observed

Cellulose - 40%

Other - 60%

Asbestos Present: NO

No Asbestos Observed

Cellulose - 40%

Other - 60%

Asbestos Present: **NO** 

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.



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

Lab ID #: 69722 - 02

Cust. #: RS-HM-01B

Material: Roofing Material

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 4

Lab ID #: 69722 - 02a

Cust. #: RS-HM-01B

Material: Green Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 2 of 4

Asbestos Present: NO

No Asbestos Observed

Cellulose - 40%

Other - 60%

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 40%

Other - 60%

Asbestos Present: NO

Cellulose - 40%

No Asbestos Observed

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.



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

Lab ID #: 69722 - 02c

Cust. #: RS-HM-01B

Material: Black Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 4 of 4

Lab ID #: 69722 - 03

Cust. #: RS-HM-02A

Material: Red/Grey Linoleum

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 40%

Cellulose - 40%

Other - 60%

Other - 60%

Asbestos Present: NO

Asbestos Present: **NO** 

No Asbestos Observed

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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 40%

Other - 60%

Lab ID #: 69722 - 04

Cust. #: RS-HM-02B

Material: Red/Grey Linoleum

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 69722 - 05

Cust. #: RS-HM-03A

Material: Grey Vinyl

Location:

Appearance: grey,fibrous,nonhomogenous

Layer: 1 of 1

Asbestos Present: **NO** 

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: NO

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.



# 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 - 07

Cust. #: RS-HM-04A

Material: Grey Linoleum

Location:

Appearance: grey,fibrous,nonhomogenous

Layer: 1 of 1

Lab ID #: 69722 - 08

Cust. #: RS-HM-04B

Material: Grey Linoleum

Location:

Appearance: grey,fibrous,nonhomogenous

Layer: 1 of 1

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: **NO** 

No Asbestos Observed

Cellulose - 40%

Other - 60%

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 40%

Other - 60%

Asbestos Present: NO

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.



# 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 - 10

Cust. #: RS-HM-05B

Material: 1x1 White Ceiling Tile w/ Pinholes

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69722 - 11

Cust. #: RS-HM-06A

Material: 2x4 White Smooth Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

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: NO

No Asbestos Observed

Cellulose - 70%

Other - 30%

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 80%

Other - 20%

Asbestos Present: NO

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.



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 - 13

Cust. #: RS-HM-07A

Material: Drywall/Joint Compound

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 69722 - 14

Cust. #: RS-HM-07B

Material: Drywall/Joint Compound

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 69722 - 15

Material: Black Asphalt Siding

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: NO

Asbestos Present: **NO** 

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

No Asbestos Observed

Cellulose - 20%

Cellulose - 20% Other - 80%

Cellulose - 35%

Other - 65%

Other - 80%

Cust. #: RS-HM-08A

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.



# 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

No Asbestos Observed

Non-Asbestos

Lab ID #: 69722 - 16

Cust. #: RS-HM-08B

Material: Black Asphalt Siding

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 1

Lab ID #: 69722 - 17

Cust. #: RS-HM-09A

Material: Window Glazing

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 1

Lab ID #: 69722 - 18

Cust. #: RS-HM-09B

Material: Window Glazing

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 1

Asbestos Present: NO

Cellulose - 40%

Other - 60%

Asbestos Present: **NO** No Asbestos Observed

Asbestos Present: NO

Wollastonite - 1%

Wollastonite - 1%

Other - 99%

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

Other - 99% No Asbestos Observed

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.

# 69722

# APEX Research, Inc. 11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990 E-mail: apexresearch@chartermi.net

Fax: 734-449-9991

Date: 4-20-17 Date:	Relinquished by: A Shefflettee Received by:	RS HM-c	10 RS-HM 65B	0 RS: HM-054	840-HH-04B	RS-HM-OHA Khay		S RS-HM-03A	RS. HM- 02B	S R5-HM-0ZA	2 RS-4M-01B	RS-AM-01A	Lab ID # Client ID #	Curor: August 111) All Samples	Other: S. C. C.	48 hour 72 hour	Rush 24 hour	Turn Around Times: (Circle One)	Phone: (888) 449-4566 F	City, St., Zip: Lansing, MI 48901	Address: PO Box 13216	Client Name: Red Cedar Consulting
-20-17	nd by: UPS Relinquished by: M	HM-06A 2x 4 white smooth CT	58	54 1× 1 white CT w/ senholes	., 0	A Kesy Elisleum	; 0	3A they Vinyl	**	A Red + Kray Knielenn	:\	A Roofing materials	Material/Location	TEM: AHERA 7400 Bulk/NOB	Mold: Bulk Tape	Lead: Bulk Wipe	Asbestos: Bulk X Wipe	PLM EPA 600, PC	Fax: (888) 448-8739 Contact Person		Project:	
APR 2 I 201	WARDEIVED Received by:												Volume Area	NOB EPA Level II	BioSIS Other Vi	_ Air Paint Soil	Point Count PCM	apaquet@redcedarconsulting.net all samples with a detection of <5% ACM.	Person: Aaron Paquet		2529 Ray St	Date of Survey: 4-20-17
										0.00			Results		Viable		•	nsulting.net<5% ACM.			Report	Lab Use Only Log-In

Rev: 12/03 Work Forms: COC

ATIX ATISTIATOS

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



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			6	RS-4M-078	
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			2x4 white senseth CT	R5-14M-068	
Results	Area	Volume	Material/Location	D# Client ID#	Lab ID#
	vel II	OB EPA Level II	TEM: AHERA 7400 Bulk/NOB	d	Name of the state
Viable	Other V	_ BioSIS	Mold: Bulk Tape	TIP ALL STORY	Other:
	ıt Soil_	Air Paint	Lead: Bulk Wipe	72 hour	48 hour
	PCM	Point Count	Asbestos: Bulk Wipe	24 hour	Rush
apaquet@redcedarconsulting.net with a detection of <5% ACM.	et@redcedarco detection of	apaque all samples with a c	PLM EPA 600, PC	Turn Around Times: (Circle One)	
ļ	Aaron Paquet	ı İ	(888) 448-8739	(888) 449-4566 Fax:	Phone:
vebou		#:	Project # :	, Zip: Lansing, MI 48901	City, St., Zip:
Log-III		0 71	Project: 25	PO Box 13216	Address:
Lab Use Only	4-20-17		Date of Survey	ame: Red Cedar Consulting	Client Name:

Date:

4-20-17

Date : \_

4-20-17

Date:

Date:

Received by:

STX PROTATO

Rev: 12/03 Work Forms: COC

# Red Cedar Consulting

# **Tables**

Table 1 - Summary of Hazardous Materials, 2529 Ray St., Muskegon Heights, Michigan

	Hazardous Materials Description and Location	
Location	Material Description	Quantity
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

# 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

Asbestos Containing Material Description and Location						
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity	
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.	

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

Interior - Asbestos Containing Materials			
Location	Material Description	Friable	Approx. Quantity
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.)	HVAC Duct Wrap	Yes	54 sq. ft.
	Total		54 sq. ft.

#### **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.

Muskegon County Land Bank Parcel ID: 61-26-185-149-0009-00

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.

Muskegon County Land Bank Parcel ID: 61-26-185-149-0009-00

#### **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.

Muskegon County Land Bank Parcel ID: 61-26-185-149-0009-00

### 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.

Muskegon County Land Bank Parcel ID: 61-26-185-149-0009-00

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)

Muskegon County Land Bank Parcel ID: 61-26-185-149-0009-00

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.

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** 

Raion Poquet

Aaron Paguet

Michigan/EPA Certified Asbestos Building Inspector

(A30955)

### Red Cedar Consulting

### Attachment 1 APEX Research Laboratory Analytical Results



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 40%

Other - 60%

Lab ID #: 69787 - 01

Cust. #: RS-HM-01A

Material: Roofing Materials

Location: House

Appearance: black,fibrous,homogenous

Layer: 1 of 2

Asbestos Present: YES Chrysotile - 10%

Asbestos Present: NO

No Asbestos Observed

Other - 90%

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

Lab ID #: 69787 - 02

Cust. #: RS-HM-01B

Material: Roofing Materials

Location: House

Appearance: black,fibrous,homogenous

Layer: 1 of 2

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.



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

Lab ID #: 69787 - 04

Cust. #: RS-HM-02B

Material: Roofing Materials

Location: Garage

Appearance: black,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Cellulose - 40%

Cellulose - 40%

Other - 60%

Other - 60%

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: 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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

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: **NO**No Asbestos Observed

Asbestos Present: YES

Chrysotile - 20%

O Other - 100%

Lab ID #: 69787 - 05a Cust. #: RS-HM-03A

Cusi. #. KS-111VI-0

Material: Glue Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 3

Lab ID #: 69787 - 05b

Cust. #: RS-HM-03A

Material: Linoleum

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 3 of 3

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

Robert T. Letarte Jr., Laboratory Director

Other - 80%

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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 Present: NO

No Asbestos Observed

Lab ID #: 69787 - 06

Cust. #: RS-HM-03B

Material: 12x12 Black/Grey Layered VFT

Location:

Appearance: black,nonfibrous,homogenous

Layer: 1 of 3

Lab ID #: 69787 - 06a

Cust. #: RS-HM-03B

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 3

Lab ID #: 69787 - 06b

Cust. #: RS-HM-03B

Material: Linoleum

Location:

Appearance:

Layer: 3 of 3

Asbestos Type/Percent Non-Asbestos

Other - 100%

Asbestos Present: **NO** 

No Asbestos Observed

Other - 100%

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: 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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 10%

Fiberglass - 10%

Other - 80%

Lab ID #: 69787 - 07

Cust. #: RS-HM-04A

Material: Cream 4" Squared Vinyl

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 1

Cellulose - 10%

Lab ID #: 69787 - 08 Cust. #: RS-HM-04B

Material: Cream 4" Squared Vinyl

Asbestos Present: **NO**No Asbestos Observed

Fiberglass - 10% Other - 80%

<sub>'</sub>1

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: NO

Cellulose - 50%

Lab ID #: 69787 - 09 Cust. #: RS-HM-05A

Material: Brown Linoleum

No Asbestos Observed

Other - 50%

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 1

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: 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 - 10

Cust. #: RS-HM-05B

Material: Brown Linoleum

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 69787 - 11

Cust. #: RS-HM-06A

Material: 12x12 Black Marble VFT

Location:

Appearance: black,nonfibrous,homogenous

Layer: 1 of 3

Cust. #: RS-HM-06A

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 3

Asbestos Present: NO

No Asbestos Observed

Cellulose - 50%

Other - 50%

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 1%

Other - 99%

Other - 100%

Lab ID #: 69787 - 11a

Material: Glue

Asbestos Present: NO No Asbestos Observed

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: 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

Asbestos Present: YES

Chrysotile - 30%

Non-Asbestos

Other - 70%

Lab ID #: 69787 - 11b

Cust. #: RS-HM-06A

Material: Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 3 of 3

Asbestos Present: **NO**No Asbestos Observed

Other - 100%

Lab ID #: 69787 - 12 Cust. #: RS-HM-06B

Material: 12x12 Black Marble VFT

Location:

Appearance: black,nonfibrous,homogenous

Layer: 1 of 3

Lab ID #: 69787 - 12a

Cust. #: RS-HM-06B

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

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

Layer: 2 of 3

Asbestos Present: **NO**No Asbestos Observed

Jant

Robert T. Letarte Jr., Laboratory Director

Other - 100%

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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 - 12b

Cust. #: RS-HM-06B Material: Linoleum

Location:

NOT ANALYZED

Asbestos Present:

Appearance: Layer: 3 of 3

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: NO

Asbestos Present: **NO** 

No Asbestos Observed

No Asbestos Observed

Cellulose - 40%

Cellulose - 40% Mineral Wool - 30%

Other - 30%

Mineral Wool - 30%

Other - 30%

Lab ID #: 69787 - 14 Cust. #: RS-HM-07B

Cust. #: KS-HM-0/B

Material: 2x4 White CT w/ Pinholes, Fissures

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

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: 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

Asbestos Present: **NO** 

No Asbestos Observed

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 20%

Other - 80%

Lab ID #: 69787 - 15

Cust. #: RS-HM-08A Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

Asbestos Present: **NO** 

Other - 100%

Cellulose - 20%

Other - 80%

Lab ID #: 69787 - 15a Cust. #: RS-HM-08A

Material: Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Lab ID #: 69787 - 16

Cust. #: RS-HM-08B

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

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: 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

Other - 100%

Lab ID #: 69787 - 16a

Cust. #: RS-HM-08B

Material: Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Lab ID #: 69787 - 17

Cust. #: RS-HM-09A

Material: Tan/Brown Linoleum

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 69787 - 18

Cust. #: RS-HM-09B

Material: Tan/Brown Linoleum

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

Cellulose - 50%

Cellulose - 50%

Other - 50%

Other - 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: 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

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Cellulose - 80%

Other - 20%

Lab ID #: 69787 - 19

Cust. #: RS-HM-10A

Material: 1x1 White Textured Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69787 - 20

Cust. #: RS-HM-10B

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 80%

Other - 20%

Material: 1x1 White Textured Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: YES

Chrysotile - 5%

Wollastonite - 2%

Other - 93%

Cust. #: RS-HM-11A

Lab ID #: 69787 - 21

Material: Window Glazing

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

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: 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 - 22

Cust. #: RS-HM-11B Material: Window Glazing

Location:

NOT ANALYZED

Asbestos Present:

Appearance:

Layer: of

Lab ID #: 69787 - 23

Cust. #: RS-HM-12A

Material: Vapor Barrier

Location:

Layer: 1 of 1

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 60%

Other - 40%

Appearance: black, fibrous, homogenous

Lab ID #: 69787 - 24

Cust. #: RS-HM-12B

Material: Vapor Barrier

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: NO

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.



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 - 25

Cust. #: RS-HM-13A

Material: Yellow Linoleum

Location:

Appearance: yellow,fibrous,nonhomogenous

Layer: 1 of 1

Lab ID #: 69787 - 26

Cust. #: RS-HM-13B

Material: Yellow Linoleum

Location:

Appearance: Layer:

Lab ID #: 69787 - 27

Cust. #: RS-HM-14A

Material: Tan/Black Linoleum

Location: Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: YES

Other - 75%

Chrysotile - 25%

Asbestos Present:

NOT ANALYZED

Asbestos Present: YES Chrysotile - 30%

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

Robert T. Letarte Jr., Laboratory Director

Other - 70%

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.



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

Other - 100%

Other - 100%

Lab ID #: 69787 - 28

Cust. #: RS-HM-14B

Material: Tan/Black Linoleum

Location:

NOT ANALYZED

Appearance: Layer: of

Lab ID #: 69787 - 29

Cust. #: RS-HM-15A

Material: Layered Woodgrain 12x12 VFT

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 1 of 5

Lab ID #: 69787 - 29a

Cust. #: RS-HM-15A

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 5

Asbestos Present:

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

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.



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

Non-Asbestos

Lab ID #: 69787 - 29b

Cust. #: RS-HM-15A

Material: Beige Floor Tile

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 3 of 5

Lab ID #: 69787 - 29c

Cust. #: RS-HM-15A

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 4 of 5

Lab ID #: 69787 - 29d

Cust. #: RS-HM-15A

Material: Linoleum

Location:

Appearance: black, fibrous, nonhomogenous

Layer: 5 of 5

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Asbestos Present: **NO** 

No Asbestos Observed

Other - 100%

Other - 70%

Asbestos Present: YES

Chrysotile - 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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69787 - 30

Cust. #: RS-HM-15B

Material: Layered Woodgrain 12x12 VFT

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 1 of 5

Asbestos Present: **NO** No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Other - 100%

Lab ID #: 69787 - 30a Cust. #: RS-HM-15B

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 5

Lab ID #: 69787 - 30b

Cust. #: RS-HM-15B

Material: Beige Floor Tile

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 3 of 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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69787 - 30c

Cust. #: RS-HM-15B

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 4 of 5

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: NO

No Asbestos Observed

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

Robert T. Letarte Jr., Laboratory Director

Other - 100%

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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69787 - 31a

Cust. #: RS-HM-16A

Material: Glue Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 3

Asbestos Present: **NO** 

Cellulose - 10%

Lab ID #: 69787 - 31b Cust. #: RS-HM-16A

Material: Linoleum

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 3 of 3

No Asbestos Observed

Fiberglass - 10%

Other - 80%

Other - 100%

Lab ID #: 69787 - 32

Cust. #: RS-HM-16B

Material: 12x12 Grey VFT

Location:

Appearance: grey,nonfibrous,homogenous

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

Layer: 1 of 3

Asbestos Present: NO

No Asbestos Observed

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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69787 - 32a

Cust. #: RS-HM-16B

Material: Glue Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 3

Asbestos Present: **NO** 

Cellulose - 10%

Lab ID #: 69787 - 32b Cust. #: RS-HM-16B

Material: Linoleum

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 3 of 3

No Asbestos Observed

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: NO

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.



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: NO

No Asbestos Observed

Cellulose - 10%

Other - 80%

Lab ID #: 69787 - 35

Cust. #: RS-HS-01A

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69787 - 35a

Cust. #: RS-HS-01A

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Fiberglass - 10%

Other - 100%

Asbestos Present: NO

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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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

Other - 100%

Cellulose - 2%

Other - 98%

Other - 100%

Lab ID #: 69787 - 36

Cust. #: RS-HS-01B

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69787 - 36a

Cust. #: RS-HS-01B

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Lab ID #: 69787 - 37

Cust. #: RS-HS-01C

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: **NO** 

Asbestos Present: **NO** 

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

No Asbestos Observed

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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69787 - 37a

Cust. #: RS-HS-01C

Material: Plaster Base Coat

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 2 of 2

Asbestos Present: NO

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

Lab ID #: 69787 - 38a

Cust. #: RS-HS-01D

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Asbestos Present: **NO**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.



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

Asbestos Present: NO

Asbestos Present: **NO** 

No Asbestos Observed

No Asbestos Observed

Non-Asbestos

Other - 100%

Other - 100%

Lab ID #: 69787 - 39

Cust. #: RS-HS-01E

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69787 - 39a

Cust. #: RS-HS-01E

Material: Plaster Base Coat

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #:

Asbestos Present:

Cust. #: Material:

Layer:

Location: Appearance:

of

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.

### 69787

# 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

Other: Sday Rush 48 hour Phone: Address: Client Name: City, St., Zip: Furn Around Times: (Circle One) Lab ID (888) 449-4566 72 hour 24 hour D 0 #  $\mathcal{O}$ S Red Cedar Consulting Lansing, PO Box 13216 RS-HM-01B R5-HM-Oles 12x12 Bluck Marble VFT/ Layour R5-1+11-02A RS-4M-01A RS-44-03B PS-144-054 R5-44-03A 25- HM-04B R5-4M-04A R5-4M-02B (TTP) All Samples Client ID # HK-05B MI 48901 Fax: 2x12 Black & Than Sugared VE Chown Lindeuse Yearn 4 tooping (888) 448-8739 Asbestos: Bulk TEM: Mold: Lead: Material/Location Materiela House Bulk Bulk Material **AHERA 7400** aguecea PLM EPA 600, PC all samples with a detection of <5% ACM. × Wipe Wipe Tape Date of Survey: 4.25-17 Contact Person: Project #: Project: 2533 Ryanda M Kerry Bulk/NOB BioSIS Air Point Count Volume Aaron Paquet EPA Level II Paint Other Area PCM Results Lab Use Only Log-In\_\_\_\_ Report\_

Relinquished by: AtteMatter Received by:

Date: 4-25-17

Relinquished by:

Received by: APR 2 6

APEX HESEARCH

100g

Date:

Rev: 12/03 Work Forms: COC

Rush

24 hour

Phone:

(888) 449-4566

Client Name:

Address:

PO Box 13216

City, St., Zip:

48 hour

72 hour

Other: 5 May

Lab ID#

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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

Relinquished by: Wille Musture Received by: Turn Around Times: (Circle One) Red Cedar Consulting Lansing, MI 48901 RS-HM-09A Ian and Beson Sindleum R5-HM-074 284 White CT w/ Re-holy + fine (TTP) All Samples 811-WH-52 RS-HM-18A RS-HM-06B 12×12 Black Marble VFT Layers X5- HM-084 R5-4M-07B RS- 414-09B RS-44-08\$ X5-HM-11A RS-AM-10B Client ID # Date: Fax: (888) 448-8739 1x1 whate Shepvall of Sout Compound Wendow 4-25-17 Asbestos: Bulk Mold: Lead: Material/Location Bulk Bulk AHERA 7400 PLM EPA 600, PC all samples with a detection of <5% ACM. testured × Date: Relinquished by: Wipe Wipe Tape Date of Survey: Contact Person: Aaron Paquet Project #: Project: 2533 Bulk/NOB Air Point Count BioSIS Volume EPA Level II 4-25-17 Paint Other Received by: Date:\_ Area PCM Soil ADOX DO LPR N Results Report\_ Log-In\_ Lab Use Only

Rev: 12/03 Work Forms: COC

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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



- 1	l	Relinquished by: Affle Wester Recei	33 RS-11	37 RS-HM-1	31 R5-HH-	30 R5-HM-1	RS-HM-	28 RS-+M-1	27 R5-HM-1	26 RS-HM-13B	35 RS-HN-1	23 RS-HM-12	Lab ID # Client ID #		Other: 5day (TTP) All Samples	48 hour 72 hour	Rush 24 hour		Turn Around Time	Phone: (888) 449-4566	City, St., Zip: Lansing, MI 48	Address: PO Box 13216	Client Name: Red Cedar Consulting
Date: 4-25-11	_	Received by:	17A Len Vingt	1	16A 12×12 Keay V		15A Tayered Woodgrain		144 Tan & Black	38 "	13A Gellow Line	121 Vepor Bernier		TEM:	Mold: Bulk		<b>1</b>	Asbestos: Bulk	limes: (Circle One) PLM	Fax: (888) 448-8739	48901		ulting
Date:	· ·	Relinguished by:	2	0.	(FT Sayered	•	main 12X12 VET		Exister .	-	leum	iel	Material/Location	AHERA 7400 Bulk/NOB	Tape	Wipe	1	× Wipe	EPA 600, PC	Contact Person:	Project #:	Project: 253	Date of Survey
													Volume	B EPA Level II	BioSIS(	Air Paint	1	Point Count	apaquet all samples with a de	Aaron		2533 8	urvey: 4.25-
Date:	<u>A</u>	Received by:										To the second se	Area	91 II	Other Viable _	Soil		PCM	apaquet@redcedarconsulting.net ith a detection of <5% ACM.	Paquet		alde St	-17
P	P												Results						ting.net \CM.			Report	Lab Use Only

## APEX Research, Inc. 11054 HI Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990 E-mail: apexresearch@chartermi.net



Fax: 734-449-9991

Other: Relinquished by: John Left Letter Received by: 48 hour Address: Client Name: City, St., Zip: Lansing, MI 48901 Turn Around Times: (Circle One) (888) 449-4566 72 hour 24 hour 8 120 88 Red Cedar Consulting PO Box 13216 RS-145-01A R5-45-01C R5-HM-17B RS-45-018 R5-45-018 RS-15-010 (TTP) All Samples Client ID# Fax: The Veingle Plester (888) 448-8739 Asbestos: Bulk TEM: Mold: Lead: Material/Location Bulk Bulk AHERA 7400 PLM EPA 600, PC all samples with a detection of <5% ACM. Relinquished by: Wipe Wipe Contact Person: Aaron Paquet Date of Survey: 4-25-17 Project #:\_ Project: 2533 Lywold of Bulk/NOB Point Count BioSIS Volume EPA Level II Paint Other Received by: Area Results Lab Use Only Log-In \_\_\_\_ Report\_

Rev: 12/03 Work Forms: COC

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### Red Cedar Consulting

### **Tables**

Table 1 - Summary of Hazardous Materials, 2533 Reynolds St., Muskegon Heights, Michigan

Hazardous Materials Description and Location									
Location	Material Description	Quantity							
Exterior	Automobile Tires	5							
Garage	Automobile Tires	3							
Garage	Television	3							
Garage	Gallon Container Misc. Paint	14							
Garage	Quart Container Misc. Paint	3							
1st Floor Living Room	Thermostat	1							
1 <sup>st</sup> Floor Kitchen	Carbon Monoxide Detector	1							
1st 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	1st Floor Bathroom	NA	
RS-HM-04B	Cream 4" Squared Vinyl	No	M	Category I	ND	1st Floor Bathroom	NA	
RS-HM-05A	Brown Linoleum	No	M	Category I	ND	1st Floor Closet	NA	
RS-HM-05B	Brown Linoleum	No	M	Category I	ND	1st Floor Closet	NA	
RS-HM-06A	Black Marble Layered 12x12 Vinyl Floor Tile	No	M	Category I	ND/ND/30%CH	1st Floor NW Bedroom	235 sq. ft.	
RS-HM-06B	Black Marble Layered 12x12 Vinyl Floor Tile	No	M	Category I	ND/ND/NA	1st 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	1st Floor Kitchen Wall	NA	
RS-HM-09A	Tan & Brown Linoleum	No	M	Category I	ND	1st Floor Closet	NA	
RS-HM-09B	Tan & Brown Linoleum	No	M	Category I	ND	1st Floor Closet	NA	
RS-HM-10A	White Textured 1'x1' Ceiling Tile	Yes	M	Category II	ND	1st Floor Hall Closet	NA	
RS-HM-10B	White Textured 1'x1' Ceiling Tile	Yes	M	Category II	ND	1st Floor Hall Closet	NA	
RS-HM-11A	Window Glazing	Yes	M	Category II	5%CH	1st Floor Kitchen	37 Windows	
RS-HM-11B	Window Glazing	Yes	M	Category II	NA	1st 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	1st Floor NE Bedroom Ceiling	NA
RS-HS-01C	Plaster	No	S	Category II	ND/ND	1st Floor Kitchen Wall	NA
RS-HS-01D	Plaster	No	S	Category II	ND/ND	1st 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

A	Asbestos Containing Material Description and Location										
Location	Material Description	Condition	Material Type	Approx. Quantity							
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

= 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

Exterior - Asbestos Containing Materials			
Location	Material Description	Friable	Approx. Quantity
Building Roof	Asphalt Shingles	No	1,650 sq. ft.
	Total		1,650 sq. ft.
Interior - Asbestos Containing Materials			
Location	Material Description	Friable	Approx. Quantity
1 <sup>st</sup> Fl. Kitchen	Black & Gray Layered 12x12 Vinyl Floor Tile	No	260 sq. ft.
1st 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.
	Total		939 sq. ft.
Interior - Asbestos Containing Materials			
Location	Material Description	Friable	Approx. Quantity
Living (2 registers, 20 sq. ft.)			
Bath (1 register, 10 sq. ft.)	HVAC Duct Wrap	Yes	40 sq. ft.
NW Bedroom (1 register, 10 sq. ft.)	Total		40 ag ft
I A C A C A C A C A C A C A C A C A C A	Total		40 sq. ft.
Interior - Asbestos Containing Materials			
Location	<b>Material Description</b>	Friable	Approx. Quantity
Basement (2 in. wide HVAC Tape on Cold Air Return Ductwork, 35 lin. ft.)	HVAC Duct Wrap	Yes	35 lin. ft.
	Total		35 lin. ft.

Table 4 - Summary of All Asbestos Containing Materials, 2533 Reynolds St., Muskegon Heights, Michigan

Interior - Asbestos Containing Materials									
Location	<b>Material Description</b>	Friable	Approx. Quantity						
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						
		Total	37 Windows						

# **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.

Muskegon County Land Bank Parcel ID: 61-26-540-003-0013-00

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.

Muskegon County Land Bank Parcel ID: 61-26-540-003-0013-00

#### **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.

Muskegon County Land Bank Parcel ID: 61-26-540-003-0013-00

#### 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.

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



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

Lab ID #: 69608 - 02

Cust. #: RS-HM-01B

Material: House Vapor Barrier

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69608 - 03

Cust. #: RS-HM-02A

Material: Shingle Roof Brown

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: **NO** 

Cellulose - 90%

No Asbestos Observed

Other - 10%

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 90%

Other - 10%

Asbestos Present: NO Fiberglass - 20%

No Asbestos Observed

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.



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

No Asbestos Observed

Non-Asbestos

Lab ID #: 69608 - 04

Cust. #: RS-HM-02B

Material: Shingle Roof Brown

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 1

Lab ID #: 69608 - 05

Cust. #: RS-HM-03A

Material: Shingle Roof Black

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 2

Lab ID #: 69608 - 05a

Cust. #: RS-HM-03A

Material: Tar Paper

Location:

Appearance: black,fibrous,homogenous

Layer: 2 of 2

Asbestos Present: **NO** 

Fiberglass - 20% Other - 80%

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Cellulose - 25%

Fiberglass - 20%

Other - 80%

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)

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 Reported: 04/19/17

Date Analyzed: 04/17/17

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Cellulose - 25%

Other - 75%

Lab ID #: 69608 - 06

Cust. #: RS-HM-03B

Material: Shingle Roof Black

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 2

Asbestos Present: **NO** No Asbestos Observed

Fiberglass - 20%

Lab ID #: 69608 - 06a Cust. #: RS-HM-03B

Material: Tar Paper

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO No Asbestos Observed

Other - 100%

Other - 80%

Lab ID #: 69608 - 07 Cust. #: RS-HM-04A

Material: 12x12 Wood Grain VFT

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 1 of 2

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.



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

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69608 - 07a

Cust. #: RS-HM-04A

Material: Mastic

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

Asbestos Present: **NO** 

Other - 100%

Other - 100%

Lab ID #: 69608 - 08 Cust. #: RS-HM-04B

Material: 12x12 Wood Grain VFT

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 1 of 2

Lab ID #: 69608 - 08a

Asbestos Present: NO No Asbestos Observed

Cust. #: RS-HM-04B

Material: Mastic

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

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

**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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 25%

Fiberglass - 5%

Other - 70%

Lab ID #: 69608 - 09

Cust. #: RS-HM-05A

Material: Tan Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

No Asbestos Observed

Asbestos Present: **NO** 

Cellulose - 25% Fiberglass - 5%

Other - 70%

Cust. #: RS-HM-05B

Lab ID #: 69608 - 10

Material: Tan Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Cust. #: RS-HM-06A

Lab ID #: 69608 - 11

Material: 12x12 White VFT

Location:

Appearance: beige,nonfibrous,homogenous

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

Layer: 1 of 2

Other - 100%

Robert T. Letarte Jr., Laboratory Director

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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 - 11a

Cust. #: RS-HM-06A

Material: Mastic

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 69608 - 12

Cust. #: RS-HM-06B

Material: 12x12 White VFT

Location:

Appearance: beige, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69608 - 12a

Cust. #: RS-HM-06B

Material: Mastic

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

Asbestos Present: NO

Other - 100%

Other - 100%

Other - 100%

No Asbestos Observed

Asbestos Present: **NO** 

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

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

**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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69608 - 13

Cust. #: RS-HM-07A

Material: Texture

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: **NO**No Asbestos Observed

Cellulose - 95% Other - 5%

Lab ID #: 69608 - 13a Cust. #: RS-HM-07A

Material: 1x1 White Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: **NO**No Asbestos Observed

Other - 100%

Lab ID #: 69608 - 14 Cust. #: RS-HM-07B

Matarial Tarton

Material: Texture

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

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.



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

No Asbestos Observed

Non-Asbestos

Lab ID #: 69608 - 14a

Cust. #: RS-HM-07B

Material: 1x1 White Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 69608 - 15

Cust. #: RS-HM-08A

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

Lab ID #: 69608 - 15a

Cust. #: RS-HM-08A

Material: Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

Cellulose - 95%

Other - 5%

Asbestos Present: **NO** No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 80%

Other - 100%

Cellulose - 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: 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 - 16

Cust. #: RS-HM-08B

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

Asbestos Present: **NO** 

No Asbestos Observed

Other - 80%

Lab ID #: 69608 - 16a

Cust. #: RS-HM-08B

Material: Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Lab ID #: 69608 - 17

Cust. #: RS-HM-09A

Material: House Window Glazing

Location:

Appearance: white, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Cellulose - 20%

Other - 100%

Asbestos Present: NO Wollastonite - 2%

No Asbestos Observed

Other - 98%

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

**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 Reported: 04/19/17

Date Analyzed: 04/17/17

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

Lab ID #: 69608 - 19

Cust. #: RS-HM-10A

Material: Front Entry Window Glazing

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 69608 - 20

Cust. #: RS-HM-10B

Material: Front Entry Window Glazing

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

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO** 

No Asbestos Observed

Wollastonite - 2%

Other - 98%

Other - 100%

Asbestos Present: **NO** No Asbestos Observed

No Asbestos Observed

Asbestos Present: NO

Other - 100%

Robert T. Letarte Jr., Laboratory Director

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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

Non-Asbestos

Other - 100%

Lab ID #: 69608 - 21

Cust. #: RS-HS-01A

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69608 - 21a

Cust. #: RS-HS-01A

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Lab ID #: 69608 - 22

Cust. #: RS-HS-01B

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

No Asbestos Observed

Cellulose - 2%

Other - 98%

Asbestos Present: NO 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

**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

Non-Asbestos

Lab ID #: 69608 - 22a

Cust. #: RS-HS-01B

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Lab ID #: 69608 - 23

Cust. #: RS-HS-01C

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69608 - 23a

Cust. #: RS-HS-01C

Material: Plaster Base Coat

Location:

Appearance: grey, fibrous, homogenous

Layer: 2 of 2

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Cellulose - 2%

Other - 98%

Other - 100%

Asbestos Present: **NO** No Asbestos Observed

Asbestos Present: NO

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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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

Other - 100%

Lab ID #: 69608 - 24

Cust. #: RS-HS-01D

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69608 - 24a

Cust. #: RS-HS-01D

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Lab ID #: 69608 - 25

Cust. #: RS-HS-01E

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

No Asbestos Observed

Cellulose - 2%

Other - 98%

Asbestos Present: NO 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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ĸ	ene	m	10:	

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 - 25a Cust. #: RS-HS-01E

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Lab ID #:

Cust. #: Material: Location: Appearance: Layer: of

Lab ID #:

Cust. #: Material: Location: Appearance: Layer: of

Asbestos Present: NO

No Asbestos Observed

Cellulose - 2%

Other - 98%

Asbestos Present:

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.

# 69608

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

830

Date : 4-12-15	Relinquished by:	VENDOMA	70	0	8		0	6	Passed St.	w	84		Lab ID#	Other: <u>3 A &amp; y</u>		Ĕ	Rush 24 hour	Turn Arou	Phone: (888) 449-456	City, St., Zip:	Address:	Client Name:
Date:	Received by:	RS-441-064	RS-4119-05B	Kr.2/1-054	BY-WH-EXTB	RS-#104	R5-4M-038	RS-H1-034	85-HM-02B	25-HM-02A	RS-HM-013	RS-HM-01A	Client ID#	(11P)All Samples #			٠.	Around Times: (Circle One)	9-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
4-12-17	UX	12x12 white 1		Tan Linoleum		12×12 1/2 sodoniu		Shingle Roof I	71	Shingle Foot	` .	House Vepor Ba	Material/Location	TEM: AHERA 7400	Mold: Bulk	Lead: Bulk	Asbestos: Bulk X	Circle One) PLM EPA	(888) 448-8739			ng
Date:	Relinquished by:	7			•	VET	,	Black	•	Brown	•	Brich		00Bulk/NOB	Tape Bic	Wipe Air	Wipe Poi	1 600, PC all samples	Contact Person:		Project:	Date of Survey
	R												Volume	EPA Level II	BioSISOt	Paint	Point Count		Aaron	- }	N +	7ev : ₩-/5.
Sp	Received by: / h						•						Area		Other Viable	Soil	PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	Paquet		Peupolds ST	_/7
3 2017													Results					lting.net ACM.		3 6 7 7 7	Report	Lab Use Only

Rev: 12/03 Work Forms: COC

APPX AMOUNTS

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



Date: 4-12-19	Relinquished by:	ß	75	8	19	K	77	76	2	74	W.	50	Lab ID#	Other:	1	) 	Rush 24 hour	Turn Around	Phone: (888) 449-4566	City, St., Zip:	Address:	Client Name:
Date:	Received by:	RS-45-01B	RS-45-01A	28-HM-10B	RS-HH-10A	RS-47-09B	785-AM-09A	RS-MM-08B	R5-41-08A	R5.HM-07B	R5-4M-07A	RS-14M-06B	Client ID#	(III)All Samples 5**				ind Times: (Circle One)	9-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
1-12-17	088	The state of the s	Plaster		Front Entry Window	. 7	House Windows G		Drywell & Joint	3	1x1 Textured Wh	12x12 white VET	Material/Location	TEM: AHERA 7400	Mold: Bulk	Lead: Bulk	os: Bulk X	PLM EPA	(888) 448-8739			ng
Date:	Relinquished by:			:	6/62/119	:	5/azing	1, -	punos ve		White ct	7	ion   Volume	Bulk/NOB	Tape BioSIS	Wipe Air	Wipe Point Count	600, PC all samples wit	rson:	••	Project: 2433	Date of Survey:
Date: APR	Received by:												ne Area	EPA Level II	Other Viable	Paint Soil	PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	Aaron Paquet		Reynolds St.	4-12-17
## 2017													Results		ole			sulting.net 5% ACM.			Report	Lab Use Only Log-In

Rev: 12/03 Work Forms: COC

PUX DUNINES

# APEX Research, Inc. 11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990



48 hour Rush Other: 5day Phone: Address: Client Name: City, St., Zip: Turn Around Times: (Circle One) Lab ID# (888)449-4566 7 24 hour 72 hour Red Cedar Consulting Lansing, MI 48901 PO Box 13216 RS-45 OIE RS-45-01D アンカーのこ Client ID# Fax: (888) 448-8739 Plaster Asbestos: Bulk TEM: Mold: Lead: Material/Location Bulk Bulk **AHERA 7400** apaquet@redcedarconsulting.net PLM EPA 600, PC all samples with a detection of <5% ACM. E-mail: apexresearch@chartermi.net × Wipe Wipe Project #: Contact Person: Aaron Paquet Date of Survey: Bulk/NOB Air \_ Point Count BioSIS Volume 2633 Reynolds St Fax: 734-449-9991 EPA Level II Paint Other Area Results Lab Use Only Log-In\_\_\_\_ Report

Rev: 12/03 Work Forms: COC

Relinquished by: Ashallulater Received by: UTS

Date: 4-12-17

Relinquished by:

Date:

Received by: The National State Stat

# Red Cedar Consulting

# **Tables**

Table 1 - Summary of Hazardous Materials, 2633 Reynolds St., Muskegon Heights, Michigan

Hazardous Materials Description and Location									
Location	Material Description	Quantity							
Living Room	Thermostat	1							

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2633 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	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:** 

<u>Material Types</u> <u>Abbreviations</u>

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2633 Reynolds St., Muskegon Heights, Michigan

M= Miscellaneous building materialNQ= Not quantifiedTSI= Thermal System InsulationNA= Not applicableS= Surfacing MaterialND= Not detected. I

PC

= Point Count Analysis

= Chrysotile Asbestos

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

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

**Notes:** Material Types

M = Miscellaneous building material TSI = Thermal System Insulation

= Surfacing Material S

**Abbreviations** 

lin. ft. = linear feet

sq. ft. = square feet

Table 4 - Summary of All Asbestos Containing Materials, 2633 Reynolds St., Muskegon Heights, Michigan

Exterior - Asbestos Containing Materials			
Location	Material Description	Friable	Approx. Quantity
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.

Muskegon County Land Bank Parcel ID: 61-26-635-257-0003-00

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.

Muskegon County Land Bank Parcel ID: 61-26-635-257-0003-00

#### **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 Cementatious "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.

Muskegon County Land Bank Parcel ID: 61-26-635-257-0003-00

#### 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 cementatious "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 cementatious (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 cementatious 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.

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

#### **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)

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# Red Cedar Consulting

# Attachment 1 APEX Research Laboratory Analytical Results



### 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

Asbestos Present: **NO** 

No Asbestos Observed

No Asbestos Observed

Non-Asbestos

Fiberglass - 30%

Other - 70%

Lab ID #: 69747 - 01

Cust. #: MB-HM-01A

Material: Roofing Materials

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 3

Asbestos Present: **NO** 

Cellulose - 40%

Other - 60%

Cust. #: MB-HM-01A

Lab ID #: 69747 - 01a

Material: White Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 3

Asbestos Present: NO

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

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.



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: **NO**No Asbestos Observed

Asbestos Present: **NO** 

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

Lab ID #: 69747 - 02b Cust. #: MB-HM-01B

Material: Black Shingle

A shastas Prasar

Asbestos Present: **NO** 

Cellulose - 40%

Cellulose - 40%

Other - 60%

No Asbestos Observed

Other - 60%

Location:

Appearance: black,fibrous,homogenous

Layer: 3 of 3

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: 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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69747 - 03

Cust. #: MB-HM-02A

Material: 12x12 Grey VFT

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 1 of 4

Asbestos Present: **NO**No Asbestos Observed

Other - 100%

Lab ID #: 69747 - 03a Cust. #: MB-HM-02A

Cust. #: MB-HM

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 4

Asbestos Present: NO

No Asbestos Observed

Cellulose - 40%

Other - 60%

Cust. #: MB-HM-02A

Lab ID #: 69747 - 03b

Material: Beige Sheet Flooring

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 3 of 4

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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 40%

Other - 60%

Lab ID #: 69747 - 03c

Cust. #: MB-HM-02A

Material: Green Sheet Flooring

Location:

Appearance: green, fibrous, nonhomogenous

Layer: 4 of 4

Lab ID #: 69747 - 04

Asbestos Present: **NO**No Asbestos Observed

No Asbestos Observed

Other - 100%

Cust. #: MB-HM-02B

Material: 12x12 Grey VFT

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 1 of 4

Lab ID #: 69747 - 04a

7 - 04a Asbestos Present: **NO** 

Cust. #: MB-HM-02B

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

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

Layer: 2 of 4

Robert T. Letarte Jr., Laboratory Director

Other - 100%

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.



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 - 04b

Cust. #: MB-HM-02B

Material: Beige Sheet Flooring

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 3 of 4

Lab ID #: 69747 - 04c

Cust. #: MB-HM-02B

Material: Green Sheet Flooring

Location:

Appearance: green, fibrous, nonhomogenous

Layer: 4 of 4

Lab ID #: 69747 - 05

Cust. #: MB-HM-03A

Material: Layered Vinyl Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 4

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 40%

Cellulose - 40%

Other - 60%

Other - 60%

Asbestos Present: NO

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.



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 - 05a

Cust. #: MB-HM-03A

Material: White Sheet Flooring

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 2 of 4

Lab ID #: 69747 - 05b

Cust. #: MB-HM-03A

Material: Sheet Flooring

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 3 of 4

Lab ID #: 69747 - 05c

Cust. #: MB-HM-03A

Material: Filler

Location:

Appearance: white, nonfibrous, homogenous

Layer: 4 of 4

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 40%

Other - 60%

Asbestos Present: **NO** 

No Asbestos Observed

No Asbestos Observed

Cellulose - 40%

Other - 60%

Asbestos Present: NO 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.



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 - 06

Cust. #: MB-HM-03B

Material: Layered Vinyl Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 4

Asbestos Present: NO

No Asbestos Observed

Cellulose - 10%

Fiberglass - 10% Other - 80%

Lab ID #: 69747 - 06a

Cust. #: MB-HM-03B

Material: White Sheet Flooring

Asbestos Present: **NO** 

Cellulose - 40%

No Asbestos Observed

Other - 60%

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 2 of 4

Lab ID #: 69747 - 06b

Cust. #: MB-HM-03B

Material: Sheet Flooring

Location:

Layer: 3 of 4

Asbestos Present: NO No Asbestos Observed

Cellulose - 40% Other - 60%

Appearance: white, fibrous, nonhomogenous

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.



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

Other - 100%

Lab ID #: 69747 - 06c

Cust. #: MB-HM-03B

Material: Filler

Location:

Appearance: white, nonfibrous, homogenous

Layer: 4 of 4

Lab ID #: 69747 - 07

Cust. #: MB-HM-04A

Material: 1x1 White Smooth Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

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: **NO** 

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Cellulose - 80%

Cellulose - 80%

Other - 20%

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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 20%

Other - 80%

Lab ID #: 69747 - 09

Cust. #: MB-HM-05A

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 69747 - 10

Cust. #: MB-HM-05B

Asbestos Present: NO

sent. 110

Cellulose - 20%

No Asbestos Observed

Other - 80%

Material: Drywall

Location:

**A** .........

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 69747 - 11

Cust. #: MB-HM-06A

Material: Window Glazing

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO**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: 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 - 12

Cust. #: MB-HM-06B

Material: Window Glazing

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 69747 - 13 Asbestos Present: **NO** 

Cust. #: MB-HM-07A

Material: Vapor Barrier

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69747 - 14

Cust. #: MB-HM-07B Material: Vapor Barrier

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: **NO** 

No Asbestos Observed

No Asbestos Observed

Asbestos Present: NO

Wollastonite - 1%

Cellulose - 50% Other - 50%

Cellulose - 50%

Other - 50%

Other - 99%

No Asbestos Observed

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.



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

Asbestos Present: NO

Asbestos Present: **NO** 

No Asbestos Observed

No Asbestos Observed

Non-Asbestos

Cellulose - 1%

Cellulose - 1% Other - 99%

Other - 99%

Lab ID #: 69747 - 15

Cust. #: MB-HM-08A

Material: Joint Compound on Paneling

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 69747 - 16

Cust. #: MB-HM-08B

Material: Joint Compound on Paneling

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Asbestos Present:

Lab ID #:

Cust. #: Material: Location:

Appearance:

Layer:

of

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.

# APRX # 69747

# APEX Research, Inc. 11054 Hi rech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

E-mail: apexresearch@chartermi.net

Fax: 734-449-9991



Rush Other: 5 day 48 hour Phone: Address: Client Name: City, St., Zip: Turn Around Times: (Circle One) Lab ID# (888) 449-4566 72 hour 24 hour دو T D 7 9  $\mathcal{Q}$ Red Cedar Consulting Lansing, MI 48901 PO Box 13216 MB-HM-OM MB-144-01B (TTP) All Samples MB-41-03B MB-144-02A/2X12 Dlay VFT MB-HM-04A MB-144.05B MB-HM-03A Seyles MB-HM-07B MB-11M-04B MB HMS 6A Window Haging MB-HM-05A Client ID # Fax: 1x1arlite Sactions (888) 448-873 Munch Asbestos: Bulk TEM: Mold: Lead: Material/Location Bulk Bulk AHERA 7400 PLM EPA 600, PC all samples with a detection of <5% ACM. Walariska × Legened Relinquished by Wipe Wipe Tape Contact Person: Aaron Paquet Date of Survey: Project #: Project: 29/0 Bulk/NOB Air BioSIS Point Count Volume EPA Level II Paint Other PCM Area Results Report \_ Log-In Lab Use Only

Rev: 12/03 Work Forms: COC

Relinquished by: A Media Received by:

Date:

4-11-19

Date: 1125

Received by:

# APEX Research, Inc. 11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

E-mail: apexresearch@chartermi.net

Fax: 734-449-9991



Other:\_ Relinquished by: A Lallatter Received by: UPS 48 hour Rush Phone: Address: Client Name: City, St., Zip: Lansing, MI 48901 Turn Around Times: (Circle One) Lab ID# (888)449-4566 72 hour 24 hour Q 5 6 Red Cedar Consulting PO Box 13216 MB- 4M-07A MB-HM-07B MB-14M-06B MB-144-08B MB-1+M-08/A Jorni (TTP) All Samples Client ID # Date: Fax: (888) 448-8739 Vapor Barrer TEM: Mold: Asbestos: Bulk Lead: Material/Location АН**І**RA 7400 apaquet@redcedarconsulting.net PM EPA 600, PC all samples with a detection of <5% ACM. Kleyeng nd on Tomolin × Relinquished by: Wipe Wipe Date of Survey: Contact Person: Aaron Paquet Project #: Project: 2910 Mason Blish Bulk/NOB BioSIS Point Count Volume EPA Level II Other Received by: Area PCM Soil Results Log-In Report\_ Lab Use Only

Rev: 12/03 Work Forms: COC

Date:

# Red Cedar Consulting

# **Tables**

Table 1 - Summary of Hazardous Materials, 2910 Mason Blvd., Muskegon Heights, Michigan

Hazardous Materials Description and Location					
Location Material Description		Quantity			
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

 $\overline{NQ}$  = 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

Asbestos Containing Material Description and Location					
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity
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

Exterior - Asbestos Containing Mate	erials			
Location	<b>Material Description</b>		Friable	Approx. Quantity
Building Exterior	Transite Siding		No	1,064 sq. ft.
		Total		1,064 sq. ft.

#### **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.

Muskegon County Land Bank Parcel ID: 61-26-635-257-0020-00

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.

Muskegon County Land Bank Parcel ID: 61-26-635-257-0020-00

#### 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 Cementatious "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.

Muskegon County Land Bank Parcel ID: 61-26-635-257-0020-00

#### 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 cementatious "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 cementatious (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 cementatious 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

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

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** anon Poquet

Aaron Paquet

Michigan/EPA Certified Asbestos Building Inspector

(A30955)

# Red Cedar Consulting

# Attachment 1 APEX Research Laboratory Analytical Results



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 35%

Other - 65%

Lab ID #: 69784 - 01

Cust. #: WS-HM-01A

Material: Vapor Barrier

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 35%

Other - 65%

Material: Vapor Barrier

Cust. #: WS-HM-010B

Lab ID #: 69784 - 02

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69784 - 03

Cust. #: WS-HM-02A

Material: Roofing Materials

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 4

Asbestos Present: NO

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.



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

Lab ID #: 69784 - 03b

Cust. #: WS-HM-02A

Material: Vapor Barrier

Location:

Appearance: black, fibrous, homogenous

Layer: 3 of 4

Lab ID #: 69784 - 03c

Cust. #: WS-HM-02A

Material: Asphaltic Tar

Location:

Appearance: black,fibrous,homogenous

Layer: 4 of 4

Asbestos Present: NO

Fiberglass - 20%

No Asbestos Observed

Other - 80%

Asbestos Present: **NO** 

Fiberglass - 25%

No Asbestos Observed

Asbestos Present: YES

Other - 75%

Other - 95%

Chrysotile - 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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Fiberglass - 20%

Other - 80%

Lab ID #: 69784 - 04

Cust. #: WS-HM-02B

Material: Roofing Materials

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 4

Asbestos Present: **NO** 

Fiberglass - 20%

Lab ID #: 69784 - 04a Cust. #: WS-HM-02B

Material: Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 4

No Asbestos Observed

Other - 80%

Lab ID #: 69784 - 04b

Cust. #: WS-HM-02B

Material: Vapor Barrier

Location:

Appearance: black,fibrous,homogenous

Layer: 3 of 4

Asbestos Present: NO No Asbestos Observed

Fiberglass - 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.



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 - 04c

Cust. #: WS-HM-02B Material: Asphaltic Tar

Location:

Appearance: Layer: 4 of 4

Lab ID #: 69784 - 05

Cust. #: WS-HM-03A

Material: Tan Vinyl

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 2

Lab ID #: 69784 - 05a

Cust. #: WS-HM-03A

Material: Floor Filler

Appearance: grey,nonfibrous,homogenous

Layer: 2 of 2

Asbestos Present:

NOT ANALYZED

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 20%

Fiberglass - 10%

Other - 70%

Other - 100%

Location:

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.



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 - 06

Cust. #: WS-HM-03B

Material: Tan Vinyl

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 2

Fiberglass - 10%

Other - 100%

Lab ID #: 69784 - 06a

Cust. #: WS-HM-03B

Material: Floor Filler

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 69784 - 07

Cust. #: WS-HM-04A

Material: Red Linoleum

Location:

Appearance: red,fibrous,nonhomogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 20%

Other - 70%

Asbestos Present: NO

Cellulose - 35%

No Asbestos Observed

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.



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 # 17-6

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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 35%

Other - 65%

Lab ID #: 69784 - 08

Cust. #: WS-HM-04B

Material: Red Linoleum

Location:

Appearance: red,fibrous,nonhomogenous

Layer: 1 of 1

Lab ID #: 69784 - 09

Cust. #: WS-HM-05A

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

Asbestos Present: NO

No Asbestos Observed

Cellulose - 15%

Fiberglass - 2%

Other - 83%

Other - 100%

Lab ID #: 69784 - 09a

Cust. #: WS-HM-05A

Material: Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Asbestos Present: **NO**No Asbestos Observed

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.



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 Reported: 05/03/17

Date Analyzed: 05/02/17

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

Lab ID #: 69784 - 10a

Cust. #: WS-HM-05B

Material: Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Lab ID #: 69784 - 11

Cust. #: WS-HM-06A

Material: Window Glazing

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 1

Asbestos Present: NO

Cellulose - 15%

No Asbestos Observed

Fiberglass - 2%

Other - 83%

Asbestos Present: **NO** 

No Asbestos Observed

Other - 100%

Other - 100%

Asbestos Present: NO No Asbestos Observed

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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69784 - 12

Cust. #: WS-HM-06B

Material: Window Glazing

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 1

Lab ID #:

Cust. #: Material:

Location: Appearance:

Layer:

of

Lab ID #:

Cust. #: Material:

Location:

Appearance: Layer:

of

Asbestos Present:

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.

## 69784

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



Rev: 12/03 Work Forms: COC	Date: 4-24-17	Relinquished by:			O	-2)	A	4	<u>о</u>	5	-	3	7)		Lab ID#	đ	1	Ĭ	Rush 24 hour	Turn Arou	Phone: (888) 449-4566	City, St., Zip:	Address:	Client Name: _
	Date: 4.25-1;	Reflected by:		165- AM-061	WS-4M-05B	W5-4M-05A	W5-HM-048	15-4M-04	WS-HM-03B	18-HM-03A	WS-4M-02B	15-HM-024	W5-AM-01B	WS-HM-OIA	Client ID#	م د مراورون در استان	TTP All Samples			Around Times: (Circle One)	9-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
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	Date:	Relinquished by:	0	ering		at lempered		enc			* *	steriele		è	ocation	400Bulk/NOB	Tape	Wipe	Wipe	A 600, PC all samples	_ Contact Person	Project #:	Project: 29/	_ Date of Survey
		I													Volume	EPA Level II	BioSISO	Air Paint _	Point Count		rson: Aaron Pa		2917 Wood	rvey: 4-2;
APEX PLESEARCH	Date:	Received by:													Area   I	Π	Other Viable	Soil	PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	Paquet		A	1-17
															Results					cing.net .CM.			Report	Lab Use Only Log-In



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

Rev: 12/03 Work Forms: COC	Date: 4-24-17 Date: 4	Relinquished by: Received by:						13-MH-04B	Lab ID # Client ID #		y V	Ĭ	Rush 24 hour	Turn Around Times: (Circle One)	Phone: (888) 449-4566 Fax:	City, St., Zip: Lansing, MI 48901	Address: PO Box 13216	Client Name: Red Cedar Consulting
	4-25-17 Date:	VFS Relinquished by:					0 8	Window Maring	Material/Location	TEM: AHERA 7400 Bulk/NOB	Mold: Bulk Tape	Lead: Bulk Wipe	Asbestos: Bulk Wipe	$\operatorname{ircleOne})$ PLM EPA 600, PC all samples	(888) 448-8739	Project #:	Project: 29/	Date of Survey
Sold Sold Sold Sold Sold Sold Sold Sold	Date: APEX AFEC	Received by: APR 2 6	ARC Const						Volume Area Re	OBEPA Level II	BioSISOtherViable	Air Paint Soil	Point Count PCM	apaquet@redcedarconsulting.net samples with a detection of <5% ACM.	Contact Person; Aaron Paquet		7 Wood St.	1: 4-24-17
2		2017							Results		1			ng.net 1.			Report	Lab Use Only

### Red Cedar Consulting

### **Tables**

Table 1 - Summary of Hazardous Materials, 2917 Wood St., Muskegon Heights, Michigan

Hazardous Materials Description and Location											
Location	Material Description	Quantity									
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

Material Types

M = Miscellaneous building material

TSI = Thermal System Insulation S = Surfacing Material

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

Asbestos Containing Material Description and Location													
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity								
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

Exterior - Asbestos Containing Mat	terials		
Location	Material Description	Friable	Approx. Quantity
Building Roof	Asphalt Shingles	No	1,296 sq. ft.
	Tota	al	1,296 sq. ft.
<b>Exterior - Asbestos Containing Mat</b>	terials		
Location	<b>Material Description</b>	Friable	Approx. Quantity
Building Exterior	Transite Siding/Debris across Property	No	1,152 sq. ft.
	Tota	ıl	1,152 sq. ft.

### **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.

Muskegon County Land Bank Parcel ID: 61-26-770-036-0012-00

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.

Muskegon County Land Bank Parcel ID: 61-26-770-036-0012-00

### **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.

Muskegon County Land Bank Parcel ID: 61-26-770-036-0012-00

### 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)

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

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

Raion Paguet

Aaron Paquet

Michigan/EPA Certified Asbestos Building Inspector (A30955)

### Red Cedar Consulting

### Attachment 1 APEX Research Laboratory Analytical Results



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 70%

Other - 30%

Lab ID #: 69693 - 01

Cust. #: HL-HM-01A

Material: Vapor Barrier

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 70%

Other - 30%

Cust. #: HL-HM-01B

Lab ID #: 69693 - 02

Material: Vapor Barrier

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69693 - 03

Cust. #: HL-HM-02A

Material: Shingle Materials

Location: Roof

Appearance: black,fibrous,homogenous

Layer: 1 of 2

No Asbestos Observed

Asbestos Present: NO

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.



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 - 03a

Cust. #: HL-HM-02A

Material: Shingle Location: Roof

Appearance: black,fibrous,homogenous

Layer: 2 of 2

Lab ID #: 69693 - 04

Cust. #: HL-HM-02B

Material: Shingle Materials

Location: Roof

Appearance: black, fibrous, homogenous

Layer: 1 of 2

Lab ID #: 69693 - 04a

Cust. #: HL-HM-02B

Material: Shingle Location: Roof

Appearance: black, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Cellulose - 20%

Other - 80%

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 20%

Other - 80%

Asbestos Present: NO Cellulose - 20%

No Asbestos Observed 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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 15%

Fiberglass - 2%

Other - 83%

Lab ID #: 69693 - 05

Cust. #: HL-HM-03A

Material: Tan Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 69693 - 06

Cust. #: HL-HM-03B

Material: Tan Linoleum

Asbestos Present: NO

No Asbestos Observed

Cellulose - 15%

Fiberglass - 2%

Other - 83%

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 69693 - 07

Cust. #: HL-HM-04A

Material: 12x12 Brown VFT

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 3

Asbestos Present: NO

No Asbestos Observed

Synthetic - 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.



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

Non-Asbestos

Lab ID #: 69693 - 07a

Cust. #: HL-HM-04A

Material: Glue Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 3

Lab ID #: 69693 - 07b

Cust. #: HL-HM-04A

Material: Linoleum/Glue

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 3 of 3

Lab ID #: 69693 - 08

Cust. #: HL-HM-04B

Location:

Appearance: brown, fibrous, homogenous

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Cellulose - 20%

Fiberglass - 2%

Other - 78%

Synthetic - 2%

Other - 98%

Material: 12x12 Brown VFT

Layer: 1 of 3

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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69693 - 08a

Cust. #: HL-HM-04B

Material: Glue Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 3

Lab ID #: 69693 - 08b

Cust. #: HL-HM-04B

Material: Linoleum/Glue

Asbestos Present: **NO** 

Cellulose - 20%

No Asbestos Observed

Fiberglass - 2%

Other - 78%

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 3 of 3

Lab ID #: 69693 - 09

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Cust. #: HL-HM-05A

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 3

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.



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

Non-Asbestos

Lab ID #: 69693 - 09a

Cust. #: HL-HM-05A

Material: Plaster Base Coat

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 2 of 3

Lab ID #: 69693 - 09b

Cust. #: HL-HM-05A

Material: Drywall

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 3 of 3

Lab ID #: 69693 - 10

Cust. #: HL-HM-05B

Material: Drywall

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 1%

Cellulose - 20%

Other - 80%

Other - 99%

Asbestos Present: NO No Asbestos Observed

Cellulose - 20%

Other - 80%

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

Robert T. Letarte Jr., Laboratory Director

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



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

Other - 100%

Lab ID #: 69693 - 11

Cust. #: HL-HM-06A

Material: Window Glazing

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 1

Lab ID #: 69693 - 12

Cust. #: HL-HM-06B

Material: Window Glazing

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 69693 - 13

Cust. #: HL-HS-01A

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Wollastonite - 1%

Other - 99%

Other - 100%

Asbestos Present: NO

No Asbestos Observed

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.



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

Lab ID #: 69693 - 14

Cust. #: HL-HS-01B

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69693 - 14a

Cust. #: HL-HS-01B

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Hair - 1%

Other - 99%

Asbestos Present: **NO** 

No Asbestos Observed

Other - 100%

Asbestos Present: NO

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.



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

Other - 100%

Lab ID #: 69693 - 15

Cust. #: HL-HS-01C

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69693 - 15a

Cust. #: HL-HS-01C

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 69693 - 16

Cust. #: HL-HS-01D

Material: Felt

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 3

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Hair - 1%

Other - 99%

Asbestos Present: NO

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.



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

Other - 100%

Hair - 1%

Other - 99%

Other - 100%

Lab ID #: 69693 - 16a

Cust. #: HL-HS-01D

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 3

Lab ID #: 69693 - 16b

Cust. #: HL-HS-01D

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

Layer: 3 of 3

Lab ID #: 69693 - 17

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

Cust. #: HL-HS-01E

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.



Test Method, Polarized Light Microscopy (PLM)

Project: 3025 Highland St

D	en	Λ	rt	T	Λ	

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

Lab ID #:

Cust. #: Material: Location: Appearance: Layer: of

Lab ID #:

Cust. #: Material: Location:

Appearance: Layer:

of

Asbestos Present: NO

No Asbestos Observed

Hair - 1%

Other - 99%

Asbestos Present:

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.

### 69693

# APEX

	X Kesearch,
	DC.
E-mail: apexresearch@chartermi.net	2X Kesearch, Inc. 11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-4
Fax: 734-449-9991	Phone: 734-449-9990
	APEX

	Turn Aro	Phone: (888) 449-4566	City, St., Zip:	Address:	Client Name:	
Asbestos:	Turn Around Times: (Circle One)	149-4566 Fax: (888) 448-8739	City, St., Zip: Lansing, MI 48901	PO Box 13216	Client Name: Red Cedar Consulting	
Asbestos: Bulk X Wine Point Count PCM	apaquet@redcedarconsulting.net PLM EPA 600, PC all samples with a detection of <5% ACM.		8	Project: 3025 11. 11	Date of Survey: 4-19-17 Lab Use Only	

48 hour

72 hour

Other: 50

(TTP) All Samples

TEM:

AHERA 7400\_

Bulk/NOB

EPA Level II

Mold:

Bulk

Tape

BioSIS

Other\_

Viable\_

Lead:

Bulk

Wipe

Air

Soil

Rush

24 hour

Date : 4-19-17 Date :	Relinquished by: UPS	M-14-14M-06	10 HL: HM-05B	50-WH-7H D	8 HL-HM-04B	140-M-14 £	850-MH-7H1 9	120-WH-74	#L-#M-02B	3 HL-HM-03A	2 HL-HM-01B	HL-HM-01A	Lab ID# Client ID#
Date: 4-19-17 Date:	by: UP S  Relinquished by:	HL-HM-06A Window Blagging	3	HL: HM-054 Sunall & Soint Compour	\$0.000	HL-HM-044 12X12 Blown VFT	• • • • • • • • • • • • • • • • • • • •	HL+HM-D3A tan Lindsum		4 Shingle Meterials (Root)		HL-HM-014 Vegor Barrier	Material/Location
													Volume
Date :	Received by:												Area
APR 2 0 2017	1130												Results

Rev: 12/03 Work Forms: COC

Date: 4-19-1

Date: 4-19-17

Date:

Date:

FEX FINE BO

# APEX Research, Inc. 11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

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

Rev: 12/03 Work Forms: COC	Date: 4-19-17	Relinquished by: A Shell Lete Received by:			7	10		+			Lab ID# (		Other: Say (T	48 hour 72 hour	Rush 24 hour	Turn Around Times: (Circle One)	Phone: (888)449-4566	City, St., Zip: Lan	Address: PO 1	Client Name: Red
	Date:	Lea Received by:			745-01E	A10-571	125-216	45-01B	KL-45-01A	HA HAY OFB	Client ID#		TTP All Samples			Times: (Ci	566 Fax:	Lansing, MÍ 48901	PO Box 13216	Red Cedar Consulting
•	19-17 Date :	UPS Reli			<b>V</b>				Pleater	Window Klassi	Material/Location	TEM: AHERA 7400	Mold: Bulk7	Lead: Bulk W	os: Bulk X	PLM EPA	(888) 448-8739			
		Relinquished by:							D	*	n Volume	Bulk/NOB EPA	Tape BioSIS	Wipe Air I	( )	600, PC all samples with	Contact Person: Aaron	Project # ·	Project - zaz	Date of Survey:
Tate:	APR	Received by:									Area	EPA Level II	Other Viable	Paint Soil	PCM		on Paquet	regulared of	t-/7-//	
TIME LITTER AND CO.	2 0 2017										Results		le 		,	ulting.net		Report	Log-In	Lab Use Only

THE PROPERTY

### Red Cedar Consulting

### **Tables**

Table 1 - Summary of Hazardous Materials, 3025 Highland St., Muskegon Heights, Michigan

Hazardous Materials Description and Location					
Location	Material Description	Quantity			
Front Entry	Automobile Tire	1			
Garage	Automobile Tire	2			
Dining	Thermostat	1			
Hallway	Smoke Detector	1			
Dining	Gallon Container Misc. Paint				
Basement	Smoke Detector				
Basement	Gallon Container Misc. Paint				

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

### Material Types

M = Miscellaneous building materialTSI = 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

Asbestos Containing Material Description and Location					
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity
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.

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

Interior - Asbestos Containing Materials			-
Location	<b>Material Description</b>	Friable	Approx. Quantity
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	60 sq. ft.
		Total	60 sq. ft.

### **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)

Muskegon County Land Bank Parcel ID: 61-26-770-001-0014-00

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.

Muskegon County Land Bank Parcel ID: 61-26-770-001-0014-00

### **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 Cementatious "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.

Project No.: 17-1083

Muskegon County Land Bank Parcel ID: 61-26-770-001-0014-00

#### 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 cementatious "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 cementatious (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 1rst 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 cementatious 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.

Project No.: 17-1083

Muskegon County Land Bank Parcel ID: 61-26-770-001-0014-00

#### **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:

- 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

Raion Paguet

Aaron Paquet

Michigan/EPA Certified Asbestos Building Inspector (A30955)

# Red Cedar Consulting

# Attachment 1 APEX Research Laboratory Analytical Results



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: **NO** 

Chrysotile - Trace

Asbestos Present: **NO** 

No Asbestos Observed

Lab ID #: 69857 - 01a

Cust. #: PS-HM-01A

Material: Tar Paper

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 69857 - 02

Cust. #: PS-HM-01B

Material: Asphalt Fiberboard

Location:

Appearance: black,fibrous,nonhomogenous

Layer: 1 of 2

Cellulose - 40%

Cellulose - 35%

Other - 65%

Other - 60%

POINT COUNT RESULT

Asbestos Present: NO

Cellulose - 40%

Chrysotile - Trace

Other - 60%

POINT COUNT RESULT

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.



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

Asbestos Present: NO

Asbestos Present: **NO** 

No Asbestos Observed

No Asbestos Observed

Non-Asbestos

Cellulose - 35%

Other - 65%

Lab ID #: 69857 - 02a

Cust. #: PS-HM-01B

Material: Tar Paper

Location:

Appearance: black,fibrous,homogenous

Layer: 2 of 2

Lab ID #: 69857 - 03

Cust. #: PS-HM-02A

Material: Roofing Materials

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 5

Lab ID #: 69857 - 03a

Cust. #: PS-HM-02A

Asbestos Present: NO

Fiberglass - 20%

Fiberglass - 20% Other - 80%

No Asbestos Observed

Other - 80%

Material: Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 2 of 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: 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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 30% Other - 70%

Lab ID #: 69857 - 03b

Cust. #: PS-HM-02A Material: Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 3 of 5

Asbestos Present: NO

No Asbestos Observed

O Cellulose - 30%

Lab ID #: 69857 - 03c Cust. #: PS-HM-02A

Material: Shingle

Location:

**A** .. .. . . . . . . . . .

Appearance: black, fibrous, homogenous

Layer: 4 of 5

Asbestos Present: **NO**No Asbestos Observed

Fiberglass - 20%

Other - 80%

Other - 70%

Lab ID #: 69857 - 03d

Cust. #: PS-HM-02A

Material: Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 5 of 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: 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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Fiberglass - 20%

Other - 80%

Lab ID #: 69857 - 04

Cust. #: PS-HM-02B

Material: Roofing Materials

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 5

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Fiberglass - 20%

Other - 80%

Material: Shingle

Lab ID #: 69857 - 04a

Cust. #: PS-HM-02B

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 5

Lab ID #: 69857 - 04b

Cust. #: PS-HM-02B

Material: Shingle

Location:

Appearance: black, fibrous, homogenous

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

Layer: 3 of 5

Other - 70%

Cellulose - 30%

Robert T. Letarte Jr., Laboratory Director

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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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 30%

Other - 70%

Lab ID #: 69857 - 04c

Cust. #: PS-HM-02B

Material: Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 4 of 5

Lab ID #: 69857 - 04d

Cust. #: PS-HM-02B

Asbestos Present: NO

No Asbestos Observed

Fiberglass - 20%

Other - 80%

Material: Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 5 of 5

Lab ID #: 69857 - 05

Cust. #: PS-HM-03A

Material: Cream Vinyl

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Fiberglass - 15%

Other - 85%

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

**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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Fiberglass - 15%

Other - 85%

Lab ID #: 69857 - 06 Cust. #: PS-HM-03B

Material: Cream Vinyl

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69857 - 07

Material: Tan Vinyl

Cust. #: PS-HM-04A

Asbestos Present: NO

No Asbestos Observed

Cellulose - 20%

Fiberglass - 10%

Other - 70%

Location:

Location.

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 2

Asbestos Present: **NO**No Asbestos Observed

Other - 100%

Lab ID #: 69857 - 07a Cust. #: PS-HM-04A

Material: Adhesive

Location:

Appearance: yellow,nonfibrous,homogenous

Layer: 2 of 2

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

**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 - 08

Cust. #: PS-HM-04B

Material: Tan Vinyl

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 2

Asbestos Present: NO No Asbestos Observed

Fiberglass - 10%

Lab ID #: 69857 - 08a

Cust. #: PS-HM-04B

Material: Adhesive

Location:

Appearance: yellow,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 69857 - 09

Cust. #: PS-HM-05A

Material: Brown Linoleum

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

Cellulose - 20%

Other - 70%

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Cellulose - 35% Other - 65%

Robert T. Letarte Jr., Laboratory Director

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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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 35%

Other - 65%

Lab ID #: 69857 - 10 Cust. #: PS-HM-05B

Material: Brown Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Cellulose - 15%

Cust. #: PS-HM-06A

Material: Drywall

Lab ID #: 69857 - 11

iteriai. Diywa

n:

Fiberglass - 2%

Other - 83%

Other - 100%

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

Asbestos Present: NO

No Asbestos Observed

Lab ID #: 69857 - 11a Cust. #: PS-HM-06A

Material: Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

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

**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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 15%

Fiberglass - 2%

Other - 83%

Lab ID #: 69857 - 12

Cust. #: PS-HM-06B

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

Other - 100%

Other - 100%

Lab ID #: 69857 - 12a

Cust. #: PS-HM-06B

Material: Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Lab ID #: 69857 - 13

Cust. #: PS-HM-07A

Material: Window Glazing (28x54)

Location:

Appearance: beige, nonfibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69857 - 14

Cust. #: PS-HM-07B

Material: Window Glazing (28x54)

Location:

Appearance: beige, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 69857 - 15

Cust. #: PS-HM-08A

Asbestos Present: **NO** 

Fiberglass - 10%

No Asbestos Observed

Other - 90%

Material: Brown Stone Vinyl

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69857 - 16

Cust. #: PS-HM-08B

Material: Brown Stone Vinyl

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69857 - 17

Cust. #: PS-HM-09A

Material: Basement Window Glazing

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 1

Asbestos Present: **NO** No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Other - 100%

Lab ID #: 69857 - 18 Cust. #: PS-HM-09B

Material: Basement Window Glazing

Location:

Appearance: beige, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 69857 - 19

Cust. #: PS-HM-10A

Material: Window Glazing (44x62)

Location:

Appearance: white, nonfibrous, homogenous

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

Layer: 1 of 1

Robert T. Letarte Jr., Laboratory Director

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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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69857 - 20

Cust. #: PS-HM-10B

Material: Window Glazing (44x62)

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 69857 - 21

Asbestos Present: **NO** No Asbestos Observed

Fiberglass - 10%

Other - 90%

Cust. #: PS-HM-11A

Material: Tan Stone Vinyl

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69857 - 22

Cust. #: PS-HM-11B

Material: Tan Stone Vinyl

Asbestos Present: NO

Cellulose - 20%

No Asbestos Observed

Fiberglass - 10%

Other - 70%

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 2

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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69857 - 22a

Cust. #: PS-HM-11B

Material: Adhesive

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Asbestos Present: **NO** 

Cellulose - 20%

Cust. #: PS-HM-12A

Lab ID #: 69857 - 23

Material: Grey Vinyl

No Asbestos Observed

Fiberglass - 10% Other - 70%

Other - 100%

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 2

Asbestos Present: NO

No Asbestos Observed

Lab ID #: 69857 - 23a Cust. #: PS-HM-12A

Material: Adhesive

Location:

Appearance: yellow,nonfibrous,homogenous

Layer: 2 of 2

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.



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 - 24

Cust. #: PS-HM-12B

Material: Grey Vinyl

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 2

Other - 70%

Other - 100%

Lab ID #: 69857 - 24a

Cust. #: PS-HM-12B

Material: Adhesive

Location:

Appearance: yellow,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 69857 - 25

Cust. #: PS-HM-13A

Material: Vapor Barrier Under Wood

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 20%

Fiberglass - 10%

Asbestos Present: NO

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.



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

Lab ID #: 69857 - 27

Cust. #: PS-HM-14A

Material: Vapor Barrier Under Transite

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69857 - 28

Cust. #: PS-HM-14B

Material: Vapor Barrier Under Transite

Location:

Appearance: black, fibrous, homogenous

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

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Cellulose - 35%

Other - 65%

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 35%

Other - 65%

Asbestos Present: NO Cellulose - 35% No Asbestos Observed Other - 65%

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.



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

Other - 100%

Other - 100%

Other - 100%

Lab ID #: 69857 - 29

Cust. #: PS-HM-15A

Material: Window Glazing (28x46)

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 69857 - 30

Cust. #: PS-HM-15B

Material: Window Glazing (28x46)

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 69857 - 31

Cust. #: PS-HS-01A

Material: Popcorn Texture

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO No Asbestos Observed

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.



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

Asbestos Present: NO

Asbestos Present: **NO** 

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

No Asbestos Observed

Non-Asbestos

Other - 100%

Other - 100%

Other - 100%

Lab ID #: 69857 - 32

Cust. #: PS-HS-01B

Material: Popcorn Texture

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 69857 - 33

Cust. #: PS-HS-01C

Material: Popcorn Texture

Location:

Appearance: white,nonfibrous,homogenous

Layer: 1 of 1

Lab ID #: 69857 - 34 Cust. #: PS-HS-01D

Material: Popcorn Texture

Location:

Appearance: white, nonfibrous, homogenous

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

Layer: 1 of 1

Robert T. Letarte Jr., Laboratory Director

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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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69857 - 35

Cust. #: PS-HS-01E

Material: Popcorn Texture

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO** 

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

Lab ID #: 69857 - 36a

Cust. #: PS-HS-02A

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

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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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

Non-Asbestos

Lab ID #: 69857 - 37

Cust. #: PS-HS-02B

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69857 - 38

Cust. #: PS-HS-02C

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69857 - 39

Cust. #: PS-HS-02D

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Type/Percent

Asbestos Present: NO

Cellulose - 2%

No Asbestos Observed

Other - 98%

Asbestos Present: **NO** 

Cellulose - 2%

No Asbestos Observed

Other - 98%

Other - 100%

Asbestos Present: NO

No Asbestos Observed

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.



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 - 39a

Cust. #: PS-HS-02D

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Asbestos Present: YES

Chrysotile - 2.00%

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

Lab ID #: 69857 - 40a

Location:

Layer: 2 of 2

POINT COUNT RESULT

Asbestos Present: **NO** 

No Asbestos Observed

Other - 100%

Asbestos Present:

Cust. #: PS-HS-02E

Material: Plaster Base Coat

Appearance:

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.

Apex # 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

APEX
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Rev: 12/03 Work Forms: COC	Date: 4-27-17	Relinquished by: Alle Hatter Received by:	-54	10 25-	- K-	75-	7 PS.	6 P5-	2 PS-	, X	2 75-	2 P5-	134	Lab ID# Clier	ď	Shall	Ĭ	Riich 24 hoir	Turn Around T	Phone: (888) 449-4566	City, St., Zip: Lansing,	Address: PO Box 1	Client Name: Red Cedar
	Date: 4-27-17	Received by: UPS	HM-06A Summel + In	'	HM 05A Brown Lind		HH- ale Jan Vingt		HM-03A Beam Vinny	1 &	Robins M	HM-01B	HM-01A lisphalt Liber	Client ID #   Material/Location	TEM: AHERA 7400	TTP) all camples Mold: Bulk	Lead: Bulk	os: Bulk	Times: (Circle One) PLM E	Fax: (888) 448-8739	MI 48901	13216	r Consulting
	Date : 1030	MANN.	it Compound		Ceco-		0				ateriale		hiberboard	ocation Volume	Bulk/NOB	Tape BioSIS	Wipe Air Paint	x Wipe Point Count	apaqı EPA 600, PC all samples with a	Contact Person: Aaron	Project #:	27	_ Date of Survey: $\checkmark$ -
Ž	Date:	Received by:												Area   I	EPA Level II	_ Other Viable _	nt Soil	PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	1 Paquet		Peck St	27-16
														Results					cing.net			Report	Lab Use Only

69757
APEX Research, Inc. 11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990 E-mail: apexresearch@chartermi.net



Fax: 734-449-9991

Received by: 11 Pate: 4-27-17  Date: 4-27-17  Date: 4-27-17		84.44 - 54 EE	5 PR- 44-114 to	801-WH - St OC	0 PS- HM- 10A W		PS. H.M.09A	75. M.088		14 PS- HM-07B		75-HM-06B M	Lab ID #   Client ID #	THE TIME TIME TO SELECT SAME TERMS	5/11	48 hour 72 hour	Rush 24 hour	Turn Around Times: (Circle One)	449-4566 Fax:	City, St., Zip: Lansing, MI 48901	Address: PO Box 13216	Client Name: Red Cedar Consulting
by: UT > Relinquished by: 4			Stone Vind	0 0	indoe Hagging (44 ×42)	ν, Δ	Besser telinder Glassing	,	Blown Stone Vines		uine (28	Musel of Frint Grangerand	Material/Location	TEM: AHERA 7400 Bulk/NOB	Mold: Bulk Tape	Lead: Bulk Wipe	Asbestos: Bulk X Wipe	PLM EPA 600, PC all	(888) 448-8739 Contact Person	Project # :	Project : <u>302</u> ;	Date of Survey
Received by:	THE WILL												Volume Area	B EPA Level II	BioSIS Other	Air Paint Soil	Point Count PCM	apaquet@redcedarconsulting.net samples with a detection of <5% ACM.	erson: Aaron Paquet		3027 Pack St	urvey: 4-27-17
												The state of the s	Results	I	Viable	ii		rconsulting.net of <5% ACM.			Report	Lab Use Only Log-In

Rev: 12/03 Work Forms: COC

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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

	Received by:	2 8 2017	Relinquished by: 6	230	Pulled Value Received by: UP	Relinquished by:
			•	~,	PS 45-01C	S
			•		PS- HS- 01B	8
			tuse	Pepesan Ten	R-45-01A	N.
			d	.,	PK- HM-15B	30
			ine (28×46)	Dindow Bar	PS- HM-15A	B
			•	l	8/11-14H -54	Z
			Under Transito	Vapor Berrier	75- HM-14A	72
					P5- HM-13B	K
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				.,0 ,,0	PG- HM-128	E
				They Vine	F8-421-12A	Z
Results	Area	Volume	Location	Material/Location	Client ID#	Lab ID#
ľ	evel II	)B EPA Level II	17400 Bulk/NOB	TEM: AHERA 7400	- (***) All Samples	Outof : Jakey
Viable	Other	BioSIS	Tape	Mold: Bulk	TTD	Other: N
	nt Soil	Air Paint	Wipe	Lead: Bulk _		48 hour 72 hour
	PCM_	Point Count	wipe	Aspestos: Bulk		Rush 24 hour
rconsultir f <5% ACM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	apaques with a c	c all	PLM	nd Times: (Circle One)	Turn Around T
	Paquet	Person: Aaron	Contact Person	(888) 448-8739	9-4566 Fax:	Phone: (888) 449-4566
<b></b>	,	+	Project #:		Lansing, MI 48901	City, St., Zip:
,	ick St	Project: 3027 P	Project :		PO Box 13216	Address:
	27-17	Survey: 4.	Date of Survey	Q	Red Cedar Consulting	Client Name: _F
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Rev. 12/03 Work Forms: COC

Date: 4-27-17

PUX THUM ATO

Date:

Date: 4-27-17



69857
APEX Research, Inc. 11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

	Date:	8 2017	Date: APR 2 8	4-27-17	Date :	Date: 4-27-17
	Received by:	M/AB	Relinquished by: <u>C</u>	UPS	Relinquished by: Affel Wasters Received by:	Relinquished by:
				<del>\</del>	PS-45-02E	40
					FS-45-02D	36
					PS-45-02C	<i>SE</i>
					75-H5-02B	72
				Pleater	PS-H5-02A	26
				7 , ,	18-45-01E	35
			there	Forcon To	75-45-01D	48
Results	Area	Volume	Material/Location	Material	Client ID#	Lab ID#
	vel II	DB EPA Level II	AHERA 7400 Bulk/NOB	TEM: AHEI	- Control Sampres	
	Other Viable	BioSIS	Tape	Mold: Bulk	TTP 111 C-11-	Ž
	t Soil	Air Paint	Wipe	Lead: Bulk		48 hour 72 hour
	PCM	Point Count	Wipe	Asbestos: Bulk		Rush 24 hour
lting.net ACM.	apaquet@redcedarconsulting.net with a detection of <5% ACM.		PLM EPA 600, PC all samples		Around Times: (Circle One)	Turn Arou
	Paquet	Person: Aaron	Contact Person:	(888) 448-8739	9-4566 Fax:	Phone: (888) 449-4566
		#:	Project #:		Lansing, MI 48901	City, St., Zip: _
Report	St St	: 3027 Fe	Project: 302		PO Box 13216	Address:
Lab Use Only	27.77	Survey:	Date of Survey	g	Red Cedar Consulting	Client Name:

Rev: 12/03 Work Forms: COC

TO INCHES

# Red Cedar Consulting

# **Tables**

Table 1 - Summary of Hazardous Materials, 3027 Peck St., Muskegon Heights, Michigan

	Hazardous Materials Description and Location	Quantity 6 1							
Location	Material Description	Quantity							
Exterior	Automobile Tire	6							
Exterior	Television	1							
1st Floor West Apt Living Room	Smoke Detector	1							
1st Floor West Apt NE Bedroom	Television	1							
1st 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	1st Fl. East Apt Bathroom	NA
PS-HM-04B	Tan Vinyl	No	M	Category I	ND/ND	1st Fl. East Apt Bathroom	NA
PS-HM-05A	Brown Linoleum	No	М	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	1st 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	1st Fl. East Apt Living	NA
PS-HM-10B	Window Glazing (44x62)	Yes	M	Category II	ND	1st 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

A	Asbestos Containing Material Description a	nd Location			
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity
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

Interior - Asbestos Containing Materials			
Location	Material Description	Friable	Approx. Quantity
Basement (misc. residual HVAC tape in wall protrusion, 1 sq. ft.)	HVAC Duct Wrap	Yes	1 sq. ft.
1 34. 10.//	Total		1 sq. ft.
<b>Exterior - Asbestos Containing Materials</b>			
Location	Material Description	Friable	Approx. Quantity
Building Exterior	Transite Siding	No	2,400 sq. ft.
	Total		2,400 sq. ft.
Interior - Asbestos Containing Materials			
Location	Material Description	Friable	Approx. Quantity
1 <sup>st</sup> Fl. E Apt. NW Bedroom	Wall Plaster	No	420 sq. ft.
1st 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.
, ,	Total		1,200 sq. ft.
Interior - Asbestos Containing Materials			
Location	Material Description	Friable	Approx. Quantity
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.
1st Fl. W Apt. (236 lin. wall feet)	Residual Plaster in Wall Base (must remove 1' of drywall)	No	320 lin. ft.
	Total		408 lin. ft.

#### **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)

Muskegon County Land Bank Parcel ID: 26-770-012-0026-00

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.

Muskegon County Land Bank Parcel ID: 26-770-012-0026-00

#### **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.

Muskegon County Land Bank Parcel ID: 26-770-012-0026-00

#### 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.

Muskegon County Land Bank Parcel ID: 26-770-012-0026-00

#### 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)

Muskegon County Land Bank Parcel ID: 26-770-012-0026-00

#### 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

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

Raion Paguet

Aaron Paquet

Michigan/EPA Certified Asbestos Building Inspector (A30955)

# Red Cedar Consulting

# Attachment 1 APEX Research Laboratory Analytical Results



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Fiberglass - 15%

Other - 85%

Lab ID #: 69785 - 01

Cust. #: GA-HM-01A

Material: Roofing Material

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 1

Lab ID #: 69785 - 02

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Fiberglass - 15%

Other - 85%

Other - 100%

Cust. #: GA-HM-01B

Material: Roofing Material

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69785 - 03

Cust. #: GA-HM-02A

Material: 12x12 Grey Diamond VFT

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

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 2

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.



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

No Asbestos Observed

Asbestos Present: **NO** 

Asbestos Present: NO

No Asbestos Observed

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

Lab ID #: 69785 - 04a

Cust. #: GA-HM-02B

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

Asbestos Present: NO

Other - 100%

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.



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

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Synthetic - 5%

Other - 95%

Lab ID #: 69785 - 05

Cust. #: GA-HM-03A

Material: 12x12 Yellow VFT

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 2

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Synthetic - 5%

Other - 95%

Lab ID #: 69785 - 05a Cust. #: GA-HM-03A

Material: Glue

Location:

Location.

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 69785 - 06

Cust. #: GA-HM-03B

Material: 12x12 Yellow VFT

Location:

Appearance: beige, fibrous, homogenous

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

Layer: 1 of 2

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.



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

Fiberglass - 10% Other - 90%

Fiberglass - 10% Other - 90%

Lab ID #: 69785 - 06a

Cust. #: GA-HM-03B

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 69785 - 07

Cust. #: GA-HM-04A

Material: Tan Vinyl

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69785 - 08

Cust. #: GA-HM-04B

Material: Tan Vinyl

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

Other - 100%

No Asbestos Observed

Asbestos Present: **NO** 

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 20%

Other - 80%

Lab ID #: 69785 - 09

Cust. #: GA-HM-05A

Material: Drywall

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 2

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Cellulose - 20%

Other - 80%

Lab ID #: 69785 - 09a Cust. #: GA-HM-05A

Material: Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Lab ID #: 69785 - 10

Cust. #: GA-HM-05B

Material: Drywall

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 2

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.



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 Reported: 05/03/17

Date Analyzed: 05/02/17

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

Asbestos Present: YES

No Asbestos Observed

Non-Asbestos

Other - 100%

Other - 95%

Lab ID #: 69785 - 10a

Cust. #: GA-HM-05B

Material: Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Lab ID #: 69785 - 11

Cust. #: GA-HM-06A

Material: Window Glazing

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69785 - 12

Asbestos Present:

Chrysotile - 5%

Cust. #: GA-HM-06B

Material: Window Glazing

Appearance:

Location:

NOT ANALYZED

Layer: of

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.



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 - 13

Cust. #: GA-HM-07A

Material: Grey Linoleum

Location:

Appearance: grey,fibrous,nonhomogenous

Layer: 1 of 1

Asbestos Present: NO

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: **NO** 

No Asbestos Observed

Cellulose - 10%

Fiberglass - 5%

Other - 85%

Other - 100%

Lab ID #: 69785 - 15

Cust. #: GA-HM-08A

Material: 12x12 Grey Diamond VFT

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: NO No Asbestos Observed

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 Reported: 05/03/17

Date Analyzed: 05/02/17

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

Other - 100%

Other - 100%

Other - 100%

Lab ID #: 69785 - 16

Cust. #: GA-HM-08B

Material: 12x12 Grey Diamond VFT

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 2

Lab ID #: 69785 - 16a

Cust. #: GA-HM-08B

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

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 - 17

Cust. #: GA-HM-09A

Material: Yellow Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 69785 - 18

Cust. #: GA-HM-09B

Material: Yellow Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 69785 - 19

Cust. #: GA-HS-01A

Material: Popcorn Texture

Location:

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

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Cellulose - 15%

Fiberglass - 5%

Other - 80%

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Cellulose - 15%

Fiberglass - 5%

Other - 80%

Other - 100%

Appearance: white, nonfibrous, homogenous

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

No Asbestos Observed

Non-Asbestos

Lab ID #: 69785 - 20

Cust. #: GA-HS-01B

Material: Popcorn Texture

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 69785 - 21

Cust. #: GA-HS-01C

Material: Popcorn Texture

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 69785 - 22

Cust. #: GA-HS-02A

Material: Plaster

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Asbestos Type/Percent

Asbestos Present: NO

Other - 100%

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: YES

Chrysotile - 5%

Cellulose - 2%

Other - 100%

Other - 93%

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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69785 - 23

Cust. #: GA-HS-02B

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: **NO** 

No Asbestos Observed

Hair - 2% Other - 98%

Lab ID #: 69785 - 23a Cust. #: GA-HS-02B

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 69785 - 24

Cust. #: GA-HS-02C

Material: Plaster Texture

Location:

Appearance: white, fibrous, homogenous

Layer: 1 of 2

Asbestos Present: NO

Wollastonite - 5%

No Asbestos Observed

Other - 95%

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

No Asbestos Observed

Non-Asbestos

Lab ID #: 69785 - 24a

Cust. #: GA-HS-02C

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69785 - 24b

Cust. #: GA-HS-02C

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 69785 - 25

Cust. #: GA-HS-02D

Material: Plaster Texture

Location:

Appearance: white, fibrous, homogenous

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

Layer: 1 of 2

Asbestos Present: NO

Other - 100%

Asbestos Present: **NO** No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Hair - 2%

Other - 98%

Other - 95%

Wollastonite - 5%

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

No Asbestos Observed

Non-Asbestos

Lab ID #: 69785 - 25a

Cust. #: GA-HS-02D

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69785 - 25b

Cust. #: GA-HS-02D

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 69785 - 26

Cust. #: GA-HS-02E

Material: Plaster Texture

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: NO

Other - 100%

Asbestos Present: **NO** 

No Asbestos Observed

Hair - 2%

Other - 98%

Asbestos Present: NO

No Asbestos Observed

Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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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

No Asbestos Observed

Non-Asbestos

Lab ID #: 69785 - 26a

Cust. #: GA-HS-02E

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69785 - 26b

Cust. #: GA-HS-02E

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 69785 - 27

Cust. #: GA-HS-02F

Material: Plaster Texture

Location:

Appearance: white, fibrous, homogenous

Layer: 1 of 2

Asbestos Present: NO

Other - 100%

Asbestos Present: **NO** No Asbestos Observed

Hair - 2%

Other - 98%

Asbestos Present: NO

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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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

Non-Asbestos

Other - 100%

Lab ID #: 69785 - 27a

Cust. #: GA-HS-02F

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69785 - 27b

Cust. #: GA-HS-02F

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 69785 - 28

Cust. #: GA-HS-02G

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

Hair - 2%

Other - 98%

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

Non-Asbestos

Lab ID #: 69785 - 28a

Cust. #: GA-HS-02G

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 2

Lab ID #:

Cust. #: Material:

Location: Appearance:

Layer:

Lab ID #:

Cust. #: Material:

Location: Appearance:

Layer:

of

of

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Asbestos Present:

Asbestos Present:

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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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

Other: Sday Rush Relinquished by: All Matera Received by: 48 hour Phone: Address: Client Name: City, St., Zip: Turn Around Times: (Circle One) Lab ID# (888) 449-4566 24 hour 72 hour O Ĺ Red Cedar Consulting Lansing, MI 48901 PO Box 13216 6A. HMOZA 12X12 Stay (TTP) All Samples 6A-HM-03A BA - HM-05B GA-4M-05A GA. HM-04B GA-411-03B GA .HM-02B GA-HM-DGA BA. HM-04A GA. 41-01B GA-47-01A Client ID# Fax: Kosting 12X12 yellow VFT Window Chequiell of Jami (888) 448-8739 8 UPS Asbestos: Bulk TEM: Mold: Lead: Material/Location Very Bulk Bulk **AHERA 7400** PLM EPA 600, PC all samples with a detection of <5% ACM. Materia Lemons × Relinquished by: Wipe Wipe Tape Date of Survey:  $\cancel{x} - \cancel{x} \cancel{x} - \cancel{x}$ Contact Person: Aaron Paquet T Project #: Project: 3/28 Bulk/NOB Air Point Count BioSIS Volume EPA Level II Paint Other Received by: PCM Area Soil Viable Results Lab Use Only
Log-In \_\_\_\_\_ Report\_

Date: 4-24-17

Date: 4-25-17

Date:

FORMUNE VIEW

APR 2 6 2017/020

Rev: 12/03 Work Forms: COC

# 2018

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

						Rev: 12/03
	Date:		Date:	4-25-17	Date :	Date: 4-24-1
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			noleum 8	May Son	GA-HM-87A	13
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Results	Area	Volume	Material/Location	Mate	Client ID#	Lab ID#
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	PCM	Point Count	Bulk Wipe	Asbestos: Bulk		Rush 24 hour
sulting.net	apaquet@redcedarconsulting.net with a detection of <5% ACM.	apaq samples with a	PLM EPA 600, PC all s	Circle One)	Around Times: (Circle One)	Turn Arou
'	n Paquet	Person: Aaron		(888) 448-8739	19-4566 Fax:	Phone: (888) 449-456
		-	Project #:		Lansing, MI 48901	City, St., Zip:
Report	thendal Stop	8	Project:		PO Box 13216	Address:
Lab Use Only Log-In	4.24.17	Date of Survey: 🧳	Date of	ng	Red Cedar Consulting	Client Name: _

Rev: 12/03 Work Forms: COC

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



Rev: 12/03 Work Forms: COC	Date: 4.24.17	Relinquished by: And Musters			25 6	27 426	36		204	23 6	Lab ID#		Other: Soluy (	48 hour 72 hour	Rush 24 hour	Turn Aroun	Phone: (888) 449-4566	City, St., Zip: Lar	Address: PO	Client Name: Red
	Date:	Leter Received by:			GA-45-026	GA-45-02F	CA-45-82E	CA-18.02D	GA-45-02C	GA 45-02B	Client ID #	(	TTP) All Samples			Around Times: (Circle One)	.566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
	1-25-17	078			¥					Plater	Material/Location	TEM: AHERA 7400	Mold: Bulk	Lead: Bulk	Asbestos: Bulk	MTd	(888) 448-8739			
	Date:	Relinquished by:									ocation	7400 Bulk/NOB	Tape	Wipe	Wipe	EPA 600, PC all samples	Contact Person:	Project #:	Project: 3/28	Date of Survey
										A Section of the Sect	Volume	B EPA Level II	BioSIS	Air Paint	Point Count		Aaron		3128 Klein	Survey: 4.2
Alex	Date:	Received by:									Area	el II	Other Viable	Soil	PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	Paquet		dile thout	A-17
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# Red Cedar Consulting

# **Tables**

Table 1 - Summary of Hazardous Materials, 3128 Glendale St., Muskegon Heights, Michigan

	Hazardous Materials Description and Location	
Location	Material Description	Quantity
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	М	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	М	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:**

<u>Material Types</u> <u>Abbreviations</u>

S = Surfacing Material ND = Not detected. Laboratory result is less than 1 % asbestos PC = Point Count Analysis lin. ft. = linear feet

PC = Point Count Analysis lin. ft. = linear feet CH = Chrysotile Asbestos 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

A	Asbestos Containing Material Description	on and Location			
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity
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.) 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

**Abbreviations** 

M = Miscellaneous building material

TSI = Thermal System Insulation

S = Surfacing Material

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

Table 4 - Summary of All Asbestos Containing Materials, 3128 Glendale St., Muskegon Heights, Michigan

Interior - Asbestos Containing Materials				
Location	<b>Material Description</b>		Friable	Approx. Quantity
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	135 sq. ft.
to ousement, 25 sq. re.)		Total		135 sq. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
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
		Total		16 Windows

Table 4 - Summary of All Asbestos Containing Materials, 3128 Glendale St., Muskegon Heights, Michigan

Interior - Asbestos Containing Materi	ials			
Location	<b>Material Description</b>		Friable	Approx. Quantity
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.
		Total		3,443 sq. ft.

#### **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.

Muskegon County Land Bank Parcel ID: 61-26-770-029-0021-00

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.

Muskegon County Land Bank Parcel ID: 61-26-770-029-0021-00

#### **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.

Muskegon County Land Bank Parcel ID: 61-26-770-029-0021-00

#### 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)

Muskegon County Land Bank Parcel ID: 61-26-770-029-0021-00

#### **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

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

Raion Paguet

Aaron Paquet

Michigan/EPA Certified Asbestos Building Inspector (A30955)

# Red Cedar Consulting

# Attachment 1 APEX Research Laboratory Analytical Results



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

Lab ID #: 69582 - 01a

Cust. #: SE-HM-01A

Material: Brown Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 69582 - 02

Cust. #: SE-HM-01B

Material: Brown/Red Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 2

Asbestos Present: **NO** 

Cellulose - 40%

No Asbestos Observed

Other - 60%

Asbestos Present: **NO** No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Cellulose - 40%

Cellulose - 40%

Other - 60%

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.



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

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Cellulose - 40%

Other - 60%

Lab ID #: 69582 - 02a

Cust. #: SE-HM-01B

Material: Brown Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 2 of 2

Lab ID #: 69582 - 03

Cust. #: SE-HM-02A

Material: Black Shingle

Location:

Layer: 1 of 2

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 40%

Other - 60%

Appearance: black, fibrous, homogenous

Lab ID #: 69582 - 03a Cust. #: SE-HM-02A

Material: Tar Paper

Location:

Appearance: black,fibrous,homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Cellulose - 50%

Other - 50%

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

Robert T. Letarte Jr., Laboratory Director

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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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 40%

Other - 60%

Lab ID #: 69582 - 04

Cust. #: SE-HM-02B

Material: Black Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 2

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 50%

Other - 50%

Lab ID #: 69582 - 04a Cust. #: SE-HM-02B

Material: Tar Paper

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

Cellulose - 70%

Cust. #: SE-HM-03A

Lab ID #: 69582 - 05

Material: Vapor Barrier

No Asbestos Observed

Other - 30%

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

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: 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

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Cellulose - 70%

Other - 30%

Lab ID #: 69582 - 06

Cust. #: SE-HM-03B

Material: Vapor Barrier

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69582 - 07

Cust. #: SE-HM-04A

Material: Grey Linoleum

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 10%

Fiberglass - 10%

Other - 80%

Location:

Appearance: grey,fibrous,nonhomogenous

Layer: 1 of 1

Lab ID #: 69582 - 08

Asbestos Present: NO

Cellulose - 10%

Cust. #: SE-HM-04B

No Asbestos Observed

Fiberglass - 10% Other - 80%

Material: Grey Linoleum

Location:

Appearance: grey,fibrous,nonhomogenous

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

Layer: 1 of 1

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.



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 - 09

Cust. #: SE-HM-05A Material: White Linoleum

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed Fiberg

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: **NO** 

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: NO

No Asbestos Observed

Cellulose - 10% Fiberglass - 10%

0.1 0.00/

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.



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 - 12

Cust. #: SE-HM-06B

Material: Grey 12" Square Linoleum

Location:

Appearance: grey,fibrous,nonhomogenous

Layer: 1 of 1

Asbestos Present: NO

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: **NO** 

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: NO

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.



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

No Asbestos Observed

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

Lab ID #: 69582 - 16

Cust. #: SE-HM-08B

Material: 2x2 White Textured Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69582 - 17

Cust. #: SE-HM-09A

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Type/Percent

Asbestos Present: NO

Cellulose - 80%

Other - 20%

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Cellulose - 80%

Cellulose - 20%

Fiberglass - 5%

Other - 75%

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: 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

Cellulose - 20%

Lab ID #: 69582 - 18a

Cust. #: SE-HM-09B

Material: Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

Lab ID #: 69582 - 19 Cust. #: SE-HM-10A

Material: Fiberboard

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Fiberglass - 5%

Other - 75%

Other - 100%

Cellulose - 80%

Other - 20%

Asbestos Present: **NO** 

No Asbestos Observed

No Asbestos Observed

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: 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

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Lab ID #: 69582 - 20

Cust. #: SE-HM-10B

Material: Fiberboard

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69582 - 21

Cust. #: SE-HM-11A

Material: Window Glazing

Location:

Appearance: white, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69582 - 22

Cust. #: SE-HM-11B

Material: Window Glazing

Location:

Appearance: white, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

Cellulose - 80%

Other - 20%

Asbestos Present: NO No Asbestos Observed

Wollastonite - 2%

Wollastonite - 2% Other - 98%

Other - 98%

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: 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

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

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: **NO** 

Other - 100%

Other - 100%

Lab ID #: 69582 - 23a Cust. #: SE-HM-12A

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 5

Lab ID #: 69582 - 23b

Cust. #: SE-HM-12A

Material: White Floor Tile

Location:

Appearance: white, nonfibrous, homogenous

Layer: 3 of 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: 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

No Asbestos Observed

Non-Asbestos

Lab ID #: 69582 - 23c

Cust. #: SE-HM-12A

Material: Glue,

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 4 of 5

Lab ID #: 69582 - 23d

Cust. #: SE-HM-12A

Material: Sheet Flooring

Location:

Appearance: green, fibrous, nonhomogenous

Layer: 5 of 5

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: **NO** 

Other - 100%

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 40%

Other - 60%

Asbestos Present: NO

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: 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

Non-Asbestos

Lab ID #: 69582 - 24a

Cust. #: SE-HM-12B

Material: Glue Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 5

Lab ID #: 69582 - 24b

Cust. #: SE-HM-12B

Material: White Floor Tile

Location:

Appearance: white, nonfibrous, homogenous

Layer: 3 of 5

Lab ID #: 69582 - 24c

Cust. #: SE-HM-12B

Material: Glue, Location:

Appearance: clear,nonfibrous,homogenous

Layer: 4 of 5

Asbestos Type/Percent

Asbestos Present: NO

Other - 100%

Other - 100%

Other - 100%

No Asbestos Observed

Asbestos Present: **NO** 

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

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: 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

No Asbestos Observed

Non-Asbestos

Lab ID #: 69582 - 24d

Cust. #: SE-HM-12B

Material: Sheet Flooring

Location:

Appearance: green, fibrous, nonhomogenous

Layer: 5 of 5

Lab ID #: 69582 - 25

Cust. #: SE-HM-13A

Material: 1x1 White Ceiling Tile Pitted

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

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: **NO** 

Cellulose - 40%

Other - 60%

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 80%

Other - 20%

Asbestos Present: NO Cellulose - 80%

No Asbestos Observed

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: 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 Reported: 04/18/17

Date Analyzed: 04/13/17

Sample Information

Asbestos Type/Percent

No Asbestos Observed

Non-Asbestos

Other - 100%

Other - 100%

Lab ID #: 69582 - 27

Cust. #: SE-HM-14A

Material: Layered Black Marble 12x12 VFT

Location:

Appearance: black,nonfibrous,homogenous

Layer: 1 of 4

Lab ID #: 69582 - 27a

Cust. #: SE-HM-14A

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 4

Lab ID #: 69582 - 27b

Cust. #: SE-HM-14A

Material: White Floor Tile

Location:

Appearance: white, nonfibrous, homogenous

Layer: 3 of 4

Asbestos Present: NO

Other - 100%

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO No Asbestos Observed

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: 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

Non-Asbestos

Lab ID #: 69582 - 27c

Cust. #: SE-HM-14A

Material: Glue Location:

Appearance: clear,nonfibrous,homogenous

Layer: 4 of 4

Lab ID #: 69582 - 28

Cust. #: SE-HM-14B

Material: Layered Black Marble 12x12 VFT

Location:

Appearance: black,nonfibrous,homogenous

Layer: 1 of 4

Lab ID #: 69582 - 28a

Cust. #: SE-HM-14B

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 4

Asbestos Type/Percent

Asbestos Present: NO

Other - 100%

Other - 100%

Other - 100%

No Asbestos Observed

Asbestos Present: **NO** 

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

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: 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

Other - 100%

Lab ID #: 69582 - 28b

Cust. #: SE-HM-14B

Material: White Floor Tile

Location:

Appearance: white, nonfibrous, homogenous

Layer: 3 of 4

Lab ID #: 69582 - 28c

Cust. #: SE-HM-14B

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 4 of 4

Lab ID #: 69582 - 29

Cust. #: SE-HS-01A

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

No Asbestos Observed

Other - 100%

Other - 100%

Asbestos Present: NO

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: 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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 2%

Hair - 2%

Other - 96%

Lab ID #: 69582 - 29a

Cust. #: SE-HS-01A

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

No Asbestos Observed

Asbestos Present: **NO** 

Other - 100%

Lab ID #: 69582 - 30 Cust. #: SE-HS-01B

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69582 - 30a

Cust. #: SE-HS-01B

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Cellulose - 2% Hair - 1%

Other - 97%

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: 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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69582 - 31

Cust. #: SE-HS-01C

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69582 - 31a

Cust. #: SE-HS-01C

Material: Plaster Base Coat

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

Cellulose - 2%

Hair - 2%

Other - 96%

Other - 100%

Location:

Location.

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Asbestos Present: **NO** 

Lab ID #: 69582 - 32 Cust. #: SE-HS-01D

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

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

Layer: 1 of 2

Robert T. Letarte Jr., Laboratory Director

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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

Cellulose - 1%

Lab ID #: 69582 - 32a

Cust. #: SE-HS-01D

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Lab ID #: 69582 - 33

Cust. #: SE-HS-01E

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69582 - 33a

Cust. #: SE-HS-01E

Material: Plaster Base Coat

Location:

Appearance: grey, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO No Asbestos Observed

Hair - 1%

Other - 98%

Other - 100%

Cellulose - 2%

Hair - 2%

Other - 96%

Asbestos Present: **NO** 

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

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: 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

Non-Asbestos

Lab ID #: 69582 - 34

Cust. #: SE-HS-02A

Material: Ceiling Texture

Location:

Appearance: white, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69582 - 35

Cust. #: SE-HS-02B

Material: Ceiling Texture

Location:

Appearance: white, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69582 - 36

Cust. #: SE-HS-02C

Material: Ceiling Texture

Location:

Appearance: white, fibrous, homogenous

Layer: 1 of 1

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Cellulose - 2%

Other - 98%

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 2%

Other - 98%

Asbestos Present: NO

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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# 69582



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

Relinquished by:	1	6	2	×	4	0	<b>5</b>	4	v.	ý	- AMERICAN .	Lab ID#	d	Other: 5 May	48 hour 72 hour	Rush 24 hour	Turn Arou	Phone: (888) 449-456	City, St., Zip:	Address:	Client Name:
Relinquished by: Affect Materia Received by:	5E-MM-06A	SE-XX- 05 B	SE-47-05A	SE-MM-84B	5E-MM-04A	5E-HM-03B	SE HM- 03A	5E-HH-02B	SE-HM-02A	SE-44-01B	5E-AH-01A	Client ID#		(TTP) All Samples			Around Times: (Circle One)	49-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
	Thay 12 square devolume	" "	White Smileum	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Gray Lindburge	, , , , , ,	Vapor Basice	***	Black Steigle	,, ,, 0	Elson Shingle	Material/Location	TEM: AHERA 7400	Mold: Bulk Tape	Lead: Bulk Wipe	Ashestos: Bulk X Wipe	PLM EPA 600,	(888) 448-8739			
уу:	eum					,						l Volume	Bulk/NOB EPA Level II	BioSIS	e Air Paint _	e Point Count	apaquet@ PC all samples with a deto	rson: Aaron	• • [		Date of Survey: 4-//
Received by: have hary												Area Results	П	Other Viable	Soil	PCM	apaquet@redcedarconsulting.net samples with a detection of <5% ACM.	Paquet	volovi	Report	Lab Use Only

Date:

Date:

Date:

Date:

IPR = 2 2017

TOTA CHOURSE

Rev: 12/03 Work Forms: COC

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	214

Date: 4-11-17	Relinquished by Malefu	22 SE-,	-35	20 SE-	19 SE.	18 35	17 SE.	16 56.	15 38	SE.	13 SE		Lab ID# (	Outer: Day	N	48 hour 72 hour	Rush 24 hour	Turn Arounc	Phone: (888)449-456	t., Zip: _	PO	Client Name: Red
Date :	Matter Received by:	- HH- 118	-HM-11A	801-MH-	· HM-10A	SE-HM-098	- HM-09A	· HM-08B	SE-4M-08 A	-HM-078	-MY-07A	SE-44-06B	Client ID#	All Samples 5				Around Times: (Circle One)	66 Fax:	Lansing, MI 48901	Box 13216	Cedar Consulting
9-11-17	UPS		Window &		Filesboard	0	Munuall V<		2×2 white	**	2xxwhite c	Gray 12 square	Materia	TEM: AHI	Mold: Bulk	Lead: Bulk	Asbestos: Bulk		(888) 448-8739			ng
Date :	Relinquished by:	0 0	lagina			:\	brist Compound		testimed CT		Tis penholes chesis	a Linkeye	Material/Location	AHERA 7400 Bulk/NOB	Tape	Wipe	Wipe	A 600, PC all	Contact Person:	Project #:	Project:	Date of
			***************************************					7,000,000					Volume		BioSIS	Air	Point Count	ap samples with	Person: A		: 3136	Date of Survey: _5
Date : APR	Received by: Md												e Area	EPA Level II	Other Viable	Paint Soil	PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	Aaron Paquet		The St.	1-11-17
2 207													Results			ı		<pre>llting.net ACM.</pre>			Report	Lab Use Only Log-In

Rev: 12/03 Work Forms: COC

FEX RESEARCE

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



Rev: 12/03 Work Forms: COC	Date: 4-1/-17	Relinquished by:	33		3	90	23	25	107	<i>₹</i>	25	72	22	Lab ID#	0	Other: 5 day	48 hour 72 hour	Rush 24 hour	Turn Aroui		"Zip:	Address: Po	Client Name: Red
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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

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Rev: 12/03 Work Forms: COC

ATTX RESEARCE

# Red Cedar Consulting

# **Tables**

Table 1 - Summary of Hazardous Materials, 3136 7th St., Muskegon Heights, Michigan

Hazardous Materials Description and Location										
Location	Material Description	Quantity								
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 = 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

Asbestos Containing Material Description and Location										
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity					
Living Room (1 register, 15 sq. ft.) E. Bedroom (1 register, 15 sq. ft.) Kitchen (1 register, 15 sq. ft.) 2nd 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

Interior - Asbestos Containing Materials				
Location	<b>Material Description</b>		Friable	Approx. Quantity
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.
		Total		80 sq. ft.
Interior - Asbestos Containing Materials				
Location	<b>Material Description</b>		Friable	Approx. Quantity
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.
		Total		8 lin. ft.

#### **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.

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Muskegon County Land Bank Parcel ID: 61-26-770-028-0028-00

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.

Muskegon County Land Bank Parcel ID: 61-26-770-028-0028-00

#### **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.

Muskegon County Land Bank Parcel ID: 61-26-770-028-0028-00

#### 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.

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)

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# Red Cedar Consulting

# Attachment 1 APEX Research Laboratory Analytical Results



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

Date Reported.

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Fiberglass - 15%

Other - 85%

Lab ID #: 69585 - 01

Cust. #: SS-HM-01A

Material: Roofing Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 2

Lab ID #: 69585 - 01a

Asbestos Present: NO

No Asbestos Observed

Cellulose - 20%

Other - 80%

Cust. #: SS-HM-01A

Material: Roofing Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Fiberglass - 15% Other - 85%

Lab ID #: 69585 - 02 Cust. #: SS-HM-01B

Material: Roofing Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 2

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.



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

Lab ID #: 69585 - 03

Cust. #: SS-HM-02A

Material: White Linoleum/Glue

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 69585 - 04

Material: White Linoleum/Glue

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 40%

Other - 60%

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 15%

Fiberglass - 2%

Other - 83%

Asbestos Present: NO Cust. #: SS-HM-02B 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.



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

Lab ID #: 69585 - 06

Cust. #: SS-HM-03B

Material: 1x1 White Smooth Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69585 - 07

Cust. #: SS-HM-04A

Material: Fiberboard

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO** 

Cellulose - 80%

Cellulose - 80%

Other - 20%

No Asbestos Observed

Other - 20%

Asbestos Present: NO No Asbestos Observed

Asbestos Present: **NO** 

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.



Test Method, Polarized Light Microscopy (PLM)

Project: 3200 7th Street

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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

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Cellulose - 80%

Other - 20%

Lab ID #: 69585 - 08

Cust. #: SS-HM-04B

Material: Fiberboard

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

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: **NO** 

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Other - 100%

Lab ID #: 69585 - 10

Cust. #: SS-HM-05B Material: White 8" Square Linoleum/Glue

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

Location:

Appearance: white,nonfibrous,nonhomogenous

Layer: 1 of 2

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.



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: **NO**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: NO

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: NO

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.



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

Lab ID #: 69585 - 14

Cust. #: SS-HM-07B

Material: Brown Linoleum

Location:

Appearance:

Layer:

Lab ID #: 69585 - 15

Cust. #: SS-HM-08A

Material: Drywall

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 2

Asbestos Present: YES

Other - 80%

Chrysotile - 20%

Asbestos Present:

NOT ANALYZED

Asbestos Present: NO

Cellulose - 20%

No Asbestos Observed

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.



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

Cellulose - 20% Other - 80%

Other - 100%

Lab ID #: 69585 - 15a

Cust. #: SS-HM-08A

Material: Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Lab ID #: 69585 - 16

Cust. #: SS-HM-08B

Material: Drywall

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 2

Lab ID #: 69585 - 16a

Cust. #: SS-HM-08B

Material: Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Other - 100%

Asbestos Present: NO No Asbestos Observed

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.



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

Other - 100%

Other - 100%

Lab ID #: 69585 - 17

Cust. #: SS-HM-09A

Material: Window Glazing

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 69585 - 18

Cust. #: SS-HM-09B

Material: Window Glazing

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

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: NO

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

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.



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: NO

Cellulose - 30%

No Asbestos Observed

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.

# 69585

# TILA 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: F	Red Cedar Consulting		Date of Survey ·	4-11-19	Lab Use Only
Address:	PO Box 13216	Project :	: 3200	7th Street	Renort
City, St., Zip:	Lansing, MI 48901	Project #	1		7
Phone: (888) 449-4566	9-4566 Fax:	(888) 448-8739	erson:	Aaron Paquet	•
Turn Arou	Around Times: (Circle One)	PLM EPA 600, PC all	ar samples with	apaquet@redcedarconsulting.net samples with a detection of <5% ACM.	onsulting.net <5% ACM.
		Asbestos: Bulk Wipe	_ Point Count	PCM	I
Rush 24 hour					
		Lead: Bulk Wipe	Air	Paint Soil	
48 hour 72 hour					
Other:	יייי פיייי	Mold: Bulk Tape	BioSIS	Other V	Viable
Onici - 2 start	All Samples Except	TEM: AHERA 7400 Bulk/NOB		EPA Level II	
Lab ID #	Client ID#	Material/Location	Volume	Area	Results
	55-HH-01A	Roding Shind	The state of the s		
2	55- HM-01 B	1, 0, ., 0 =			
w	55- HM-02A	White Linden			
7	55- HM-028				
5	55-HM-03A	1x1 white most ct			
6	55-HM-03 B	•			
, <del>, )</del>	55-HM-04A	Filestorid			
B	55- HM-04B	•			
Q	55-14M-05A	White 8 sauce denilem			
ſĠ	55-MM-05B	0			

Date:

4-11-17

Relinquished by: Lland

ceived by:

Date:\_

Date:

Relinquished by:

Received by: Date:

L Just

POLY RESIDENCE

55-HM-06A 2x4 White texture CT

Rev: 12/03 Work Forms: COC

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



Rev: 12/03 Work Forms: COC	Date : 4-11-17 Date :	Relinquished by Malike by:	12 65-HM-10B	85-HM-10A	16 55-HH-09B	17 55- HM-09 A	6 55-1477-08B	15 53-HH-08A	14 55-HM-07B	15 SS-HT-07A	25-HM-06B	Lab ID # Client ID #	d	Other: 5 deu (TTP) all Samples Except	48 hour 72 hour	Rush 24 hour	Turn Around Times	449-4566	City, St., Zip: Lansing, MI 48901	Address: PO Box 13216	Client Name: Red Cedar Consulting
	Date :	d by:Relinquished by:		Pittel (x) white c.T	· · · · · · · · · · · · · · · · · · ·	1 Window Elsing	0 (	Wregwall + Soint Consoner		_	3 2x4 white texture CT	Material/Location Vol	NA.	Mold: Bulk Tape BioSIS	Lead: Bulk Wipe Air	Ashestos: Bulk X Wipe Point Count	Times: (Circle One) PLM EPA 600, PC all samples	rson	Project #:	Project: 34	lting Date of Survey
APEX RESEARCH	Date: APR I 2 2017	Received by: / Receiv										lume Area Results	EPA Level II	Other Viable	Paint Soil	Count PCM PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	1: Aaron Paquet		200 The Street	1: 4-1/-17 Lab Use Only

AT PROTOCO

# Red Cedar Consulting

# **Tables**

Table 1 - Summary of Hazardous Materials, 3200 7th St., Muskegon Heights, Michigan

	Hazardous Materials Description and Location					
Location	Material Description					
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

= Miscellaneous building material

TSI = Thermal System Insulation

= Surfacing Material S = Point Count Analysis PC

СН = Chrysotile Asbestos

#### **Abbreviations**

NQ = Not quantified NA

= Not applicable

= Not detected. Laboratory result is less than 1 % asbestos ND

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

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

A	sbestos Containing Material Description a	nd Location			
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity
No Presumed Asbestos Containing Materials Identified					

**Notes:** Material Types

M = Miscellaneous building material TSI = Thermal System Insulation

= Surfacing Material S

**Abbreviations** 

lin. ft. = linear feet

sq. ft. = square feet

Table 4 - Summary of All Asbestos Containing Materials, 3200 7th St., Muskegon Heights, Michigan

Interior - Asbestos Containing M	aterials			
Location	<b>Material Description</b>		Friable	Approx. Quantity
Closet	Brown Linoleum		No	8 sq. ft.
		Total		8 sq. ft.

#### **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.

Muskegon County Land Bank Parcel ID: 61-26-770-023-0007-00

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.

Muskegon County Land Bank Parcel ID: 61-26-770-023-0007-00

#### **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.

Muskegon County Land Bank Parcel ID: 61-26-770-023-0007-00

#### 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.

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

#### **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

Caron Popuet

Aaron Paquet

Michigan/EPA Certified Asbestos Building Inspector

(A30955)

# Red Cedar Consulting

# Attachment 1 APEX Research Laboratory Analytical Results



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

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Cellulose - 95%

Other - 5%

Lab ID #: 69788 - 01

Cust. #: FS-HM-01A

Material: Vapor Barrier

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 95%

Other - 5%

Cust. #: FS-HM-01B

Lab ID #: 69788 - 02

Material: Vapor Barrier

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69788 - 03

Cust. #: FS-HM-02A

Material: Shingle Roof

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: NO

Cellulose - 25%

No Asbestos Observed

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.



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

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Cellulose - 25%

Other - 75%

Lab ID #: 69788 - 04

Cust. #: FS-HM-02B

Material: Shingle Roof

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 1

Lab ID #: 69788 - 05

Material: Tan Vinyl

Cust. #: FS-HM-03A

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 30%

Fiberglass - 10%

Other - 60%

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: NO

Cellulose - 30%

Lab ID #: 69788 - 06 Cust. #: FS-HM-03B

Material: Tan Vinyl

No Asbestos Observed

Fiberglass - 10%

Other - 60%

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

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: 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 Reported: 05/03/17

Date Analyzed: 05/02/17

Sample Information

Asbestos Type/Percent

No Asbestos Observed

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

Lab ID #: 69788 - 08

Cust. #: FS-HM-04B

Material: 1x1 White Ceiling Tile/Smooth

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

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: **NO** 

Cellulose - 95%

Other - 5%

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 95%

Other - 5%

Asbestos Present: NO

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.



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 - 10

Cust. #: FS-HM-05B

Material: 2x2 White Ceiling Tile-Pinholes/Fissures

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

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

Lab ID #: 69788 - 12

Cust. #: FS-HM-06B

Material: Window Glazing

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Cellulose - 55%

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Wollastonite - 2%

Wollastonite - 2%

Other - 98%

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.



# 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 Reported: 05/03/17

Date Analyzed: 05/02/17

Sample Information

Asbestos Type/Percent

No Asbestos Observed

Non-Asbestos

Lab ID #: 69788 - 13

Cust. #: FS-HS-01A

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69788 - 13a

Cust. #: FS-HS-01A

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Lab ID #: 69788 - 14

Cust. #: FS-HS-01B

Material: Plaster Texture

Location:

Appearance: green, fibrous, homogenous

Layer: 1 of 2

Asbestos Present: NO

Other - 100%

Asbestos Present: **NO** No Asbestos Observed

Hair - 2%

Other - 98%

Asbestos Present: NO

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.



# 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: **NO** 

No Asbestos Observed

Other - 100%

Lab ID #: 69788 - 15

Cust. #: FS-HS-01C

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69788 - 15a

Cust. #: FS-HS-01C

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Hair - 2%

Other - 98%

Asbestos Present: NO 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.



# 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 - 16

Cust. #: FS-HS-01D

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69788 - 16a

Cust. #: FS-HS-01D

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Lab ID #: 69788 - 17

Cust. #: FS-HS-01E

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: NO

No Asbestos Observed

Other - 100%

No Asbestos Observed

Asbestos Present: NO

Asbestos Present: **NO** 

Hair - 2%

Other - 98%

Other - 100%

No Asbestos Observed

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.



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 - 17a Cust. #: FS-HS-01E

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Lab ID #:

Cust. #:

Material:

Location: Appearance:

Layer:

of

Lab ID #:

Cust. #:

Material:

Location:

Appearance: Layer:

of

Asbestos Present: NO

No Asbestos Observed

Hair - 2%

Other - 98%

Asbestos Present:

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.

# 69788

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

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	Paquet	Person: Aaron	Contact Person	(888) 448-873	9-4566 Fax:	Phone: (888) 449-4566
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Report	the St.	3213 Fil	Project: 32		PO Box 13216	Address: _
Lab Use Only Log-In	25-17	Survey: 4-1	Date of Survey	ng	Red Cedar Consulting	Client Name:

Rev: 12/03 Work Forms: COC

APEX RESEARCH



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

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Rev: 12/03 Work Forms: COC

Relinquished by:

Date : \_

4-25-17

Relinquished by:

Received by:

TELECOLOR OF THE SEARCH

# Red Cedar Consulting

# **Tables**

Table 1 - Summary of Hazardous Materials, 3213 5th St., Muskegon Heights, Michigan

	Hazardous Materials Description and Location	
Location	Material Description	Quantity
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	М	Category II	ND	Bathroom	NA
FS-HM-05B	White 2'x2' Ceiling Tile with Pinholes & Fissures	Yes	М	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

= 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

A	sbestos Containing Material Description a	nd Location			
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity
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

Exterior - Asbestos Containing Materials			
Location	<b>Material Description</b>	Friable	Approx. Quantity
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.

Muskegon County Land Bank Parcel ID: 61-26-770-018-0011-00

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.

Muskegon County Land Bank Parcel ID: 61-26-770-018-0011-00

#### **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.

Muskegon County Land Bank Parcel ID: 61-26-770-018-0011-00

#### 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.

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



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

Lab ID #: 69786 - 02

Cust. #: LA-HM-01B

Material: Vapor Barrier

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69786 - 03

Cust. #: LA-HM-02A

Material: Shingle Roof

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: NO

Cellulose - 60%

No Asbestos Observed

Other - 40%

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Cellulose - 60%

Fiberglass - 30%

Other - 70%

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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Fiberglass - 30%

Other - 70%

Lab ID #: 69786 - 04

Cust. #: LA-HM-02B Material: Shingle Roof

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Other - 100%

Lab ID #: 69786 - 05 Cust. #: LA-HM-03A

Material: 12x12 Woodgrain VFT

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 1 of 2

Lab ID #: 69786 - 05a

Cust. #: LA-HM-03A

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

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

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Test Method, Polarized Light Microscopy (PLM)

Project: 3225 Glendale St

**Report To:** 

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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

Other - 100%

Other - 100%

Lab ID #: 69786 - 06

Cust. #: LA-HM-03B

Material: 12x12 Woodgrain VFT

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 1 of 2

Lab ID #: 69786 - 06a

Cust. #: LA-HM-03B

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 69786 - 07

Cust. #: LA-HM-04A

Material: Tan 6" Squared Vinyl

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

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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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 #

Date Reported: 05/03/17

17-69786

Date Collected: 04/24/17 Date Received: 04/26/17

Date Analyzed: 05/02/17

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

Lab ID #: 69786 - 09

Cust. #: LA-HM-05A

Material: Cream 6" Squared Vinyl

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Cellulose - 10%

Fiberglass - 10%

Other - 80%

Asbestos Present: **NO** 

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: NO

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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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 Reported: 05/03/17

Date Analyzed: 05/02/17

Sample Information

Asbestos Type/Percent

Non-Asbestos

Other - 100%

Lab ID #: 69786 - 11

Cust. #: LA-HM-06A

Material: 12x12 Parquet VFT

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 1 of 2

Lab ID #: 69786 - 11a

Cust. #: LA-HM-06A

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 69786 - 12

Cust. #: LA-HM-06B

Material: 12x12 Parquet VFT

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 1 of 2

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Other - 100%

Asbestos Present: NO No Asbestos Observed

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

Robert T. Letarte Jr., Laboratory Director

Other - 100%

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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 - 12a

Cust. #: LA-HM-06B

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 69786 - 13

Cust. #: LA-HM-07A

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

Lab ID #: 69786 - 13a

Cust. #: LA-HM-07A

Material: Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

Other - 100%

Cellulose - 20% Other - 80%

Other - 100%

No Asbestos Observed

Asbestos Present: **NO** 

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

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: 3225 Glendale St

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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

No Asbestos Observed

Non-Asbestos

Lab ID #: 69786 - 14

Cust. #: LA-HM-07B

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

Lab ID #: 69786 - 14a

Cust. #: LA-HM-07B

Material: Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Lab ID #: 69786 - 15

Cust. #: LA-HM-08A

Material: 12x12 Gold VFT

Location:

Appearance: yellow,nonfibrous,homogenous

Layer: 1 of 2

Asbestos Present: NO

Cellulose - 20%

Other - 80%

Asbestos Present: **NO** 

No Asbestos Observed

Other - 100%

Asbestos Present: NO

Cellulose - 1%

No Asbestos Observed

Other - 99%

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

Robert T. Letarte Jr., Laboratory Director

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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

No Asbestos Observed

Non-Asbestos

Lab ID #: 69786 - 15a

Cust. #: LA-HM-08A

Material: Glue Location:

Appearance: yellow,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 69786 - 16

Cust. #: LA-HM-08B

Material: 12x12 Gold VFT

Location:

Appearance: yellow,nonfibrous,homogenous

Layer: 1 of 2

Lab ID #: 69786 - 16a

Cust. #: LA-HM-08B

Material: Glue

Location:

Appearance: yellow,nonfibrous,homogenous

Layer: 2 of 2

Asbestos Present: NO

Other - 100%

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 1%

Other - 99%

Other - 100%

Asbestos Present: NO No Asbestos Observed

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: 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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 50%

Other - 50%

Lab ID #: 69786 - 17

Cust. #: LA-HM-09A

Material: Tan/Brown Layered Linoleum

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 2

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

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

Lab ID #: 69786 - 18

Cust. #: LA-HM-09B

No Asbestos Observed

Cellulose - 50%

Other - 50%

Material: Tan/Brown Layered Linoleum Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 2

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: 3225 Glendale St

**Report To:** 

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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 - 18a

Cust. #: LA-HM-09B

Material: Brown Sheet Flooring

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 2 of 2

Lab ID #: 69786 - 19

Cust. #: LA-HM-10A

Material: Layered Brown Linoleum

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 2

Lab ID #: 69786 - 19a

Cust. #: LA-HM-10A

Material: Grey Sheet Flooring

Location:

Appearance: grey,fibrous,nonhomogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Cellulose - 50%

Cellulose - 50% Other - 50%

Other - 50%

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

Cellulose - 50%

No Asbestos Observed

Other - 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: 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

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Lab ID #: 69786 - 20

Cust. #: LA-HM-10B

Material: Layered Brown Linoleum

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 2

Lab ID #: 69786 - 20a

Cust. #: LA-HM-10B

Material: Grey Sheet Flooring

Location:

Appearance: grey,fibrous,nonhomogenous

Layer: 2 of 2

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: **NO** 

Cellulose - 50%

Cellulose - 50%

Other - 50%

Other - 50%

No Asbestos Observed

Asbestos Present: NO

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: 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 Reported: 05/03/17

Date Analyzed: 05/02/17

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

Non-Asbestos

Cellulose - 80%

Other - 20%

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: **NO** 

Other - 100%

Other - 100%

Lab ID #: 69786 - 23 Cust. #: LA-HM-12A

Material: Brown/White 12x12 VFT

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69786 - 23a

Cust. #: LA-HM-12A

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

Asbestos Present: NO No Asbestos Observed

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: 3225 Glendale St

**Report To:** 

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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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Other - 100%

Lab ID #: 69786 - 24

Cust. #: LA-HM-12B

Material: Brown/White 12x12 VFT

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69786 - 24a

Cust. #: LA-HM-12B

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 69786 - 25

Cust. #: LA-HS-01A

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

Hair - 2%

No Asbestos Observed

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.



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

Lab ID #: 69786 - 26a

Cust. #: LA-HS-01B

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 69786 - 27

Cust. #: LA-HS-01C

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: **NO** 

Chrysotile - 0.25%

Other - 99.75%

Hair - 2%

Other - 98%

Other - 100%

POINT COUNT RESULT

Asbestos Present: **NO** 

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

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.



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

Lab ID #: 69786 - 28

Cust. #: LA-HS-01D

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: **NO** Chrysotile - 0.50%

POINT COUNT RESULT

Lab ID #: 69786 - 28a Cust. #: LA-HS-01D

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

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

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Hair - 2%

Other - 98%

Other - 99.50%

Asbestos Present: NO No Asbestos Observed

Hair - 2% Other - 98%

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.



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 Reported: 05/03/17

Date Analyzed: 05/02/17

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

Lab ID #: 69786 - 29a

Cust. #: LA-HS-01E

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 69786 - 30

Cust. #: LA-HS-02A

Material: Textured Surfacing

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO** 

Other - 100%

Chrysotile - Trace

POINT COUNT RESULT

Asbestos Present: **NO** 

Hair - 2%

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 98%

Cellulose - 1%

Other - 84%

Vermiculite - 15%

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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 1%

Vermiculite - 10% Other - 89%

Lab ID #: 69786 - 31

Cust. #: LA-HS-02B

Material: Textured Surfacing

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO** 

Cellulose - 1%

Lab ID #: 69786 - 32 Cust. #: LA-HS-02C

Material: Textured Surfacing

No Asbestos Observed

Vermiculite - 10%

Other - 89%

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #:

Asbestos Present:

Cust. #: Material:

Location: Appearance: Layer:

of

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.

# 69786

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



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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

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PIX DISEARCE

# Red Cedar Consulting

# **Tables**

#### Table 1 - Summary of Hazardous Materials, 3225 Glendale St., Muskegon Heights, Michigan

	Hazardous Materials Description and Location	
Location	Material Description	Quantity
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

A	sbestos Containing Material Description a	nd Location			
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity
No Presumed Asbestos Containing Materials Identified					

**Notes:** 

Material Types

M = Miscellaneous building material TSI = Thermal System Insulation

= Surfacing Material S

**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>			
Location	Material Description	Friable	Approx. Quantity
No Asbestos Containing Materials Identified			

# **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.

Muskegon County Land Bank Parcel ID: 61-26-770-004-0030-00

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.

Muskegon County Land Bank Parcel ID: 61-26-770-004-0030-00

#### **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.

Muskegon County Land Bank Parcel ID: 61-26-770-004-0030-00

#### 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)

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

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

Raion Poquet

Aaron Paquet

Michigan/EPA Certified Asbestos Building Inspector (A30955)

# Red Cedar Consulting

# Attachment 1 APEX Research Laboratory Analytical Results



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

Asbestos Present: YES

Chrysotile - 10%

Asbestos Present:

Non-Asbestos

Cellulose - 20%

Other - 70%

Lab ID #: 69626 - 01

Cust. #: SS-HM-01A

Material: Asphalt Siding

Location:

Appearance: black,fibrous,nonhomogenous

Layer: 1 of 1

Lab ID #: 69626 - 02

Cust. #: SS-HM-01B

Material: Asphalt Siding

Location:

NOT ANALYZED

Appearance: Layer:

Lab ID #: 69626 - 03

Cust. #: SS-HM-02A

Material: Roofing Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 2

Asbestos Present: NO

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.



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

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Cellulose - 40%

Other - 60%

Lab ID #: 69626 - 03a

Cust. #: SS-HM-02A

Material: Vapor Barrier

Location:

Appearance: black,fibrous,homogenous

Layer: 2 of 2

Lab ID #: 69626 - 04

Asbestos Present: **NO** No Asbestos Observed

Fiberglass - 15%

Other - 85%

Cust. #: SS-HM-02B

Material: Roofing Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 2

Asbestos Present: NO

No Asbestos Observed

Cellulose - 40%

Other - 60%

Lab ID #: 69626 - 04a Cust. #: SS-HM-02B

Material: Vapor Barrier

Location:

Appearance: black,fibrous,homogenous

Layer: 2 of 2

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

Robert T. Letarte Jr., Laboratory Director

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Project: 3320 Sanford St

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

ARI Report # Date Collected: 04/14/17

17-69626

Date Received: 04/17/17

Date Analyzed: 04/18/17

Date Reported: 04/24/17

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 30%

Fiberglass - 10%

Other - 60%

Lab ID #: 69626 - 05

Cust. #: SS-HM-03A

Material: Grey Linoleum

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69626 - 06

Cust. #: SS-HM-03B

Material: Grey Linoleum

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 30%

Fiberglass - 10%

Other - 60%

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 69626 - 07

Cust. #: SS-HM-04A

Material: Wood Grain Vinyl

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: NO

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)

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 - 08

Cust. #: SS-HM-04B

Material: Wood Grain Vinyl

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Fiberglass - 5%

Cellulose - 40%

Other - 60%

Other - 75%

Lab ID #: 69626 - 09

Cust. #: SS-HM-05A

Material: White Layered Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 69626 - 10

Cust. #: SS-HM-05B

Material: White Layered Linoleum

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 20%

Asbestos Present: NO

Cellulose - 60%

No Asbestos Observed

Other - 40%

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

Robert T. Letarte Jr., Laboratory Director

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Project: 3320 Sanford St

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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

Asbestos Present: YES

Chrysotile - 5%

Non-Asbestos

Other - 95%

Lab ID #: 69626 - 11

Cust. #: SS-HM-06A

Material: 9x9 Red VFT

Location:

Appearance: red,fibrous,homogenous

Layer: 1 of 2

Asbestos Present: **NO** No Asbestos Observed

Other - 100%

Lab ID #: 69626 - 11a Cust. #: SS-HM-06A

Material: Mastic

Location:

Appearance: black,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 69626 - 12

Asbestos Present:

Cust. #: SS-HM-06B Material: 9x9 Red VFT

Location:

Appearance: Layer: 1 of 2 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: 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

Cellulose - 20% Other - 80%

Other - 100%

Lab ID #: 69626 - 12a

Cust. #: SS-HM-06B

Material: Mastic

Location:

Appearance: black,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 69626 - 13

Cust. #: SS-HM-07A

Material: Drywall

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 2

Lab ID #: 69626 - 13a

Material: Joint Compound

Location:

Layer: 2 of 2

Asbestos Present: NO

Other - 100%

Asbestos Present: **NO** 

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

Cust. #: SS-HM-07A

Appearance: white, nonfibrous, homogenous

No Asbestos Observed

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: 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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 20%

Other - 80%

Lab ID #: 69626 - 14

Cust. #: SS-HM-07B

Material: Drywall

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 2

Asbestos Present: **NO** No Asbestos Observed

Other - 100%

Cust. #: SS-HM-07B

Lab ID #: 69626 - 14a

Material: Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Lab ID #: 69626 - 15

Cust. #: SS-HM-08A

Material: Window Glazing

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Wollastonite - 1%

Other - 98%

Cellulose - 1%

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

Robert T. Letarte Jr., Laboratory Director

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Project: 3320 Sanford St

**Report To:** 

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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: NO

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Cellulose - 1%

Wollastonite - 1%

Other - 98%

Other - 100%

Other - 100%

Lab ID #: 69626 - 17

Cust. #: SS-HS-01A

Material: Surfacing Material

Location:

Appearance: beige, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 69626 - 18

Cust. #: SS-HS-01B

Material: Surfacing Material

Location:

Appearance: beige,nonfibrous,homogenous

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

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

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.



Test Method, Polarized Light Microscopy (PLM)

Project: 3320 Sanford St

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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

Other - 100%

Lab ID #: 69626 - 19

Cust. #: SS-HS-01C

Material: Surfacing Material

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 1

Lab ID #:

Cust. #:

Material:

Location: Appearance:

Layer:

Lab ID #:

Cust. #: Material:

Location:

Appearance: Layer:

of

of

Asbestos Present: NO

No Asbestos Observed

Asbestos Present:

Asbestos Present:

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

Robert T. Letarte Jr., Laboratory Director

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# 69626

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

Rev: 12/03 Work Forms: COC	Date: 4-14-17	Relinquished by:		0	9	A	+	6	(j>-	£1	2	N		Lab ID#	4	Other: 5 km	48 hour 72 hour	Rush 24 hour		Turn Arou	Phone: (888) 449-456	City, St., Zip:	Address: _	Client Name: _1
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PEX RESEARCH	Section 1													Results		le				sulting.net			Report	Lab Use Only Log-In

# APEX Research, Inc. 11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

E-mail: apexresearch@chartermi.net

Fax: 734-449-9991



Rev: 12/03 Work Forms: COC	Date: 4-14-19	Relinquished by		7	JA.	£1	91	15	14	2	Ø	Lab ID#	Û	52	48 hour 72 hour	Rush 24 hour	Turn Arou	Phone: (888) 449-4566	City, St., Zip:	Address:	Client Name: _
	Date:	Relinquished by Lovel Mallie Received by:		55-H5-01C	55-45-018	55-45-014	38-HK-08B	55-HH-08A	55-HM-07B	55-HM-07A	55-HM-06B	Client ID#		(TTP) All Samples			Around Times: (Circle One)	9-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
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<b>F</b>	Date: APR	Received by:									er Ø 1. ellebrandske er er er er er	ume Area	EPA Level II	Other Vi	Paint Soil	unt PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	Aaron Paquet		a hand st	11-4-17
FIX DIVINOS	1											Results		Viable		•	nsulting.net	, <b>,</b>		Report	Lab Use Only

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# Red Cedar Consulting

# **Tables**

Table 1 - Summary of Hazardous Materials, 3320 Sanford St., Muskegon Heights, Michigan

	Hazardous Materials Description and Location								
Location Material Description Qua									
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

CH

# Material Types

= Miscellaneous building material

TSI = Thermal System Insulation

= Chrysotile Asbestos

= Surfacing Material S = Point Count Analysis PC

# **Abbreviations**

= Not quantified NQ NA

= Not applicable

= Not detected. Laboratory result is less than 1 % asbestos ND

= linear feet lin. ft. 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

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

Material Types

M = Miscellaneous building material TSI = Thermal System Insulation

= Surfacing Material S

**Abbreviations** 

lin. ft. = linear feet

sq. ft. = square feet

Table 4 - Summary of All Asbestos Containing Materials, 3320 Sanford St., Muskegon Heights, Michigan

Exterior - Asbestos Containing Mat	erials			
Location	Material Description		Friable	Approx. Quantity
Building Exterior	Asphalt Siding		No	1,320 sq. ft.
		Total		1,320 sq. ft.
Interior - Asbestos Containing Mate	erials			
Location	Material Description		Friable	Approx. Quantity
SW Bedroom	Red 9"x9" Vinyl Tile		No	120 sq. ft.
		Total		120 sq. ft.

#### **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.

Muskegon County Land Bank Parcel ID: 61-26-400-010-0013-00

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.

Muskegon County Land Bank Parcel ID: 61-26-400-010-0013-00

#### **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 Cementatious "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.

Muskegon County Land Bank Parcel ID: 61-26-400-010-0013-00

#### 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 cementatious "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 cementatious (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.

Muskegon County Land Bank Parcel ID: 61-26-400-010-0013-00

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 cementatious 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.

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



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 Reported: 04/18/17

Date Analyzed: 04/14/17

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

Lab ID #: 69583 - 02

Cust. #: ES-HM-01B

Material: Vapor Barrier

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69583 - 03

Cust. #: ES-HM-02A

Material: House Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 4

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: **NO** 

Asbestos Present: NO

No Asbestos Observed

Cellulose - 60%

Cellulose - 60%

Other - 40%

Other - 40%

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.



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

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Cellulose - 40%

Other - 60%

Lab ID #: 69583 - 03a

Cust. #: ES-HM-02A

Material: Green Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 2 of 4

Lab ID #: 69583 - 03b

Cust. #: ES-HM-02A

Material: Red Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 3 of 4

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 40%

Other - 60%

Lab ID #: 69583 - 03c

Cust. #: ES-HM-02A

Material: Red Shingle

Location:

Appearance: black,fibrous,homogenous

Asbestos Present: NO

No Asbestos Observed

Cellulose - 40%

Other - 60%

Layer: 4 of 4

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: 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

Asbestos Present: **NO** 

No Asbestos Observed

Non-Asbestos

Cellulose - 40%

Other - 60%

Lab ID #: 69583 - 04

Cust. #: ES-HM-02B

Material: House Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 4

Asbestos Present: **NO** 

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: NO

Cellulose - 40%

Lab ID #: 69583 - 04b Cust. #: ES-HM-02B

Material: Red Shingle

No Asbestos Observed

Other - 60%

Location:

Appearance: black,fibrous,homogenous

Layer: 3 of 4

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: 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

Lab ID #: 69583 - 05

Cust. #: ES-HM-03A

Material: Rolled Roofing

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69583 - 06

Cust. #: ES-HM-03B

Material: Rolled Roofing

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: **NO** 

Cellulose - 40%

No Asbestos Observed

Other - 60%

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 40%

Other - 60%

Asbestos Present: NO 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.



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

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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69583 - 07

Cust. #: ES-HM-04A

Material: Grey Layered Floor Tile

Location:

Appearance: black,nonfibrous,homogenous

Layer: 1 of 3

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Lab ID #: 69583 - 07a Cust. #: ES-HM-04A

Material: Glue

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 3

Lab ID #: 69583 - 07b

Cust. #: ES-HM-04A

Material: Sheet Flooring

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 3 of 3

Asbestos Present: NO

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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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

Other - 100%

Other - 100%

Lab ID #: 69583 - 08

Cust. #: ES-HM-04B

Material: Grey Layered Floor Tile

Location:

Appearance: black,nonfibrous,homogenous

Layer: 1 of 3

Lab ID #: 69583 - 08a

Cust. #: ES-HM-04B

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 3

Lab ID #: 69583 - 08b

Cust. #: ES-HM-04B

Material: Sheet Flooring

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 3 of 3

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

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.



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

Cellulose - 10%

Fiberglass - 10%

Cellulose - 40%

Other - 60%

Lab ID #: 69583 - 09a

Cust. #: ES-HM-05A

Material: Sheet Flooring

Location:

Appearance: grey,fibrous,nonhomogenous

Layer: 2 of 2

Lab ID #: 69583 - 10

Cust. #: ES-HM-05B

Material: Cream Linoleum

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Other - 80%

Asbestos Present: NO

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.



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

Lab ID #: 69583 - 11

Cust. #: ES-HM-06A

Material: Red Brick 12x12 VFT

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 1 of 2

Lab ID #: 69583 - 11a

Cust. #: ES-HM-06A

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

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

Layer: 2 of 2

Asbestos Present: NO

Cellulose - 40%

No Asbestos Observed

Other - 60%

Other - 100%

Other - 100%

Asbestos Present: **NO** No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

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.



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

Other - 100%

Lab ID #: 69583 - 12

Cust. #: ES-HM-06B

Material: Red Brick 12x12 VFT

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 1 of 2

Lab ID #: 69583 - 12a

Cust. #: ES-HM-06B

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 69583 - 13

Cust. #: ES-HM-07A

Material: Window Glazing

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

Asbestos Present: YES

Chrysotile - 5%

No Asbestos Observed

Other - 100%

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.



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:

NOT ANALYZED

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present:

Appearance:

Layer: of

Lab ID #: 69583 - 15

Cust. #: ES-HM-08A

Material: Red/Yellow Linoleum

Location:

Appearance: red, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 69583 - 16

Asbestos Present: NO

Cellulose - 40%

Cellulose - 40%

Other - 60%

Cust. #: ES-HM-08B

Material: Red/Yellow Linoleum

No Asbestos Observed

Other - 60%

Location:

Appearance: red,fibrous,nonhomogenous

Layer: 1 of 1

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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 20%

Other - 80%

Lab ID #: 69583 - 17

Cust. #: ES-HM-09A

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 3

Asbestos Present: **NO** 

No Asbestos Observed

Other - 100%

Other - 98.75%

Lab ID #: 69583 - 17a Cust. #: ES-HM-09A

Material: White Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 3

Lab ID #: 69583 - 17b

Cust. #: ES-HM-09A

Material: Beige Joint Compound

Location:

Appearance: beige, fibrous, homogenous

Layer: 3 of 3

Asbestos Present: YES

Chrysotile - 1.25%

POINT COUNT RESULT

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: 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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 20%

Other - 80%

Lab ID #: 69583 - 18

Cust. #: ES-HM-09B

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 3

Asbestos Present: **NO**No Asbestos Observed

Other - 100%

Lab ID #: 69583 - 18a Cust. #: ES-HM-09B

Cust. #. ES-IIVI-07D

Material: White Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 3

Lab ID #: 69583 - 18b

Asbestos Present:

Cust. #: ES-HM-09B

Material: Beige Joint Compound

Location:

age come compound

Appearance:

Layer: 3 of 3

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: 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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 40%

Other - 60%

Lab ID #: 69583 - 19

Cust. #: ES-HM-10A

Material: Gold Layered Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 2

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 70%

Other - 30%

Material: Fiberboard

Cust. #: ES-HM-10A

Lab ID #: 69583 - 19a

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 69583 - 20

Asbestos Present: NO

No Asbestos Observed

Cellulose - 40%

Other - 60%

Cust. #: ES-HM-10B

Material: Gold Layered Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 2

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: 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 - 20a

Cust. #: ES-HM-10B Material: Fiberboard

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 69583 - 21

Cust. #: ES-HS-01A

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 3

Lab ID #: 69583 - 21a

Cust. #: ES-HS-01A

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 3

Asbestos Present: NO

Cellulose - 70%

No Asbestos Observed

Other - 30%

Other - 100%

Cellulose - 2%

Other - 98%

Asbestos Present: **NO** No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 20%

Other - 80%

Lab ID #: 69583 - 21b

Cust. #: ES-HS-01A

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 3 of 3

Lab ID #: 69583 - 22

Cust. #: ES-HS-01B

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Cellulose - 2%

Other - 98%

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 69583 - 22a

Cust. #: ES-HS-01B

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

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

Layer: 2 of 2

Robert T. Letarte Jr., Laboratory Director

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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

Other - 100%

Lab ID #: 69583 - 23

Cust. #: ES-HS-01C

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 3

Lab ID #: 69583 - 23a

Cust. #: ES-HS-01C

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 3

Lab ID #: 69583 - 23b

Cust. #: ES-HS-01C

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 3 of 3

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Cellulose - 5%

Other - 95%

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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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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69583 - 24

Cust. #: ES-HS-01D

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 2% Other - 98%

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: NO No Asbestos Observed

Lab ID #: 69583 - 25

Cust. #: ES-HS-01E

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

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: 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 - 25a Cust. #: ES-HS-01E

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Lab ID #:

Cust. #:

Material: Location: Appearance:

Layer:

of

Lab ID #:

Cust. #: Material:

Location: Appearance:

Layer:

of

Asbestos Present: NO

No Asbestos Observed

Cellulose - 2%

Other - 98%

Asbestos Present:

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.

# 69583

# APEX Research, Inc. 11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990 E-mail: apexresearch@chartermi.net

Fax: 734-449-9991

Date: 4 1/-17 Date:	Relinquished by: Alle Materia Received by:	M ES-HH-04A	10 ES-HM-05B	9 ES-HM-05 A	8 FS. HM-048	7 ES-4M-04A	6 ES-HM-03B	ES-4/4-03A	4 ES-4M-02B	2 ES-HY-02A	ES-HM-018	1 ES-MM-01A	Lab ID # Client ID #		Other: She TTP 111 Saming	48 hour 72 hour	Rush 24 hour	Turn Around Times: (Circle One)	Phone: (888) 449-4566 Fax:	City, St., Zip: Lansing, MI 48901	Address: PO Box 13216	Client Name: Red Cedar Consulting
4-15-17	y: 1) PS Relinquished by:	Ed Brick 12×12 VFT		Beam Sincleum Jayred	6	They Sugged Floring		Rolled Rosping	,, ,,,,	House Shingle		Vapor Bassin	Material/Location Volu	TEM: AHERA 7400 Bulk/NOB	Mold: Bulk BioSIS	Lead: Bulk Wipe Air	Asbestos: Bulk X Wipe Point Count	PLM EPA 600, PC all samples	(888) 448-8739		Project: 333	Date of Survey:
Date: APR 1 2 2017	Received by: Received by:												lume Area Results	EPA Level II	Other Viable	Paint Soil	ıt PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	Aaron Paquet		8th of Report	Lab Use Only

 $t^{(a)}\cdot$ 

Rev: 12/03 Work Forms: COC

ATTX INSTARCE

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

RESEARCH	APEX			
		188	~	

Date: 4-11-19	Relinquished by:	22	2	8	101	Ã	F	6	5	14	び	12	Lab ID#		Other: 5 Min	48 hour 72 hour	Rush 24 hour	Turn Around	Phone: (888) 449-	City, St., Zip:	Address:	ame: _
Date:	Bold Matter Received by:	E5.45-018	ES. 45-01A	E3-HM-10B	ES-HM-10A	£5- 4/W-09B	E3-HM-09A	E5-HM-08B	ES- HM-08A	ES-HM-07B	ES- 44-07A	E5-HM-06B	Client ID#	- Confidence and the second se	ATP ALL CAMPING			ind Times: (Circle One)	19-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
A-15-17 Date:			Plate		Gold James of Terriste	0 1	Superall & Fint Com		Red + Wellow Tenoles	, O	Window Glassing	Red Brick 12x12 VF	Material/Location	TEM: AHERA 7400		Lead: Bulk Wipe	os: Bulk	PLM EPA 600,	(888) 448-8739			
	Relinquished by:						wind						Volume	Bulk/NOB EPA	e BioSIS	Air		apao PC all samples with a	Contact Person: Aaron	Project #:	Project: 3336	Date of Survey:
Date : APR	Received by:												Area	EPA Level II	Other Viable	Paint Soil	PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	on Paquet		Star Star	4-11-12
1 2 2017													Results		le			ulting.net % ACM.			Report	Lab Use Only Log-In

Rev: 12/03 Work Forms: COC

ACT ATTOMATOR

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



Relinquished by:					Z	24	23	Lab ID#	0	Other: Shau	48 hour 72 hour	Rush 24 hour	Turn Arol	Phone: (888) 449-4566	City, St., Zip:	Address:	Client Name:
Relinquished by: Deflethertest Received by: UPS					£5-45-01E	E5-45-01 D	ES.45-01 C	Client ID#		(TTP) All Samples			Turn Around Times: (Circle One)	19-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
Relinquished by:							Phytic	Material/Location	TEM: AHERA 7400	Mold: Bulk Tape	Lead: Bulk Wipe	Ashestos: Bulk X Wipe	PLM EPA 600,	(888) 448-8739	Project #:	Proje	
								Volume	Bulk/NOBEPA	BioSIS	Air	Point Count		Contact Person: Aaron	21 #:	Project: 333/	Date of Survey:
Received by:				,				Area	EPA Level II	Other Via	Paint Soil	PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	on Paquet		SA IN	4-11-17
								Results		Viable			rsulting.net 5% ACM.	i	Keport	Log-In	Lab Use Only

Date: 4-1/-

Date:

Date:

Relinquished by:

Received by:

Date:

Rev: 12/03 Work Forms: COC

# Red Cedar Consulting

# **Tables**

Table 1 - Summary of Hazardous Materials, 3336 8th St., Muskegon Heights, Michigan

Hazardous Materials Description and Location										
Location Material Description										
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

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
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	01A Plaster No S C		Category II	ND/ND/ND	Kitchen Ceiling	NA	
ES-HS-01B	Plaster	No	S	Category II	ND/ND	Kitchen Wall	NA
ES-HS-01C	ES-HS-01C Plaster		S	Category II	ND/ND/ND	NW Bedroom Ceiling	NA
ES-HS-01D	ES-HS-01D Plaster		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:

Ma	aterial Types	Abbrev	<u>viations</u>
M	= Miscellaneous building material	NQ	= Not quantified
TS	I = Thermal System Insulation	NA	= Not applicable
S	= Surfacing Material	ND	= Not detected. Laboratory result is less than 1 % asbestos
PC	= Point Count Analysis	lin. ft.	= linear feet
CF	H = Chrysotile Asbestos	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

A	Asbestos Containing Material Description and Location												
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity								
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

Interior - Asbestos Containing Materials				
Location	<b>Material Description</b>		Friable	Approx. Quantity
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
		Total		11 Windows
Exterior - Asbestos Containing Materials				
Location	<b>Material Description</b>		Friable	Approx. Quantity
Building Exterior	Transite Siding		No	978 sq. ft.
		Total		978 sq. ft.
<b>Interior - Asbestos Containing Materials</b>				
Location	<b>Material Description</b>		Friable	Approx. Quantity
Attic Walls	Drywall Compound		No	384 sq. ft.
Attic Ceiling	Drywall Compound		No	144 sq. ft.
		Total		528 sq. ft.

#### **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.

Muskegon County Land Bank Parcel ID: 61-26-400-008-0012-00

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.

Muskegon County Land Bank Parcel ID: 61-26-400-008-0012-00

#### **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.

Muskegon County Land Bank Parcel ID: 61-26-400-008-0012-00

#### 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)

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

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

Raion Paguet

Aaron Paquet

Michigan/EPA Certified Asbestos Building Inspector (A30955)

# Red Cedar Consulting

# Attachment 1 APEX Research Laboratory Analytical Results



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 Reported: 04/25/17

Date Analyzed: 04/21/17

Sample Information

Asbestos Type/Percent

No Asbestos Observed

Non-Asbestos

Lab ID #: 69692 - 01

Cust. #: NS-HM-01A

Material: Vapor Barrier

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69692 - 02

Cust. #: NS-HM-01B

Material: Vapor Barrier

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69692 - 03

Cust. #: NS-HM-02A

Material: Roofing Shingle

Location:

Appearance: black, fibrous, homogenous

Asbestos Present: NO

Cellulose - 95%

Other - 5%

Asbestos Present: **NO** No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Cellulose - 95%

Fiberglass - 20%

Other - 80%

Other - 5%

Layer: 1 of 2

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.



# 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

Lab ID #: 69692 - 04

Cust. #: NS-HM-02B

Material: Roofing Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 2

Lab ID #: 69692 - 04a

Cust. #: NS-HM-02B

Material: Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Fiberglass - 20%

Other - 80%

Asbestos Present: **NO** No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Fiberglass - 20%

Other - 80%

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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# 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

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69692 - 05

Cust. #: NS-HM-03A

Material: Grey 12x12 Pebble VFT

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 2

Asbestos Present: **NO** 

Other - 100%

Lab ID #: 69692 - 05a Cust. #: NS-HM-03A

Material: Mastic

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 69692 - 06

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Cust. #: NS-HM-03B

Material: Grey 12x12 Pebble VFT

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 2

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.



# 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

Other - 100%

Lab ID #: 69692 - 06a

Cust. #: NS-HM-03B

Material: Mastic

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

Asbestos Present: NO No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 35%

Other - 65%

Lab ID #: 69692 - 07 Cust. #: NS-HM-04A

Material: Tan/Grey Marble Linoleum

Location:

Appearance: green, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 69692 - 08

Cust. #: NS-HM-04B

Material: Tan/Grey Marble Linoleum

Location:

Appearance: green, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: NO

Cellulose - 35%

No Asbestos Observed

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.



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

Non-Asbestos

Lab ID #: 69692 - 09

Cust. #: NS-HM-05A

Material: 9x9 Brown VFT

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 2

Lab ID #: 69692 - 09a

Cust. #: NS-HM-05A

Material: Mastic

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 69692 - 10

Cust. #: NS-HM-05B

Material: 9x9 Brown VFT/Mastic

Location:

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

Appearance:

Layer:

of

Asbestos Type/Percent

Asbestos Present: YES

Asbestos Present: YES

Chrysotile - 10%

Other - 90%

Other - 90%

Asbestos Present:

Chrysotile - 10%

NOT ANALYZED

Robert T. Letarte Jr., Laboratory Director

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# 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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 95%

Other - 5%

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: **NO** 

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

Lab ID #: 69692 - 13 Cust. #: NS-HM-07A Asbestos Present: NO

Cellulose - 95%

No Asbestos Observed

Other - 5%

Material: 1x1 White Textured Ceiling Tile Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

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.



# 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

Lab ID #: 69692 - 15

Cust. #: NS-HM-08A

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

Lab ID #: 69692 - 15a

Cust. #: NS-HM-08A

Material: Joint Compound

Location:

Appearance: beige, fibrous, nonhomogenous Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Cellulose - 95%

Other - 5%

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 20%

Other - 80%

Asbestos Present: YES Other - 98.50%

Chrysotile - 1.50%

POINT COUNT RESULT

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.



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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 20%

Other - 80%

Lab ID #: 69692 - 16

Cust. #: NS-HM-08B

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

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: NO No Asbestos Observed

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

Robert T. Letarte Jr., Laboratory Director

Other - 100%

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.



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

Lab ID #: 69692 - 19

Cust. #: NS-HM-10A

Material: Cream Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 69692 - 20

Material: Cream Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Cellulose - 20%

Fiberglass - 10%

Other - 70%

Cust. #: NS-HM-10B

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.



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

Lab ID #: 69692 - 22

Cust. #: NS-HM-11B

Material: Green Marble Linoleum

Location:

Appearance: green, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 69692 - 23

Cust. #: NS-HM-12A

Material: Green Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: NO

Cellulose - 35%

No Asbestos Observed

Other - 65%

Asbestos Present: **NO** 

Cellulose - 35%

No Asbestos Observed

Other - 65%

Asbestos Present: NO Cellulose - 35% No Asbestos Observed 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.



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

No Asbestos Observed

Non-Asbestos

Lab ID #: 69692 - 24

Cust. #: NS-HM-12B

Material: Green Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 69692 - 25

Cust. #: NS-HM-13A

Material: Blue Green Linoleum

Location:

Appearance: grey,fibrous,nonhomogenous

Layer: 1 of 1

Lab ID #: 69692 - 26

Cust. #: NS-HM-13B

Material: Blue Green Linoleum

Location:

Appearance: grey,fibrous,nonhomogenous

Layer: 1 of 1

Asbestos Present: **NO** 

Cellulose - 35%

Other - 65%

Asbestos Present: **NO** 

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

Cellulose - 35%

Cellulose - 35%

Other - 65%

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.



# 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

Non-Asbestos

Other - 100%

Cellulose - 2%

Other - 98%

Lab ID #: 69692 - 27

Cust. #: NS-HS-01A

Material: Plaster Texture

Location:

Layer: 1 of 3

Appearance: green, fibrous, homogenous

Lab ID #: 69692 - 27a

Cust. #: NS-HS-01A

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 3

Lab ID #: 69692 - 27b

Cust. #: NS-HS-01A

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

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

Layer: 3 of 3

Asbestos Type/Percent

Asbestos Present: YES

Other - 98.50%

Chrysotile - 1.50%

POINT COUNT RESULT

Asbestos Present: **NO** 

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

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.



# 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

Lab ID #: 69692 - 28a

Cust. #: NS-HS-01B

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Lab ID #: 69692 - 29

Cust. #: NS-HS-01C

Location:

Layer: 1 of 3

Asbestos Present: NO

Other - 100%

Cellulose - 2%

Other - 98%

Asbestos Present: **NO** 

No Asbestos Observed

No Asbestos Observed

Material: Plaster Texture

Appearance:

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.



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

Other - 100%

Lab ID #: 69692 - 29a

Cust. #: NS-HS-01C

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 3

Lab ID #: 69692 - 29b

Cust. #: NS-HS-01C

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 3 of 3

Lab ID #: 69692 - 30

Cust. #: NS-HS-01D

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

Cellulose - 2%

No Asbestos Observed

Other - 98%

Other - 100%

Asbestos Present: NO

No Asbestos Observed

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.



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

No Asbestos Observed

Non-Asbestos

Lab ID #: 69692 - 30a

Cust. #: NS-HS-01D

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Lab ID #: 69692 - 31

Cust. #: NS-HS-01E Material: Plaster Texture

Location:

Appearance:

Layer: 1 of 3

Lab ID #: 69692 - 31a

Cust. #: NS-HS-01E

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 3

Asbestos Present: NO

Cellulose - 2%

Other - 98%

NOT ANALYZED

Asbestos Present:

Asbestos Present: NO

Other - 100%

No Asbestos Observed

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.



# Test Method, Polarized Light Microscopy (PLM)

Project: 3337 Ninth St.

R	en	ort	$T_0$	٠.

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

Non-Asbestos

Lab ID #: 69692 - 31b

Cust. #: NS-HS-01E

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 3 of 3

Lab ID #:

Cust. #: Material:

Location: Appearance:

Layer:

Lab ID #:

Cust. #: Material:

Location:

Appearance: Layer:

of

of

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Cellulose - 2%

Other - 98%

Asbestos Present:

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.

# 69692

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
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Relinquished by: ARAMMenter Received by: U75 Re	11 NS-HM-06A 1X1 White Sworth	NS-HM-	NS-HM-04A Ten+ Steen Marke	NS-411-03A Hay 12x12 Felle	5 NS-HM-024 Rooking Shingle	2 NS-HM-01A Vagus Bauces	Lab ID # Client ID # Material/Location	PO Box 13216  13216  1 Lansing, MI 48901  1 Lansing, MI 48901  1 Circle One)  1 Asbestos: Bulk  1 Cour  1 Mold: Bulk  1 TP All Samples  1 TEM: AHERA 7400
Relinquished by: Received by: 1/2   Received by: 1/	9		eislein !	VET			on Volume Area	Date of Survey: 4-19-17  Project: 3337 72
2 0 2017							Results	Lab Use Only Log-In Report sulting . net 5% ACM.

Rev: 12/03 Work Forms: COC

HOLDEN MINISTER

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



				22 NS-HM-118	
			Green Marble Guideum	21 NS-HW-11A	
				20 NS-HM-10B	
			Cream Serieur	19 NS-HM-10A	
			0	19 NS-HM-098	
			Window Klasing	17 NS-HM-09A	
			0	16 NS-HM-08B	
			Sheefwell & Frint langues	15-MM-08A	
				NS-417-07B	
			1x1 white textured cT	B NS-HM-07A	
			1x White Smooth CT	N5-HM-06B	
Results	Area	Volume	Material/Location	# Client ID#	Lab II
	evel II	)B EPA Level II	TEM: AHERA 7400 Bulk/NOB	AII Samples	Called .
Viable	Other V	BioSIS	Mold: Bulk Tape	`	Other:
	nt Soil	Air Paint	Lead: Bulk Wipe	72 hour	48 hour
i	PCM	Point Count	Asbestos: Bulk Wipe	24 hour	Rush
apaquet@redcedarconsulting.net es with a detection of <5% ACM.	et@redcedarcodetection of	apaqu amples with a c	H WTA	Around Times: (Circle One)	
	Aaron Paquet	on:	(888) 448-8739	(888) 449-4566 Fax:	Phone: _
		#:	Project # :	Zip: Lansing, MI 48901	City, St., Zip:
Report	AA	Project: 3337/2	Project :	PO Box 13216	Address:
Lab Use Only Log-In	19-17	Survey: 4	9 Date of Survey	Me: Red Cedar Consulting	Client Name:

Date:

Rev: 12/03 Work Forms: COC

Relinquished by:

Marting Received by: 075

Relinquished by:

Received by:

Date:

AND THE TABLE

Date: 4-19-17

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



Date: 4-19-17	Relinquished by: Logh Matter		31	<i>3</i> 0	29	24	2,	28	25	24	23	Lab ID#	Ó	Other:	48 hour 72 hour	Rush 24 hour	Turn Arou	Phone: (888) 449-4566	City, St., Zip:	ł	Client Name: _
Date :	Matter Received by:		NS-45-01E	N5-45-01D	NS-HS-010	NS-45-01B	NS-HS-01A	NS-HM-13B	N5-HM- 13A	NS-4M-12 B	NS.HM-12A	Client ID#	- ATT GRIMDIED	TIP ALL STEELS			Around Times: (Circle One)	9-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
4-19-17 Date:	UPS Relinquished by:		4				Plater	77	Blue Kleen Bustemm		Meen Serioleum	Material/Location	TEM: AHERA 7400 Bulk/NOB	Mold: Bulk Tape	Lead: Bulk Wipe	Asbestos: Bulk Wipe	PLM EPA 600, PC all	: (888) 448-8739 Contact Person	Project #:	Project	Date of Survey
												Volume	OB EPA Level II	BioSIS	_ Air Paint	Point Count	apaque samples with a de	l: Aaron	#:	Project: 3337 /2	Survey: 4-
Date:	Received by:											Area	el II	Other Viable	Soil	PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	Paquet		AH	9-17
2 0 2017												Results		(V	í		ulting.net ACM.			Report	Lab Use Only

Rev: 12/03 Work Forms: COC

AUX THOMAS

# Red Cedar Consulting

# **Tables**

Table 1 - Summary of Hazardous Materials, 3337 9th St., Muskegon Heights, Michigan

	Hazardous Materials Description and Location		
Location	Material Description	Quantity	
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

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
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 Abbreviations

M = Miscellaneous building material NQ = Not quantified TSI = Thermal System Insulation NA = Not applicable

S = Surfacing Material ND = Not detected. Laboratory result is less than 1 % asbestos PC = Point Count Analysis lin. ft. = linear feet

= Point Count Analysis lin. ft. = linear feet = Chrysotile Asbestos 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

A	sbestos Containing Material Description a	nd Location			
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity
No Presumed Asbestos Containing Materials Identified					

**Notes:** 

Material Types

M = Miscellaneous building material TSI = Thermal System Insulation

= Surfacing Material S

**Abbreviations** 

lin. ft. = linear feet

sq. ft. = square feet

Table 4 - Summary of All Asbestos Containing Materials, 3337 9th St., Muskegon Heights, Michigan

Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Kitchen	Brown 9"x9" Vinyl Floor Tile		No	128 sq. ft.
		Total		128 sq. ft.
Interior - Asbestos Containing Materials				
Location	<b>Material Description</b>		Friable	Approx. Quantity
1st 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.
		Total		726 sq. ft.
Interior - Asbestos Containing Materials				
Location	<b>Material Description</b>		Friable	Approx. Quantity
Living Room Walls	<b>Drywall Compound</b>		No	560 sq. ft.
Kitchen S Wall	Drywall Compound		No	132 sq. ft.
		Total		692 sq. ft.

#### **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.

Muskegon County Land Bank Parcel ID: 61-07-830-005-0012-00

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.

Muskegon County Land Bank Parcel ID: 61-07-830-005-0012-00

#### **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 Cementatious "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.

Muskegon County Land Bank Parcel ID: 61-07-830-005-0012-00

#### 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 cementatious "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 cementatious (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 cementatious 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)

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

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

Raion Paguet

Aaron Paquet

Michigan/EPA Certified Asbestos Building Inspector (A30955)

# Red Cedar Consulting

# Attachment 1 APEX Research Laboratory Analytical Results



# 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

Lab ID #: 69921 - 02

Cust. #: MS-HM-01B

Material: Asphalt Shingles

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69921 - 03

Cust. #: MS-HM-02A

Material: Asphalt Lap Siding

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 3

Asbestos Present: **NO** 

No Asbestos Observed

Fiberglass - 30%

Other - 70%

Asbestos Present: **NO** No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Fiberglass - 30%

Cellulose - 40%

Other - 60%

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: 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

Lab ID #: 69921 - 03b

Cust. #: MS-HM-02A

Material: Tar Paper

Location:

Appearance: black, fibrous, homogenous

Layer: 3 of 3

Lab ID #: 69921 - 04

Material: Asphalt Lap Siding

Appearance: black,fibrous,homogenous

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

Asbestos Present: NO

Asbestos Present: **NO** 

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

No Asbestos Observed

Cellulose - 40%

Cellulose - 60%

Cellulose - 40%

Other - 60%

Other - 40%

Other - 60%

Cust. #: MS-HM-02B

Location:

Layer: 1 of 3

Robert T. Letarte Jr., Laboratory Director

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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

Lab ID #: 69921 - 04b

Cust. #: MS-HM-02B

Material: Tar Paper

Location:

Appearance: black, fibrous, homogenous

Layer: 3 of 3

Lab ID #: 69921 - 05

Cust. #: MS-HM-03A

Material: Red Brick Linoleum

Location:

Appearance: red,fibrous,nonhomogenous

Layer: 1 of 1

Asbestos Present: **NO** 

Cellulose - 40%

No Asbestos Observed

Other - 60%

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 60%

Other - 40%

Other - 70%

Asbestos Present: YES

Chrysotile - 30%

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

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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 - 06

Cust. #: MS-HM-03B

Material: Red Brick Linoleum

Location:

NOT ANALYZED

Appearance:

Layer: of

Lab ID #: 69921 - 07

Cust. #: MS-HM-04A

Material: Yellow Linoleum

Location:

Appearance: yellow,fibrous,nonhomogenous

Layer: 1 of 1

Asbestos Present:

Asbestos Present: **NO** 

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: NO

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

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# Test Method, Polarized Light Microscopy (PLM)

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**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: **NO** 

Asbestos Present: **NO** 

No Asbestos Observed

No Asbestos Observed

Other - 100%

Other - 100%

Lab ID #: 69921 - 09a

Cust. #: MS-HM-05A

Material: Glue

Location:

Location.

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 69921 - 10

Cust. #: MS-HM-05B

Material: Blue 12x12 VFT

Location:

Appearance: blue,nonfibrous,homogenous

Layer: 1 of 2

Asbestos Present: NO

No Asbestos Observed

Other - 100%

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

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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

Non-Asbestos

Lab ID #: 69921 - 10a

Cust. #: MS-HM-05B

Material: Glue Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 69921 - 11

Cust. #: MS-HM-06A

Material: Black/White 12x12 VFT

Location:

Appearance: black,nonfibrous,homogenous

Layer: 1 of 2

Lab ID #: 69921 - 11a

Cust. #: MS-HM-06A

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

Asbestos Type/Percent

No Asbestos Observed

Asbestos Present: NO

Other - 100%

Asbestos Present: **NO** 

No Asbestos Observed

Other - 100%

Other - 100%

Asbestos Present: NO No Asbestos Observed

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: 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

Other - 100%

Other - 100%

Other - 70%

Lab ID #: 69921 - 12

Cust. #: MS-HM-06B

Material: Black/White 12x12 VFT

Location:

Appearance: black,nonfibrous,homogenous

Layer: 1 of 2

Lab ID #: 69921 - 12a

Cust. #: MS-HM-06B

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 69921 - 13

Cust. #: MS-HM-07A

Material: Red Linoleum

Location:

Appearance: red,fibrous,nonhomogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: YES

Chrysotile - 30%

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

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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

Asbestos Present:

Non-Asbestos

Lab ID #: 69921 - 14

Cust. #: MS-HM-07B Material: Red Linoleum

Location:

NOT ANALYZED

Appearance: of

Layer:

Lab ID #: 69921 - 15

Cust. #: MS-HM-08A

Material: Red 9x9 VFT

Location:

Appearance: red, fibrous, homogenous

Layer: 1 of 2

Lab ID #: 69921 - 15a

Cust. #: MS-HM-08A

Material: Glue

Appearance: beige,nonfibrous,homogenous

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

Layer: 2 of 2

Asbestos Present: YES

Asbestos Present: NO

No Asbestos Observed

Other - 90%

Chrysotile - 10%

Location:

Other - 99%

Cellulose - 1%

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Project: 6085 Main St.

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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

Cellulose - 1%

Other - 99%

Other - 90%

Lab ID #: 69921 - 16

Cust. #: MS-HM-08B Material: Red 9x9 VFT

Location:

NOT ANALYZED

Asbestos Present: **NO** 

Asbestos Present: YES

Chrysotile - 10%

No Asbestos Observed

Asbestos Present:

Appearance: Layer: 1 of 2

Lab ID #: 69921 - 16a

Cust. #: MS-HM-08B

Material: Glue

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 69921 - 17

Cust. #: MS-HM-09A

Material: Tan 9x9 VFT

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 2

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

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Test Method, Polarized Light Microscopy (PLM)

Project: 6085 Main St.

**Report To:** 

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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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 1%

Other - 99%

Lab ID #: 69921 - 17a

Cust. #: MS-HM-09A

Material: Glue Location:

Appearance: beige,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 69921 - 18

Cust. #: MS-HM-09B

Material: Tan 9x9 VFT

Location:

NOT ANALYZED

Asbestos Present:

Asbestos Present: NO

No Asbestos Observed

Appearance:

Layer: 1 of 2

Lab ID #: 69921 - 18a

Cust. #: MS-HM-09B

Material: Glue

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 2 of 2

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

Robert T. Letarte Jr., Laboratory Director

Cellulose - 1%

Other - 99%

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ARI Report #

17-69921

Date Collected: 05/03/17

Date Received: 05/04/17

Date Reported: 05/09/17

Date Analyzed: 05/08/17

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

Lab ID #: 69921 - 20

Cust. #: MS-HM-10B

Material: White 2x4 Ceiling Tile

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 69921 - 21

Cust. #: MS-HM-11A

Material: Drywall

Location:

Appearance: white, fibrous, homogenous

Layer: 1 of 2

Asbestos Present: NO

No Asbestos Observed

Cellulose - 80%

Other - 20%

Asbestos Present: **NO** 

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

Cellulose - 80%

Cellulose - 20%

Other - 80%

Other - 20%

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

Robert T. Letarte Jr., Laboratory Director

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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

Other - 100%

Cellulose - 20% Other - 80%

Other - 100%

Lab ID #: 69921 - 21a

Cust. #: MS-HM-11A

Material: Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Lab ID #: 69921 - 22

Cust. #: MS-HM-11B

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

Lab ID #: 69921 - 22a

Cust. #: MS-HM-11B

Material: Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

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.



## 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

Other - 100%

Lab ID #: 69921 - 23

Cust. #: MS-HS-01A

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 3

Lab ID #: 69921 - 23a

Cust. #: MS-HS-01A

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 3

Lab ID #: 69921 - 23b

Cust. #: MS-HS-01A

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 3 of 3

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 2%

Other - 98%

Asbestos Present: NO No Asbestos Observed

Cellulose - 20%

Other - 80%

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

Robert T. Letarte Jr., Laboratory Director

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



## 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

Other - 100%

Lab ID #: 69921 - 24

Cust. #: MS-HS-01B

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 3

Lab ID #: 69921 - 24a

Cust. #: MS-HS-01B

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 3

Lab ID #: 69921 - 24b

Cust. #: MS-HS-01B

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 3 of 3

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO** 

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Hair - 2%

Other - 98%

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.



# 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

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 69921 - 25

Cust. #: MS-HS-01C

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 3

No Asbestos Observed

Asbestos Present: **NO** 

Cellulose - 5%

Other - 95%

Lab ID #: 69921 - 25a Cust. #: MS-HS-01C

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 3

Asbestos Present: NO

No Asbestos Observed

Cellulose - 20%

Other - 80%

Lab ID #: 69921 - 25b Cust. #: MS-HS-01C

Material: Drywall

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

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 3 of 3

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.



## 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

Non-Asbestos

Lab ID #: 69921 - 26

Cust. #: MS-HS-01D

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69921 - 27

Cust. #: MS-HS-01E

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69921 - 28

Cust. #: MS-HS-02A

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Type/Percent

Asbestos Present: NO

Hair - 5%

No Asbestos Observed

Other - 95%

Asbestos Present: **NO** 

Hair - 5%

No Asbestos Observed

Other - 95%

Asbestos Present: NO

Hair - 2%

No Asbestos Observed

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.



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

Asbestos Present: NO

Asbestos Present: **NO** 

No Asbestos Observed

No Asbestos Observed

Non-Asbestos

Hair - 2%

Other - 98%

Cellulose - 10%

Other - 90%

Lab ID #: 69921 - 29

Cust. #: MS-HS-02B

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69921 - 30

Cust. #: MS-HS-02C

Material: Plaster/Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #:

Asbestos Present:

Cust. #: Material:

Location: Appearance:

Layer:

of

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.

# 69921

# APEA Kesearch, Inc. 11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990 E-mail: apexresearch@chartermi.net

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APEX	C 45 W

Fax: 734-449-9991

Other:\_ 48 hour Rush Relinquished by: Phone: Address: Client Name: City, St., Zip: Turn Around Times: (Circle One) Lab ID# いのと 5-3-17 (888) 449-4566 72 hour 24 hour 6 12 De 0 Red Cedar Consulting Lansing, MI 48901 PO Box 13216 MS-4M-02B MS-HM-0113 MS-14M-05B ms-Hm-04B ms-Hm-03A ms-1+m-02A MS-HM-054 Who-wh-sw 125-14-42-03B MS-HM-01A ms-4m-06A TTP All Samples Client ID# Received by: US Date: 5-3-17 Fax: Black ひれげ 12×72円 31/20 Res) Yellow Lingleur tsonat 7 Asphalt Shingles (888) 448-8739 -Asbestos: Bulk TEM: Mold: Lead: Brick 12×12 UFT Material/Location Bulk Bulk **AHERA 7400** as Siding PLM EPA 600, PC all samples with a detection of <5% ACM. Lindem × Relinquished by: Wipe Wipe Tape Contact Person: Aaron Paquet Date of Survey: Project #: Project: 6085 Bulk/NOB BioSIS Air Point Count Volume EPA Level II Paint mair St 5-3-17 Other Received by: Area PCM Soil Viable Results Lab Use Only Log-In\_\_\_\_ Report\_

Rev: 12/03 Work Forms: COC

Date:

ATTX ATTACK

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



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Paquet	Contact Person: Aaron	-8739	X: (888) 448	19-4566 Fax:	Phone: (888) 449-456
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Main St.	N	Projec		PO Box 13216	Address: _
3-17	Date of Survey: _53-17	Date of	ing	Red Cedar Consulting	Client Name: _

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

Wipe Point Count PCM	Asbestos: Bulk X Wipe	D.:t
apaquet@redcedarconsulting.net ${\tt PIM}$ EPA 600, PC all samples with a detection of <5% ACM.	Turn Around Times: (Circle One) PLM EPA	Turn Aro
Contact Person: Aaron Paquet	149-4566 Fax: (888) 448-8739	Phone: (888) 449-4566
	City, St., Zip: Lansing, MI 48901	City, St., Zip:
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Date of Survey: 5-3-(7 Lab Use Only Log-In	Client Name: Red Cedar Consulting	Client Name:

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# Red Cedar Consulting

# **Tables**

Table 1 - Summary of Hazardous Materials, 6085 Main St., Dalton, Michigan

	Hazardous Materials Description and Location	
Location	Material Description	Quantity
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

Material Types

= Miscellaneous building material TSI = Thermal System Insulation

= Surfacing Material S

PC = Point Count Analysis

= Chrysotile Asbestos

Abbreviations

= Not quantified NQ NA = Not applicable

= Not detected. Laboratory result is less than 1 % asbestos ND

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

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

A	Asbestos Containing Material Description a	nd Location			
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity
Building Exterior Front Gable	Transite Siding	No	Fair	M	108 sq. ft.

<u>Material Types</u> <u>Abbreviations</u>

M = Miscellaneous building material TSI = Thermal System Insulation

S = Surfacing Material

lin. ft. = linear feet

sq. ft. = square feet

Table 4 - Summary of All Asbestos Containing Materials, 6085 Main St., Dalton, Michigan

Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
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.
		Total		582 sq. ft.
<b>Exterior - Asbestos Containing Materials</b>				
Location	<b>Material Description</b>		Friable	Approx. Quantity
<b>Building Exterior Front Gable</b>	Transite Siding		No	108 sq. ft.
		Total		108 sq. ft.

#### **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.

Muskegon County Land Bank Parcel ID: 61-07-507-023-0001-00

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.

Muskegon County Land Bank Parcel ID: 61-07-507-023-0001-00

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.

Muskegon County Land Bank Parcel ID: 61-07-507-023-0001-00

#### 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).

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



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

Lab ID #: 69922 - 02

Cust. #: PW-HM-01B

Material: Rolled Roofing

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 69922 - 03

Cust. #: PW-HM-02A

Material: Glazing

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 1

Asbestos Present: **NO** 

Cellulose - 20%

No Asbestos Observed

Other - 80%

Asbestos Present: **NO** 

No Asbestos Observed

Cellulose - 20%

Other - 80%

Asbestos Present: NO Other - 100%

No Asbestos Observed

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.



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 # Date Collected: 05/03/17

17-69922

Date Received: 05/04/17

Date Reported: 05/09/17

Date Analyzed: 05/08/17

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

Lab ID #:

Cust. #: Material:

Location: Appearance:

Layer:

Lab ID #:

Cust. #: Material:

Location:

Appearance: Layer:

of

of

Asbestos Present: NO Other - 100%

No Asbestos Observed

Asbestos Present:

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.

# 69922

# ATTX Kesearch Inc

Survey  1: 622  #: Person samples Point C Air BioSIS	E-mail: apexresearch@chartermi.net Fax: 734-44  It Name: Red Cedar Consulting  ESS: PO Box 13216  St., Zip: Lansing, MI 49901  Cises 143-4566  Fax: (888) 448-8739  TATOUNG Times: (Circle One)  PATOUNG Times: (Circle One)  PATOUNG Times: (Circle One)  Ashestos: Bulk	Date: NAY 0 4 2017	D	5.3.1) Date:	Date :
Date of Survey	E-mail: apexresearch@chartermi.net  E-mail: apexresearch@chartermi.net  E-mail: apexresearch@chartermi.net  Date of Survey  ESS:  PO Box 13216  Fax: [838] 449-4566  Fax: [838] 449-8739  Contact Persor  The Around Times: (Circle One)  PLM EPA 600, PC all samples  Ashestos: Bulk	ceived t	Re	Relinquished by:	
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Date of Survey	E-mail: apexresearch@chartermi.net  E-mail: apexresearch@chartermi.net  E-mail: apexresearch@chartermi.net  Date of Survey  Po Box 13216  St., Zip: Lansing, MI 48901  Project : 622  Project #:  Proj				
Date of Survey	E-mail: apexresearch@chartermi.net  ESS:    PO Box 13216   Project : 622				
Date of Survey	E-mail: apexresearch@chartermi.net  It Name: Red Cedar Consulting				
Date of Survey	E-mail: apexresearch@chartermi.net  It Name: Red Cedar Consulting				
The Name: Red Cedar Consulting   Project   Red Survey    St., Zip:   Po Box 13216   Project   Red     St., Zip:   Lansing, MI 48901   Project   Red     Project   Red Cedar Consulting   Project   Red     St., Zip:   Lansing, MI 48901   Project   Red     Project   Red Cedar Consulting   Project   Red     Point Contact Person   Project   Red     Point   Point   Project   Project   Red     Point   Point   Project   Project   Red     Point   Point   Project   Red     Point   Project   Red     Project   Red Cedar Consulting   Project   Red     Point   Project   Red     Project   Red Cedar Consulting   Project   Red     Point   Project   Red     Project   Red Cedar Consulting    Project   Red Project    Project   R	E-mail: apexresearch@chartermi.net  It Name: Red Cedar Consulting				1.
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Date of Survey ess:  PO Box 13216  St., Zip: Lansing, MI 48901  Project # :  E: (888) 449-4566  Fax: (888) 448-8739  Contact Person  Around Times: (Circle One)  PLM EPA 600, PC all samples  Ashestos: Bulk	E-mail: apexresearch@chartermi.net  th Name: Red Cedar Consulting			: (	
Name:   Red Cedar Consulting	t Name: Red Cedar Consulting   Bate of Survey    St., Zip:   Fo Box 13216   Project : 662    St., Zip:   Lansing, MI 48901   Project # :    E: (888) 449-4566   Fax : (888) 448-8739   Contact Person  The Around Times: (Circle One)   PLM EPA 600, PC all samples    Asbestos: Bulk   X   Wipe   Point of Survey    Asbestos: Bulk   Nipe   Point of Survey    Asbestos: Bulk   Nipe   Point of Survey    Table   Point of Survey    Red Cedar Consulting   Project : 662    Project # :    Project			Rollad Roufin	PW-HM-OIA
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Name: Red Cedar Consulting Date of Survey  S: PO Box 13216 Project: 622.  Cip: Lansing, MI 48901 Project #:  (888) 449-4566 Fax: (888) 448-8739 Contact Person  Around Times: (Circle One) PLM EPA 600, PC all samples  Asbestos: Bulk X Wipe Point (24 hour	Vame: Red Cedar Consulting Date of Survey    Po Box 13216   Project : 622	So So		Bulk	
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Red Cedar Consulting Date of Survey:	Red Cedar Consulting E-mail: apexresearch@chartermi.net Fax:  Date of Survey:	2	2000	Project	PO
	Fax:	1	••	Date of	

# Red Cedar Consulting

# **Tables**

Table 1 - Summary of Hazardous Materials, 6622 Poppy Way., Dalton, Michigan

	Hazardous Materials Description and Location								
Location	Material Description	Quantity							
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

**Abbreviations** 

#### **Notes:**

Material Types

M = Miscellaneous building material

NQ = Not quantified

TSI = Thermal System Insulation

NA = Not applicable

S = Surfacing Material ND = Not detected. Laboratory result is less than 1 % asbestos PC = Point Count Analysis lin. ft. = linear feet

= Point Count Analysis lin. ft. = linear feet = Chrysotile Asbestos 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

Asbestos Containing Material Description and Location								
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity			
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

Exterior - Asbestos Containing Materials			
Location	Material Description	Friable	Approx. Quantity
No Asbestos Containing Materials Identified			

#### **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		Inst. Type	Terms of Sale	Liber & Page	Ver By	rified	Prcnt. Trans.
PROGRESSIVE HOLDING CO LLC	COUNTY OF MUSKEG	ON TREASUR		04/29/2015		TAX REVERTED	4054/4	-	:D	0.0
MUSKEGON COUNTY TREASURER				10/17/2012		QUIT- CLAIM	3928/3			0.0
CRACKER BOX LLC	MUSKEGON COUNTY			04/02/2012	20	FORECLOSURE	3914/2			0.0
BMF PROPERTIES INC	CRACKER BOX LLC	TIMPROTITIO		05/17/2007	MD	WARRANTY DEED	3746/3			100.0
Property Address	CRACKER BOX BEC	Class: 703				.lding Permit(s)	Date			atus
55 W OAKWOOD AVE			SKEGON HEIGH		ti teb bai	Tailing Telimite (b)	02/15/2			
33 W CARWOOD AVE		P.R.E. 0		15 5010015			02/13/2	.000 BR 20	00	
Owner's Name/Address			061-007-380							
COUNTY OF MUSKEGON TREASUR	RER	MAP #: 20-		O	0.00					
173 E APPLE AVE STE 104		V T		V 0 TCV/TFA:		6 T1 M-1-1	- 00010 00000000			
MUSKEGON MI 49442		X Improve	d Vacant	Land Va	lue Estim	ates for Land Tabl		5T		
		Public Improve	ments	Descrip	tion Fr	* I ontage Depth Fro	actors *	%Adi Reas	nn	Value
		Dirt Ro		SOUTHWE		36.00 100.00 1.00		100	)11	2,520
Tax Description		Gravel		36 A	ctual Fro	nt Feet, 0.08 Tota	al Acres Tota	l Est. Land	Value =	2,520
HT6890 CHAS M STEELE'S SUE FT OF LOTS 37 38 39 & 40	B'D BLK / E 36	X Paved R								
Comments/Influences		X Storm S X Sidewal								
		X Water	V							
		X Sewer								
		X Electri	С							
		X Gas X Curb								
		Street	Lights							
			d Utilities							
		Undergr	ound Utils.							
		Topogra	phy of							
		Site								
		X Level Rolling								
		Low								
		High								
		Landsca	ped							
		Landsca: Swamp	ped							
		Landsca	ped							
		Landsca Swamp Wooded	-							
		Landsca Swamp Wooded Pond Waterfr Ravine	ont							
		Landsca Swamp Wooded Pond Waterfr Ravine Wetland	ont	Year	Lan	nd Building	Assessed	Board of	Tribunal/	Taxabl
		Landsca Swamp Wooded Pond Waterfr Ravine	ont	Year	Lan Valu	1 - 1	Assessed Value	Board of Review	Tribunal/ Other	
		Landsca Swamp Wooded Pond Waterfr Ravine Wetland Flood P	ont			ie Value				Value
		Landsca Swamp Wooded Pond Waterfr Ravine Wetland Flood P	ont lain en Wha 1998 REVIEWE	t 2017 D 2016	Valu	T EXEMPT	Value			Value EXEMP
The Equalizer. Copyright Licensed To: County of Mus		Landsca Swamp Wooded Pond Waterfr Ravine Wetland Flood P	ont lain en Wha 1998 REVIEWE	t 2017 D 2016	Valu EXEMP	T EXEMPT EXEMPT	Value EXEMPT			Taxable Value EXEMP EXEMP 9,600

<sup>\*\*\*</sup> 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  X Wood Frame  Building Style: 1 STY  Yr Built Remodeled	Eavestrough Insulation 0 Front Overhang 0 Other Overhang (4) Interior  Drywall X Plaster Paneled Wood T&G Trim & Decoration  Ex X Ord Min Size of Closets	X Gas Wood Coal Elec. Steam  Forced Air w/o Ducts Forced Hot Water Electric Baseboard Elec. Ceil. Radiant Radiant (in-floor) Electric Wall Heat Space Heater Wall/Floor Furnace	Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi repl.Tub	Interior 1 Story Interior 2 Story 2nd/Same Stack Two Sided Exterior 1 Story Prefab 1 Story Prefab 2 Story Heat Circulator Raised Hearth Wood Stove Direct-Vented Gas  Area Type  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
Condition for Age:	Lg X Ord Small Doors: Solid X H.C.	Forced Heat & Cool Heat Pump No Heating/Cooling Central Air	Oven Microwave Standard Range Self Clean Range	Class: CD
Room List  Basement 1st Floor 2nd Floor	(5) Floors  Kitchen: Hardwood Other: Carpeted Other: Tile	Wood Furnace  (12) Electric  100 Amps Service	Sell Clean Range Sauna Trash Compactor Central Vacuum Security System	Total Base Cost: 54,516 X 1.390 Total Base New: 75,777 E.C.F. Total Depr Cost: 34,100 X 0.473 Estimated T.C.V: 16,129  Bsmnt Garage: Carport Area: Roof:
2 Bedrooms (1) Exterior Wood/Shingle	(6) Ceilings X Plaster	No./Qual. of Fixtures  Ex.   X   Ord.   Min	Stories Exterior 1 Story Siding 1 Story Siding	Foundation Rate Bsmnt-Adj Heat-Adj Size Cost Basement 64.74 0.00 0.00 520 33,665 Slab 64.74 -11.49 0.00 162 8,627
X Aluminum/Vinyl Brick	(7) Excavation	No. of Elec. Outlets    Many   X   Ave.   Few   Few	Other Additions/Adjust (14) Water/Sewer Public Water	Rate Size Cost 1025.00 1 1,025
Insulation   (2) Windows   Large	Basement: 520 S.F. Crawl: 0 S.F. Slab: 162 S.F. Height to Joists: 0.0	Average Fixture(s) 1 3 Fixture Bath 2 Fixture Bath	Public Sewer (16) Porches WGEP (1 Story), Sta	1025.00 1 1,025 andard 43.09 98 4,223
X Avg. Avg. Small  Wood Sash X Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement Double Glass	(8) Basement  Conc. Block Poured Conc. Stone Treated Wood Concrete Floor  (9) Basement Finish  Recreation SF	Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains	Base Cost	Siding Foundation: 18 Inch (Unfinished) 24.80 240 5,952  /Comb.%Good= 45/100/100/100/45.0, Depr.Cost = 34,100 0.473 => TCV of Bldg: 1 = 16,129
Patio Doors X Storms & Screens  (3) Roof X Gable Gambrel Hip Mansard Shed X Asphalt Shingle	Living SF Walkout Doors No Floor SF  (10) Floor Support	Ceramic Tub Alcove Vent Fan  (14) Water/Sewer  1 Public Water 1 Public Sewer Water Well 1000 Gal Septic 2000 Gal Septic		
Chimney: Brick	oner.oup.	Lump Sum Items:		

<sup>\*\*\*</sup> Information herein deemed reliable but not guaranteed\*\*\*

Grantor	Grantee		Sale Price	Sale Date	Inst. Type	Terms of Sa	le	Liber & Pag	-	ified	Prcnt. Trans.
MUSKEGON COUNTY TREASURER	CITY OF MUSKEGON	1	0	12/17/2015	5 QC	OTHER		4073/	223 DOC		0.0
COOK KENNETH J	COUNTY OF MUSKEO	GON	0	03/31/2015	5 OT	OTHER		4053/	746 DOC		0.0
STATE OF MICHIGAN DNR	COOK KENNETH J		0	09/15/2000	OT	OTHER		UNREC	OR'D DOC		0.0
COOK KENNETH J	STATE OF MICHIGA	AN DNR	0	05/02/2000	OT	OTHER		3087/	553 DOC		0.0
Property Address	<u> </u>		03.EXEMPT COUNT	Y Zoning:	R-1 Bu	ilding Permit	(s)	Dat	te Number	St	tatus
139 MYRTLE AVE		School:	MUSKEGON SCHOO	LS							
		P.R.E.	0%								
Owner's Name/Address		MAP #: 2	4-31-20-361-004								
CITY OF MUSKEGON			2017 Est TCV	0 TCV/TFA	: 0.00						
993 TERRACE ST MUSKEGON MI 49440		X Impro	ved Vacant	Land Va	alue Esti	mates for Land	d Table R11.1	.R11.1	ANGELL GENERA	L RESIDENT:	 îAL
HOUREGON HI 45440		Publi					* Factors	*			
		Impro	vements			rontage Deptl				n	Value
Tax Description		Dirt				ATYPICAL .01 ont Feet, 0.0			100 27*110	V21110 -	2,700 2,700
CITY OF MUSKEGON		Grave X Paved	l Road	Z / F	ACCUAL FI	Jiic reet, 0.0	/ IOCAL ACTES	100	ar Est. Land	value –	2,700
REVISED PLAT OF 1903		X Storm									
W 27 FT LOT 5 BLK 208 Comments/Influences		X Sidew									
Comments/Influences		X Water									
		X Sewer									
		X Gas	IIC								
		X Curb									
			t Lights								
			ard Utilities ground Utils.								
		Site	raphy of								
		X Level									
		Rolli									
		Low	_								
		High	,								
		X Lands Swamp	-								
		Woode									
		Pond									
			front								
		Ravin Wetla									
			nd Plain	Year	La	nd Buil	lding As	sessed	Board of	Tribunal/	Taxable
					Val	ue \	/alue	Value	Review	Other	Value
		Who	When What	2017	EXEM	PT EX	KEMPT	EXEMPT			EXEMPT
			/ INSPECTE	D 2016	EXEM	PT EX	KEMPT	EXEMPT			EXEMPT
The Equalizer. Copyright Licensed To: County of Mus				2015	1,4	00	3,400	9,800			8,312C
Election 10. Country of Mus	onegon, michigali			2014	1,4	00	3,600	10,000			8,182C

Parcel Number: 61-24-205-208-0005-00 Jurisdiction: 24 CITY OF MUSKEGON County: MUSKEGON Printed on 11/29/2016

<sup>\*\*\*</sup> Information herein deemed reliable but not guaranteed\*\*\*

11/29/2016

Parcel Number: 61-24-205-208-0005-00

<sup>\*\*\*</sup> Information herein deemed reliable but not guaranteed\*\*\*

Parcel Number: 6	61-26-185-066-	-0001-10	Jurisdictio	on: 26 CITY	OF MUSKEGON	HTS	County: MUSKEGON		Printed	on	11/29/2016
Grantor	Gra	intee		Sale Price		Inst. Type	Terms of Sale	Libe & Pa		Verified By	Prcnt. Trans.
BROWN SHANIA	COU	NTY OF MUSKE	GON TREASUE	(	04/29/2015	5 WD	TAX REVERTED	4053	/883	DEED	0.0
COLE, LUCILLE	BRO	WN, SHANIA		(	05/20/1997	7 LC	QUIT-CLAIM	2039	/349	DEED	0.0
Property Address			Class: 703	B.EXEMPT COUN	ITY Zoning:	R1-RES Bui	ilding Permit(s)	Di	ate Num	ber	Status
227 E HACKLEY AVE	<u> </u>		School: MU	JSKEGON HEIGH	ITS SCHOOLS			05/0	6/2009 B-9	3-09	
			P.R.E. C	) 응							
Owner's Name/Addi	ress		MAP #: 26-	-000-066-020							
	COUNTY OF MUSKEGON TREASURER 173 E APPLE AVE STE 104			2017 Est TO	CV 0 TCV/TFA	: 0.00					
Tax Description HT0473 BLK 66 W 40 FT OF LOT 1 & N 38 FT OF W 40 FT OF LOT 2 Comments/Influences		X Improved Vacant		Land Va	alue Estim	nates for Land Tab	ole 00001.NORTH	EAST			
		Public				*	Factors *				
		Improve		Descrip NORTHEA		contage Depth Fr 40.00 88.00 1.0		te %Adj. Re 80 100	eason	Value 3,200	
		Gravel		40 A	Actual Fro	ent Feet, 0.08 Tot	al Acres To	tal Est. La	and Value =	3,200	
			Lights od Utilities cound Utils.  The phy of								
· A Control of the co			Flood F	-	Year	Lar Valı	1				
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	THE REAL PROPERTY.	the second	Who Wh	nen Wha	IT  201/	LAEMI	EXEMPT	FYEMEL			EXEMPT

2016

2015

2014

CEJ 06/30/1999 REVIEWED

EXEMPT

1,600

1,600

EXEMPT

6,200

6,700

EXEMPT

7,800

8,300

EXEMPT

7,800s

8,300s

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<sup>\*\*\*</sup> 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  X Wood Frame  Building Style: 1 STY  Yr Built Remodeled 1925 0	Eavestrough Insulation 0 Front Overhang 0 Other Overhang (4) Interior  Drywall Plaster Paneled Wood T&G  Trim & Decoration  Ex X Ord Min Size of Closets  Lg X Ord Small	X Gas Oil Elec. Wood Coal Steam  Forced Air w/o 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	Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi repl.Tub Oven	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	Year Built: Car Capacity: Class: Exterior: Brick Ven.: Stone Ven.: Common Wall: Foundation: Finished ?: Auto. Doors: Mech. Doors: Area: % Good:
Condition for Age: Average  Room List	Doors:   Solid X H.C.	No Heating/Cooling  Central Air	Microwave Standard Range Self Clean Range	Effec. Age: 55 Floor Area: 768 Total Base Cost: 38,519 X 1.390	Storage Area: No Conc. Floor:
Basement 1st Floor 2nd Floor	Kitchen: Other: Other:	Wood Furnace (12) Electric 100 Amps Service	Sauna Trash Compactor Central Vacuum Security System	Total Base New: 53,541 E.C.F. Total Depr Cost: 24,094 X 0.503 Estimated T.C.V: 12,119	Bsmnt Garage:  Carport Area: Roof:
Bedrooms   (1) Exterior		No./Qual. of Fixtures  Ex. X Ord. Min  No. of Elec. Outlets  Many X Ave. Few  (13) Plumbing  Average Fixture(s)  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:	Stories Exterior  1 Story Siding Other Additions/Adju (14) Water/Sewer Public Water Public Sewer Phy/Ab.Phy/Func/Econ ECF (NORTHEAST)	912.00 912.00	768 36,695 Size Cost  1 912 1 912 2.Cost = 24,094

Parcel Number: 61-26-185-066-0001-10

<sup>\*\*\*</sup> Information herein deemed reliable but not guaranteed\*\*\*

Pice   Date   Type   4 Page   Dy   Transmission   0   12/79/035   0   0   0   0   0   0   0   0   0	Parcel Number: 61-24-205-	247-0012-00	Jurisdicti	ion: 24 CITY	OF MUSKEGO	N	Со	ounty: MUSKEGON		Prin	ted on		11/29	/2016
### PROGRESSIVE HOLDING CO LLC COUNTY OF MURREGON   0.3/31/2015   07 OTHER   4031/753   000   0.0   ### WORKERSON COUNTY TRANSHERS   0.00 / 07/26/2012   07 OTHER   3928/160   000   100.   ### ALIZIN TREAS, 1.   WORKERSON COUNTY TRANSHERS   0.04/02/2012   07 COUNT ORDER   3918/3607   000   0.0   ### Property Address   0.04/02/2012   07 COUNT ORDER   3918/3607   000   0.0   ### Property Address   0.04/02/2012   07 COUNT ORDER   3918/3607   000   0.0   ### Property Address   0.04/02/2012   07 COUNT ORDER   3918/3607   000   0.0   ### Property Address   0.04/02/2012   07 COUNT ORDER   3918/3607   000   0.0   ### Property Address   0.04/02/2012   07 COUNT ORDER   3918/3607   000   0.0   ### Property Address   0.04/02/2012   07 COUNT ORDER   3918/3607   000   0.0   ### Property Address   0.04/02/2012   07 COUNT ORDER   3918/3607   000   0.0   ### Property Address   0.04/02/2012   07 COUNT ORDER   3918/3607   000   0.0   ### Property Address   0.04/02/2012   07 COUNT ORDER   3918/3607   000   0.0   ### Property Address   0.04/02/2012   07 COUNT ORDER   0.04/02/2012   0.04/02/2	Grantor	Grantee					-	Terms of Sale			-	ified		Prcnt. Trans.
### MERKEGON COUNTY TREASURER   1,800   99/26/2012   CC   CFIER   3928/180   DOC   100.  ### ALLEN TERESA L   MUSKEGON COUNTY TREASURER   0   04/02/2012   OT   COUNT FORDER   3913/807   DOC   0.  ### COUNTY TREASURER   0   04/02/2012   OT   COUNTY FORDER   3913/807   DOC   0.  ### COUNTY TREASURER   0   04/02/2012   OT   COUNTY FORDER   3913/807   DOC   0.  ### COUNTY OF MUSKEGON COUNTY TREASURER   COUNTY FORDER   3913/807   DOC   0.  ### COUNTY OF MUSKEGON   CASE   MORE ART CALL   11/01/2000   MF-00-0381   COMPLETE    ### COUNTY OF MUSKEGON   MAP 4: 24-31-29-133-003   MORE ART CALL   11/01/2000   MF-00-0381   COMPLETE    ### COUNTY OF MUSKEGON   MAP 4: 24-31-29-133-003   MORE ART CALL   MORE	COUNTY OF MUSKEGON TREASUR	CITY OF MUSKEGON	I	0	12/17/201	5 QC	(	OTHER	4	073/223	DOC			0.0
### ALEN TEMESA L MISKEGON COUNTY PREABURER	PROGRESSIVE HOLDING CO LLC	COUNTY OF MUSKEG	GON	0	03/31/201	5 OT		OTHER	4	053/753	DOC			0.0
Property Address	MUSKEGON COUNTY TREASURER	PROGRESSIVE HOLD	OING CO LLO	1,800	09/26/201	2 QC	(	OTHER	3	928/160	DOC			100.0
School: MUSKEGON SCHOOLS   SECHANICAL   11/01/2000 ME-00-0381   COMPLETE F.R.E. 08	ALLEN TERESA L	MUSKEGON COUNTY	TREASURER	0	04/02/201	2 OT	(	COURT ORDER	3	913/807	DOC			0.0
P.R.2. 05	Property Address	I	Class: 70	3.EXEMPT COUN	MPT COUNTY Zoning: R-1		Building Permit(s)			Date Ni		ber Sta		
MAR 4: 24-31-29-135-003	325 IONA AVE		School:	MUSKEGON SCHOO	DLS	MECHANICAL			1	1/01/2000	ME-00-	E-00-0381 C		ľE
CITY OF MUSKEGON 2017 Set TCV 0 TCV/TFA: 0.00  2017 Set TCV 0 TCV/TFA: 0.00  X Improved   Vacant   Land Value Estimates for Land Table R12.1.R12.1 MCLAUGHLIN GENERAL RES  Public   Description   Tourisgo Depth Front Depth Rate %Adj. Reason   Value			P.R.E.	0%		E	BUILD	DING	0	5/28/1996	BD-96-	0329	COMPLET	Œ
Mark   Street   Str	Owner's Name/Address		MAP #: 24	-31-29-135-00	3									
MISKEGON MI 49440   X   Improved   Vacant   Land Value Estimates for Land Table R12.1.R12.1 MCLAUGHLIN GENERAL RES	CITY OF MUSKEGON			2017 Est TC	J 0 TCV/TFA	A: 0.00								
Public			X Improv	ed Vacant	Land V	alue Est	imat	es for Land Tab	le R12.1.R1	2.1 MCLAUC	HLIN GE	NERAL RES		
Dirt Road   Steven   Particle   14-25   3000   100   3,000			Public					*	Factors *					
Tax Description CITY OF MUSKGON REVISED PLAT OF 1903  X Storm Sewer X Storm Sewer X Sidwalk X Sever X Electric X Gas X Curb Streat Lights Strandard Utilities Underground Utils.  Topography of Site X Level Rolling Low High Rolling Rolling Rolling Low High Rolling Low High Rolling Low High Rolling Low High Rolling Rolling Rolling Rolling Low High Rolling			Improv	ements							. Reaso	n		
Comments/Influences    Early	Tax Description										- Land	Value =		
X   Storm Sewer   Sidewalk   Storm Sewer   Sto	CITY OF MUSKEGON X Paved REVISED PLAT OF 1903 X Storm										· Barra	- Varue		
Doctor   D				Sewer			ent C	ost Estimates			~ :	0.00	a 1	
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 Flood Plain  Who When What Tos 05/24/2006 DATA ENTRY Tos 05/24/2006 DATA ENTRY Licensed To: County of Muskegon, Michigan Skg 11/15/2002 INSPECTED Skg 11/15/2002 INSPECTED Skg 11/15/2002 INSPECTED Skg 11/15/2002 INSPECTED Skg 11/15/2000 DATA ENTRY Skg 11/15/2000	•			lk			cret	e					Casn va	
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 2017 EXEMPT EXEMPT EXEMPT EXEMPT Licensed To: County of Muskegon, Michigan SKB 11/15/2000 DATA ENTRY 2016 EXEMPT SKE 11/15/2000 DATA ENTRY 2016 EXEMPT EXEMPT EXEMPT EXEMPT EXEMPT SKE 11/15/2000 DATA ENTRY 2016 EXEMPT EXEMPT EXEMPT EXEMPT EXEMPT SKE 11/15/2000 DATA ENTRY 2016 EXEMPT EXEMPT EXEMPT EXEMPT SKE 11/15/2000 DATA ENTRY 2016 EXEMPT EXEMPT EXEMPT EXEMPT SKE 11/15/2000 DATA ENTRY 2016 EXEMPT EXEMPT EXEMPT EXEMPT SKE 11/15/2000 DATA ENTRY 2015 SKE 11/15/2000 DATA ENTRY 2016 EXEMPT EXEMPT EXEMPT SKE 11/15/2000 DATA ENTRY 2016 EXEMPT EXEMPT SKE 11/15/2000 DATA ENTRY 2016 EXEMPT EXEMPT SKE 11/15/2000 DATA ENTRY 2015 1,500 6,600 8,100		Comments/Influences			-,,									
Site  X Level Rolling Low High X Landscaped Swamp Wooded Pond Waterfront Ravine Wetland Flood Plain  Who When What 2017 EXEMPT EXEMPT EXEMPT TGS 05/24/2006 DATA ENTRY Licensed To: County of Muskegon, Michigan  TGS 05/24/2000 DATA ENTRY AH 01/15/2000 DATA ENTRY Licensed To: County of Muskegon, Michigan  X Level Rolling Low High X Landscaped Swamp Wooded Pond Waterfront Ravine Wetland Flood Plain  Year  Land Value Value Value Review Other Value TGS 05/24/2006 DATA ENTRY AH 01/15/2000 DATA ENTRY Licensed To: County of Muskegon, Michigan SKB 11/15/2000 DATA ENTRY AH 01/15/2000 DATA ENTRY STATEMENT TO TIDUNAL TAXABLE T		X Gas X Curb Street Standa Underg	Lights rd Utilities round Utils.											
Rolling Low High X Landscaped Swamp Wooded Pond Waterfront Ravine Wetland Flood Plain  Year Land Value Value Value Value Review Other Value  Who When What 2017 EXEMPT TGS 05/24/2006 DATA ENTRY TGS 05/24/2006 DATA ENTRY Licensed To: County of Muskegon, Michigan SKB 11/15/2002 INSPECTED 2015 1,500 6,600 8,100  7,741		WICE THE	1	aphy of										
Wooded Pond Waterfront Ravine Wetland Flood Plain  Year Land Building Assessed Board of Tribunal/ Taxabl Value Value Value Review Other Value  Who When What 2017 EXEMPT E			Rollin Low High X Landsc	3										
Who When What 2017 EXEMPT EXEMPT EXEMPT EXEMPT EXEMPT EXEMPT The Equalizer. Copyright (c) 1999 - 2009. AH 01/15/2002 INSPECTED Licensed To: County of Muskegon, Michigan SKB 11/15/2000 DATA ENTRY 2015 1,500 6,600 8,100 7,741			Wooded Pond Waterf Ravine	ront										
TGS 05/24/2006 DATA ENTRY 2016 EXEMPT			Flood	Plain	Year			_						'axable Value
The Equalizer. Copyright (c) 1999 - 2009. AH 01/15/2002 INSPECTED 2015 1,500 6,600 8,100 7,741 Licensed To: County of Muskegon, Michigan SKB 11/15/2000 DATA ENTRY		A STATE OF THE STA	Who W	lhen Wha	2017	EXE	EMPT	EXEMPT	EXE	MPT				EXEMPT
The Equalizer. Copyright (c) 1999 - 2009. AH 01/15/2002 INSPECTED 2015 1,500 6,600 8,100 7,741 Licensed To: County of Muskegon, Michigan SKB 11/15/2000 DATA ENTRY		COM INC. STATE				EXE	EMPT	EXEMPT	EXE	MPT				EXEMPT
2014 1,500 6,200 7,700 7,620			AH 01/15	/2002 INSPECT	ED 2015	1,	500	6,600	8,	100				7,741C
	nicensed to: County of Mus	negon, michigan	SKB 11/15	/ZUUU DATA EN	2014	1,	500	6,200	7,	700				7,620C

<sup>\*\*\*</sup> 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  X Wood Frame  Building Style: 1 1/2 STORY  Yr Built Remodeled 0  Condition for Age: Average  Room List  1 Basement 6 1st Floor 2nd Floor 3 Bedrooms	Eavestrough Insulation 0 Front Overhang 0 Other Overhang (4) Interior  Drywall X Plaster Paneled Wood T&G  Trim & Decoration  Ex X Ord Min Size of Closets  Lg X Ord Small Doors: Solid X H.C.  (5) Floors  Kitchen: Linoleum Other: Hardwood Other:  (6) Ceilings	X Gas Oil Elec. Steam  Forced Air w/o Ducts X Forced Air w/ Ducts X 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  No./Qual. of Fixtures	Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi Tub Jacuzzi Tub Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum Security System    Appliance Allow.   Interior 1 Story Interior 2 Interior 2 Story Interior 2 Interior 2 Story Interior 2 Inter
(1) Exterior  X Wood/Shingle Aluminum/Vinyl Brick  X Insulation  (2) Windows  Many Avg. X Few X Small  X Wood Sash Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement Double Glass Patio Doors X Storms & Screens  (3) Roof  X Gable Hip Honick Mansard Flat Shed  X Asphalt Shingle  Chimney: Brick	(7) Excavation  Basement: 0 S.F. Crawl: 657 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  (10) Floor Support	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 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 Story Siding Crawl Space 53.80 -9.44 0.66 120 5,40 1.5 Story Siding Crawl Space 68.57 -9.44 0.98 537 32,27 Other Additions/Adjustments Rate Size Cos (14) Water/Sewer Public Water 912.00 1 91 Public Sewer 912.00 1 91 (16) Porches WGEP (1 Story), Shallow 31.90 120 3,82 CPP, Shallow 14.64 24 35 Phy/Ab.Phy/Func/Econ/Comb.%Good= 45/100/100/45.0, Depr.Cost = 27,32 ECF (R12.1 MCLAUGHLIN GENERAL RES) 0.500 => TCV of Bldg: 1 = 13,66

<sup>\*\*\*</sup> Information herein deemed reliable but not guaranteed\*\*\*

MCCORMICK KINDERLY   O 03/31/2015 OT OTHER   4933/758   DOC   0.0	Grantor	Grantee			Sale Price	Sale Date	Inst. Type	Terms of Sale	Libe & Pa		rified	Prcnt. Trans.
PAMILY GARDEN LLC	MUSKEGON COUNTY TREASURER	CITY OF MUSKEGO	N		0	12/17/2015	QC	OTHER	4073	3/223 DOG	2	0.0
PAMILY GARDEN LLC   MCCOMMICK KIMBERLY   2,900   01/27/2012   LC   SELER FINANCED   3901/433   PTA   100.0   Property Address   Class: 703.EXEMPT COUNTY   Zoning: R-1   Auliding Permit(s)   Date   Number   Status	MCCORMICK KIMBERLY	COUNTY OF MUSKE	GON		0	03/31/2015	OT	OTHER	4053	3/758 DOG	2	0.0
PAMILY GARDEN LLC   MCCOMMICK KIMBERLY   2,900   01/27/2012   LC   SELER FINANCED   3901/433   PTA   100.0   Property Address   Class: 703.EXEMPT COUNTY   Zoning: R-1   Auliding Permit(s)   Date   Number   Status	FAMILY GARDEN LLC	MCCORMICK KIMBE	RLY		0	01/01/2014	OC	OTHER	4008	3/572 DOG		0.0
Property Address							1			·		
School: MUSKEGON   P.R.E. 08		110001111011 11111111		703.EXE	·					<u> </u>		
P.R.E. 08									_			
Map #: 24-31-28-180-005   Map #: 24-31-28-												
2017 EST TCV 0 TCV/TFA: 0.00	Owner's Name/Address				9-180-005							
933 TRRACE ST MUSKEGON MI 49440    X   Improved   Vacant   Land Value Estimates for Land Table R12.1.R12.1 MCLAUGHLIN GENERAL RES	CITY OF MUSKEGON						0 00					
Fublic   Improvements   Description   Frontage Depth Rate %Adj. Reason   Value   Site Value			X Impr					tes for Land Tab	 le R12 1 R12 1	MCT.AUGHT.TN G	ENERAL RES	
Improvements   Description   Dirt Rad   Sad   Reason   Value   Site Value   Frontage Depth Front Depth Rate Wadj. Reason   3,000   100   3,000   100   3,000   100   66 Actual Front Feet, 0.20 Total Acres   Total Est. Land Value = 3,000   100	MUSKEGON MI 49440				vacane	Barra va	Tue Decima			THOUSE OF THE THE		
Tax Description  Gravel Road REVISED PLAT OF 1903 X Storm Sewer X Sidewalk Water X Sewer X Electric X Gas X Curb X Stread Utilities Underground Utils.  Topography of Site X Rolling Low High National Food Plain Food Plain Food Plain Food Plain Food Plain Food Plain Year Land Value Value Value Value Review Other Rev					S	Descrip	tion Fro			te %Adj. Reas	on	Value
CITY OF MUSKEGON REVISED PLAT OF 1903 X Pawed Road X Storm Sewer X Sidewalk X Mater X Sewer X Electric X Gas X Curb X Street Lights X Street Lights X Strandard Utilities Underground Utils.  Topography of Site X Level Reling Low High X Landscaped Swamp Mooded Pond Materfront Ravine Wetland Flood Plain  The Equalizer. Copyright (c) 1999 - 2009. Licensed To: County of Muskeqon, Michigan DMC 02/09/2012 DATA ENTRY 2015 1,500 11,000 12,500 11,767C	Tay Description		_			<site td="" v<=""><td>alue B&gt; TY</td><td>PICAL .1425</td><td>3000</td><td>100</td><td></td><td>·</td></site>	alue B> TY	PICAL .1425	3000	100		·
REVISED PLAT OF 1903 LOT1B INT 261  Comments/Influences  X Storm Sewer X Sewer X Sewer X Sewer 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 Metland Flood Plain Fl	_					66 A	ctual Fron	t Feet, 0.20 Tot	al Acres To	tal Est. Land	Value =	3,000
LOT 11 BLK 261  Comments/Influences  X Sidewalk X Water 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  Wetland Flood Plain  Who When What 2017 EXEMPT EXEMPT EXEMPT Licensed To: County of Muskegon, Michigan DWC 05/15/2012 DATA ENTRY DWC 05/15/2011 DATA ENTRY 2015 1,500 11,000 12,500 11,767C												
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X Electric X 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 Value Value Value Value Value Review Other Value Who When What 2017 EXEMPT DEB 02/15/2012 DATA ENTRY DES 02/09/2012 DATA ENTRY DE	Comments/Influences											
X Cas 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 Flood Plain Flood Plain  Who When What 2017 EXEMPT EXEMPT EXEMPT DECEMPT DECEMP												
X Curb X Street Lights X Standard Utilities Underground Utils.  Topography of Site  X Level Rolling Low High X Samp Wooded Pond Waterfront Ravine Wetland Flood Plain  Who When What 2017 EXEMPT EXEMPT EXEMPT EXEMPT DRB 02/15/2012 DATA ENTRY DWC 02/09/2012 DATA ENTRY DWC 02/09/20				CLIC								
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Underground Utils.  Topography of Site  X Level Rolling Low High X Landscaped Swamp Wooded Pond Waterfront Ravine Wetland Flood Plain  Who When What 2017 EXEMPT EX				_								
Topography of Site  X Level Rolling Low High X Landscaped Swamp Wooded Pond Waterfront Ravine Wetland Flood Plain  The Equalizer. Copyright (c) 1999 - 2009. Licensed To: County of Muskeqon, Michiqan  The Equalizer County of Muskeqon, Michiqan  Woo 05/12/2011 DATA ENTRY Loss of Michiqan  Woo 05/12/2011 DATA ENTRY Woo 05/12/2011 DATA ENTRY Loss of Michiqan  Woo 05/12/2011 DATA ENTRY Loss of Muskeqon, Michiqan  Woo 05/12/2011												
Site  X Level Rolling Low High X Landscaped Swamp Wooded Pond Waterfront Ravine Wetland Flood Plain  Who When What 2017 EXEMPT EXEMPT EXEMPT The Equalizer. Copyright (c) 1999 - 2009. Licensed To: County of Muskegon, Michigan DWC 05/12/2011 DATA ENTRY DWC 02/09/2012 DATA ENTRY DWC 02/09/2012 DATA ENTRY DWC 02/09/2012 DATA ENTRY DWC 02/12/2011 DATA ENTRY D												
Rolling Low High X Landscaped Swamp Wooded Pond Waterfront Ravine Wetland Flood Plain  Year Land Value Value Value Value Review Other Value  Who When What 2017 EXEMPT EXEMPT EXEMPT EXEMPT EXEMPT EXEMPT EXEMPT EXEMPT EXEMPT DRB 02/15/2012 DATA ENTRY Licensed To: County of Muskegon, Michigan DWC 05/12/2011 DATA ENTRY DWC 05/12/201		D-YMMW/	-		OI							
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High X Landscaped Swamp Wooded Pond Waterfront Ravine Wetland Flood Plain Year Land Value Value Review Other Value The Equalizer. Copyright (c) 1999 - 2009.  The Equalizer. Copyright (c) 1999 - 2009. Licensed To: County of Muskegon, Michigan DWC 05/12/2011 DATA ENTRY DWC 05/12/			11 1	ing								
X Landscaped Swamp Wooded Pond Waterfront Ravine Wetland Flood Plain  Year Land Building Assessed Board of Tribunal/ Taxable Value Value Value Review Other Value Value Review Other Value The Equalizer. Copyright (c) 1999 - 2009. Licensed To: County of Muskegon, Michigan DWC 02/09/2012 DATA ENTRY DWC 02/09/2012 DATA ENTRY DWC 05/12/2011 DATA ENTRY DWC 05/		THE PERSON										
Swamp Wooded Pond Waterfront Ravine Wetland Flood Plain  Year  Land Value Value Value Value Value Review Other Value  Who When What 2017 EXEMPT  DRB 02/15/2012 DATA ENTRY DWC 02/09/2012 DATA ENTRY Licensed To: County of Muskegon, Michigan DWC 05/12/2011 DATA ENTRY DWC 05/12/2011		A CONTRACTOR OF THE PARTY OF TH										
Pond Waterfront Ravine Wetland Flood Plain  Year Land Building Assessed Board of Tribunal/ Taxable Value Value Value Review Other Value  Who When What 2017 EXEMPT EXEMPT EXEMPT EXEMPT EXEMPT  The Equalizer. Copyright (c) 1999 - 2009. Licensed To: County of Muskegon, Michigan DWC 05/12/2011 DATA ENTRY DWC 05/12/2011 DATA ENTRY DWC 05/12/2011 DATA ENTRY DWC 05/12/2011 DATA ENTRY			Swam	ıp								
Waterfront Ravine Wetland Flood Plain  Year  Land Value Value Value Value Value Review Other Value  Who When What 2017  EXEMPT  EXEMPT  EXEMPT  EXEMPT  EXEMPT  EXEMPT  EXEMPT  EXEMPT  DRB 02/15/2012 DATA ENTRY Licensed To: County of Muskegon, Michigan  DWC 02/09/2012 DATA ENTRY DWC 05/12/2011 DATA ENTRY			11 1									
Ravine Wetland Flood Plain    Year   Land Value   Value   Value   Value   Review   Other   Value		The second was										
Flood Plain  Flood												
Value						Voar	Tano	Puilding	7.5505500	Poard of	Tribunal	/ Tayablo
Who When What 2017 EXEMPT EXEMPT EXEMPT EXEMPT  DRB 02/15/2012 DATA ENTRY 2016 EXEMPT EXEMPT EXEMPT  The Equalizer. Copyright (c) 1999 - 2009. DWC 02/09/2012 DATA ENTRY Licensed To: County of Muskegon, Michigan DWC 05/12/2011 DATA ENTRY DWC 05/12/2011 DATA ENTRY			Floc	d Plain		lear						
DRB 02/15/2012 DATA ENTRY Licensed To: County of Muskegon, Michigan DWC 05/12/2011 DATA ENTRY Licensed To: County of Muskegon, Michigan DWC 05/12/2011 DATA ENTRY DWC 05/12/20			Who	When	What	2017			EXEMPI	1		
The Equalizer. Copyright (c) 1999 - 2009. DWC 02/09/2012 DATA ENTRY Licensed To: County of Muskegon, Michigan DWC 05/12/2011 DATA ENTRY 2015 1,500 11,000 12,500 11,767C												
Licensed To: County of Muskegon, Michigan   DWC 05/12/2011 DATA ENTRY			DWC 02/	09/2012	DATA ENT	RY 2015						
	Licensed To: County of Mus	skegon, Michigan	DWC 05/	12/2011	DATA ENT	RY 2014						11,5820

County: MUSKEGON

Printed on

11/29/2016

Parcel Number: 61-24-205-261-0011-00 Jurisdiction: 24 CITY OF MUSKEGON

<sup>\*\*\*</sup> 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 X Wood Frame  Building Style: 1 1/2 STORY  Yr Built Remodeled 0 0  Condition for Age: Average Room List  Basement 4 1st Floor 3 2nd Floor	Eavestrough Insulation 0 Front Overhang 0 Other Overhang (4) Interior  Drywall X Plaster Paneled Wood T&G  Trim & Decoration  Ex X Ord Min Size of Closets  Lg X Ord Small Doors: Solid X H.C.  (5) Floors  Kitchen: Linoleum Other: Hardwood Other: Carpeted	X Gas   Oil   Elec.   Wood   Coal   Steam   Forced Air w/o 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	Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Intercom Jacuzzi Tub Jacuzzi Tub Jacuzzi repl.Tub Oven Microwave Standard Range Sauna Trash Compactor Central Vacuum Security System  Area Type Interior 1 Story Interior 2 Story Interior 1 Story Interior Interior 1 Story Interior 2 Story Interior 1
3 Bedrooms (1) Exterior  Wood/Shingle Aluminum/Vinyl Brick X Asbestos X Insulation (2) Windows  Many 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 X Asphalt Shingle  Chimney: Brick		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:	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

Parcel Number: 61-24-205-261-0011-00

<sup>\*\*\*</sup> Information herein deemed reliable but not guaranteed\*\*\*

Printed on

11/29/2016

<sup>\*\*\*</sup> Information herein deemed reliable but not guaranteed\*\*\*

Building Type	(3) Roof (cont.)	(11	l) Heating/Co	oling	(15) Built-ins	(1	5) Fireplaces	(16) Pc	orches/Decks	(17) Gara	ge
X Single Family Mobile Home Town Home Duplex A-Frame  X Wood Frame  Building Style: 1 STY  Yr Built Remodeled 1930  Condition for Age: Average  Room List  Basement 1st Floor	Eavestrough Insulation 0 Front Overhang 0 Other Overhang (4) Interior  Drywall Plaster Paneled Wood T&G  Trim & Decoration  Ex X Ord Min Size of Closets  Lg X Ord Small Doors: Solid X H.C. (5) Floors  Kitchen: Other:	X F F E E R E S W F H N N C C W	Gas Oil Wood Coal Forced Air w/ Forced Hot Wa Electric Base Elec. Ceil. R Radiant (in-f Electric Wall Epace Heater Wall/Floor Fu Forced Heat & Heat Pump No Heating/Co Central Air Wood Furnace	Ducts ter board adiant loor) Heat rnace Cool	Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor	Eff Flo Tot Tot	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 ass: D fec. Age: 59 or Area: 774 tal Base Cost: 45,2 tal Base New: 62,2 tal Depr Cost: 14,	212	CntyMult X 1.390 E.C.F.	Year Built Car Capaci Class: D Exterior: Brick Ven. Stone Ven. Common Wal Foundation Finished? Auto. Door Mech. Door Area: 360 % Good: 0 Storage Are No Conc. F Bsmnt Garae Carport Are	ty: Siding: : 0: : 0: ! Detache: : 18 Inch: s: 0: s: 0 ea: 0 loor: 0 ge:
2nd Floor Bedrooms	Other:	10	Amps Servi		Central Vacuum Security System	1	timated T.C.V: 6,7			Roof:	
(1) Exterior	(6) Ceilings		./Qual. of Fi Ex. X Ord.	xtures Min	Stories Exterior 1 Story Siding	M	Mich Bsmnt. 51.55	5 -4.52		480	Cost 22,891
X Wood/Shingle Aluminum/Vinyl Brick  Insulation  (2) Windows  Many X Avg. X Avg. Few  Wood Sash Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement Double Glass Patio Doors Storms & Screens  (3) Roof  X Gable Hip Hip Mansard Flat Shed  X Asphalt Shingle  Chimney: Brick		(14 - 1 P 1 P W W	of Elec. Out  In the second of	Reture(s) Bath Bath Auto Manual r Heat get le Floor le Wains o Alcove r	1 Story Siding Other Additions/Adju (14) Water/Sewer Public Water Public Sewer (16) Deck/Balcony Treated Wood, Stand (17) Garages Class:D Exterior: S Base Cost Phy/Ab.Phy/Func/Econ ECF (SKY BLUE)	S stme ard idin	Slab 51.58 ents  ng Foundation: 18 nb.%Good= 45/ 50/10	5 -10.0° Rate 912.00 912.00 6.9° Inch (T 19.8°	7 0.66 e 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	294 Size 1 1 140 360 .Cost =	12,389 Cost 912 912 976 7,132 14,140 6,773

<sup>\*\*\*</sup> Information herein deemed reliable but not guaranteed\*\*\*

	Grantee			Sale		Inst.	Terms of Sale	Libe		-	ified	Prcnt
				Price	Date	Type		& Pa		Ву		Trans
COUNTY OF MUSKEGON TREASUR	R CITY OF MUSKEGO	N		0	12/17/2015	QC	OTHER	4073	3/223	DOC		0.0
WENDLANDT IAN	COUNTY OF MUSKE	GON		0	03/31/2015	OT	OTHER	4053	3/730	DOC		0.0
ELLIOTT GEORGE II/RONDA	WENDLANDT IAN			0	12/22/2009	QC	ARMS-LENGTH	3834	1/303	DOC		100.
DEUTSCHE BANK NATIONAL TRU	JELLIOTT GEORGE	ΙΙ		7,000	12/12/2006	OT	ARMS-LENGTH	372	7/853	DOC		100.
Property Address		Cla	ss: 703.EXE	MPT COUNT	Y Zoning:	R-1 Buil	lding Permit(s)	Ι Ι	ate	Number	St	tatus
430 ALLEN AVE		Sch	ool: MUSKE	GON SCHOO	DLS	BUII	LDING	08/2	8/1996	BD-96-0	1679 CC	OMPLETE
		P.R	.E. 0%			BUII	LDING	05/0	2/1995	BD-95-0	274 CC	OMPLETE
Owner's Name/Address		MAP	#: 24-31-2	0-459-014								
CITY OF MUSKEGON			201	7 Est TCV	0 TCV/TFA	: 0.00						
933 TERRACE ST MUSKEGON MI 49440		X	Improved	Vacant	Land Va	lue Estima	tes for Land Tab	le R11.1.R11.1	LANGELL	GENERA	L RESIDENT	IAL
		I	Public				*	Factors *				
			Improvement	S			ntage Depth Fr				n	Value
Tax Description			Dirt Road				ARGE .2650 it Feet, 0.30 Total		) 100 6 otal Est.		Value =	4,100 4,100
CITY OF MUSKEGON			Gravel Road Paved Road									
REVISED PLAT OF 1903		X	Storm Sewer									
LOT 11& W 1/2 LOT 12 BLK S	55		Sidewalk									
Commerces, Intradices			Water Sewer									
			Electric									
			Gas									
			Curb Street Ligh	ts								
			Standard Ut									
		Į	Underground	Utils.								
			Topography o	of								
		X	Level									
	The second second	1	Rolling									
			Low									
			High Landscaped									
	10000000000000000000000000000000000000		Swamp									
			Wooded									
			Pond Waterfront									
			Ravine									
			Wetland		Year	Land	d Building	Assessed	N BO	ard of	Tribunal/	Taxable
			Flood Plain		1001	Value	1	Value		Review	Other	
		Who	When	What	2017	EXEMP	r EXEMPT	EXEMP	r			EXEMP'
	The state of the s		04/02/2001			EXEMP	Γ EXEMPT	EXEMP				EXEMP'
The Equalizer. Copyright		CMH	07/25/2000	DATA ENT	'RY 2015	2,100	8,700	10,800				10,800
Licensed To: County of Mus		دىتى	/ /	TINDEFOIL	2014	2,100	9,000	11,100				11,100

County: MUSKEGON

Printed on

11/29/2016

Parcel Number: 61-24-205-055-0011-00 Jurisdiction: 24 CITY OF MUSKEGON

<sup>\*\*\*</sup> 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 X Wood Frame Building Style: 1 STORY	Eavestrough Insulation 0 Front Overhang 0 Other Overhang (4) Interior Drywall X Plaster Paneled Wood T&G Trim & Decoration	X Gas Wood Coal Elec. Wood Coal Steam  Forced Air w/o Ducts Forced Hot Water Electric Baseboard Elec. Ceil. Radiant Radiant (in-floor) Electric Wall Heat	Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom	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	Year Built: Car Capacity: Class: Exterior: Brick Ven.: Stone Ven.: Common Wall: Foundation: Finished ?: Auto. Doors:
Yr Built Remodeled 0 0 Condition for Age: Average Room List	Ex X Ord Min Size of Closets  Lg X Ord Small Doors: Solid X H.C.  (5) Floors	Space Heater Wall/Floor Furnace Forced Heat & Cool Heat Pump No Heating/Cooling Central Air	Jacuzzi Tub Jacuzzi repl.Tub Oven Microwave Standard Range Self Clean Range	Wood Stove Direct-Vented Gas  Class: CD  Effec. Age: 54 Floor Area: 836 Total Base Cost: 50,962  X 1.390	Mech. Doors: Area: % Good: Storage Area: No Conc. Floor:
1 Basement 5 1st Floor 2nd Floor 3 Bedrooms	Kitchen: Tile Other: Other:	Wood Furnace (12) Electric 100 Amps Service	Sauna Trash Compactor Central Vacuum Security System	Total Base New: 70,837 E.C.F. Total Depr Cost: 32,585 X 0.550 Estimated T.C.V: 17,922	Bsmnt Garage: Carport Area: Roof:
(1) Exterior    Wood/Shingle   Aluminum/Vinyl   Brick   X   Asphalt   X   Insulation     (2) Windows   X   Many   Avg.   Few   X   Small     X   Wood Sash   Metal Sash   Vinyl Sash   Double Hung   Horiz. Slide   Casement   Double Glass   Patio Doors   X   Storms & Screens     (3) Roof   X   Gable   Gambrel   Hip   Mansard   Shed   X   Asphalt Shingle     Chimney: Brick   Chimney: Brick   Chimney: Brick   Casement   Chimney: Brick   Chimney: Brick   Chimney: Brick   Chimney: Brick   Chimney: Ch	(7) Excavation  Basement: 836 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  (9) Basement Finish  Recreation SF Living SF Walkout Doors No Floor SF	No./Qual. of Fixtures    Ex.   X   Ord.   Min     No. of Elec. Outlets     Many   X   Ave.   Few     (13) Plumbing     Average Fixture(s)     1		1025.00 1025.00 allow 35.05	836 47,685 Size Cost  1 1,025 1 1,025 35 1,227 .Cost = 32,585

<sup>\*\*\*</sup> Information herein deemed reliable but not guaranteed\*\*\*

Parcel Number: 61-24-205	-046-0012-00	Jurisdict	ion:	24 CITY O	F MUSKEGON		Co	unty: MUSKEGON		Prin	ted on		11/29	9/2016
Grantor	Grantee			Sale Price	Sale Date	Inst. Type	Т	erms of Sale		iber 7 Page	Ver By	ified		Prcnt. Trans.
37 EAST MAIN LLC	COUNTY OF MUSKEG	ON		0	03/31/2015	OT	С	THER	4	1053/726	DOC			0.0
COUNTY OF MUSKEGON	37 E MAIN LLC			1,000	10/13/2011	QC	С	THER	3	8892/505	DOC			100.0
PARAMOUNT LAND HOLDING LI	CCOUNTY OF MUSKEG	ON		0	03/31/2011	СО	C	COURT ORDER	3	8880/462	DOC			0.0
BRYCE PETERS FINANCIAL CO	R PARAMOUNT LAND H	OLDING LI	1	4,185	03/25/2009	QC	C	THER	3	8817/322	PTA	<u> </u>		100.0
Property Address		Class: 70	03.EXEN	MPT COUNTY	Zoning: I	R−1 Bi	uild	ing Permit(s)		Date	Number	5	Status	,
452 AMITY AVE		School:	MUSKEC	GON SCHOOL	S	RI	ES.	ADD/ALTER/REPAI	R 1	0/21/2004	PB0411	83 (	COMPLE	TE
		P.R.E.	0%			RI	ES.	ADD/ALTER/REPAI	R 1	0/21/2004	PB-04-	1183	COMPLE	TE
Owner's Name/Address		MAP #: 2	4-31-20	0-457-015		RI	ES.	ADD/ALTER/REPAI	R 1	0/01/2003	PB0308	64 (	COMPLE	TE
COUNTY OF MUSKEGON TREASU			201	7 Est TCV	0 TCV/TFA:	0.00 E	LECT	RICAL	0	7/30/2003	PE0304	11 (	COMPLE	TE
173 E APPLE AVE SUITE 104 MUSKEGON MI 49442		X Improv	ved	Vacant	Land Va	lue Esti	imate	es for Land Tab	le R11.1.R1	1.1 ANGELI	L GENERA	L RESIDENT	TIAL	
Tax Description		Dirt I Grave	rements Road l Road		- <site td="" v<=""><td>alue B&gt;</td><td>TYP</td><td>* 1 tage Depth Fro ICAL .1425 Feet, 0.20 Tota</td><td>- 3</td><td>3200 100</td><td>66*132</td><td></td><td>3</td><td>Value 3,200 3,200</td></site>	alue B>	TYP	* 1 tage Depth Fro ICAL .1425 Feet, 0.20 Tota	- 3	3200 100	66*132		3	Value 3,200 3,200
CITY OF MUSKEGON REVISED PLAT OF 1903 LOTS 12 & 13 BLK 46 Comments/Influences		X Paved X Storm X Sidewa X Water X Sewer	Sewer											
		X Electi X Gas X Curb X Street X Standa	t Light ard Uti											
	No. 14	Topogr Site	caphy c	of										
		X Level Rollin Low High	-											
C THE STATE OF THE		X Landso Swamp Woodeo Pond Waters Ravine Wetlar	d front											
			Plain		Year		and lue	Building Value	Asses Va	sed B	oard of Review			Taxable Value
Land Control of the C		Who V	When	What	2017	EXE	MPT	EXEMPT	EXE	MPT				EXEMP
1000年の記述となる。		DWC 09/0	5/2012	DATA ENTR	Y 2016	EXE	MPT	EXEMPT	EXE	MPT				EXEMP
The Equalizer. Copyright Licensed To: County of Mu	(c) 1999 - 2009.	DWC 05/1	6/2011	DATA ENTR	Y 2015	1,	600	14,700	16,	300			-	12,1550
		DODES 115 / 7/	n / ノロロち	DATA ENTE	Y								1	

<sup>\*\*\*</sup> 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 X Wood Frame Building Style: 1 STORY	Eavestrough Insulation 0 Front Overhang 0 Other Overhang (4) Interior  Drywall X Plaster Paneled Wood T&G  Trim & Decoration	X Gas Oil Elec. Wood Coal Steam  Forced Air w/o Ducts Forced Hot Water Electric Baseboard Elec. Ceil. Radiant Radiant (in-floor) Electric Wall Heat	Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom	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	Area Type  228 WGEP (1 Story) 40 CPP 20 WCP (1 Story) 80 WGEP (1 Story)	Year Built: Car Capacity: Class: Exterior: Brick Ven.: Stone Ven.: Common Wall: Foundation: Finished ?: Auto. Doors:
Yr Built Remodeled 0 0 Condition for Age: Average Room List 1 Basement	Ex   X   Ord   Min     Size of Closets   Lg   X   Ord   Small     Doors:   Solid   X   H.C.     (5) Floors   Kitchen: Tile	Space Heater Wall/Floor Furnace Forced Heat & Cool Heat Pump No Heating/Cooling Central Air Wood Furnace	Jacuzzi Tub Jacuzzi repl.Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor	Wood Stove Direct-Vented Gas  Class: CD Effec. Age: 40 Floor Area: 996 Total Base Cost: 65, Total Base New: 91,	CntyMult 595 X 1.390 177 E.C.F.	Mech. Doors: Area: % Good: Storage Area: No Conc. Floor: Bsmnt Garage:
4 1st Floor 2nd Floor	Other:	(12) Electric  100 Amps Service	Central Vacuum Security System	Total Depr Cost: 54, Estimated T.C.V: 30,		Carport Area: Roof:
2 Bedrooms  (1) Exterior  X Wood/Shingle Aluminum/Vinyl Brick  X Insulation  (2) Windows  X Many Avg. Few X Small  X Wood Sash Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement Double Glass Patio Doors X Storms & Screens  (3) Roof  X Gable Hip Flat Shed  X Asphalt Shingle  Chimney: Brick	(6) Ceilings  X Drywall  (7) Excavation  Basement: 624 S.F. Crawl: 372 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  (10) Floor Support  Joists: Unsupported Len: Cntr.Sup:	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:	Stories Exterior  1 Story Siding 1 Story Siding 1 Story Siding Cher Additions/Adju. (14) Water/Sewer Public Water Public Sewer (16) Porches WGEP (1 Story), Sh. CPP, Shallow WCP (1 Story), Sh. WGEP (1 Story), Sh. Phy/Ab.Phy/Func/Econ ECF (R11.1 ANGELL GE)	Mich Bsmnt. 59.3 Crawl Space 59.3 Crawl Space 59.3 stments  allow allow allow /Comb.%Good= 60/100/1	7 -8.77 0.00 7 -8.77 0.00 Rate 0.00 1025.00 25.60 12.60 44.39 39.74	624 34,314 352 17,811 20 1,012 Size Cost 1 1,025 1 1,025 228 5,837 40 504 20 888 80 3,179 .Cost = 54,706

<sup>\*\*\*</sup> Information herein deemed reliable but not guaranteed\*\*\*

Grantor	Grantee			Sale	Sale	Inst.	Те	rms of Sale	L	iber	Ver	ified		Prcnt
				Price	Date	Type			&	Page	Ву		'	Trans
37 EAST MAIN LLC	COUNTY OF MUSKEO	GON		0	03/31/201	5 OT	OT	HER	4	053/689	DOC			0.
COUNTY OF MUSKEGON	37 E MAIN LLC			900	10/13/201	1 QC	OT	HER	3	892/500	DOC			100.
WAYSTE INC	COUNTY OF MUSKEO	GON		0	03/31/201	1 CO	CO	URT ORDER	3	880/337	DOC			0.
COUNTY OF MUSKEGON	WAYSTE INC			5,300	08/08/200	8 QC	OT	HER	3	788/147	DOC			100.
Property Address		Cl	ass: 703.1	EXEMPT COUN	Y Zoning:	R-1 B	uildi	ng Permit(s)		Date	Number	S	tatus	
1773 SUPERIOR ST		Sc	hool: MU	SKEGON SCHOO	DLS									
		P.	R.E. 0%											
Owner's Name/Address		MA	P #: 24-3	1-29-484-01	_									
COUNTY OF MUSKEGON TREAD 173 E APPLE AVE SUITE 1				2017 Est TC	/ 0 TCV/TF	4: 0.00								
MUSKEGON MI 49442	01	X	Improved	Vacant	Land V	alue Est	imates	s for Land Tab	le R08.1.R0	8.01 MARS	H FIELD	GENERAL RE	S	
			Public						Factors *					
			Improveme					age Depth Fro CAL .1129		Rate %Ad 600 100		n		alue 600
Tax Description		1	Dirt Road Gravel Ro					Feet, 0.12 Tota				Value =		600
CITY OF MUSKEGON		X	Paved Roa		Land 1	mnroveme	nt Cos	st Estimates						
CASTENHOLZ SUB DIV OF BLKS 100 101 & 103 TO	0 120 INCL		Storm Sev		Descri				Rate C	ountyMult	Size	%Good C	ash Va	1110
LOT 10 BLK 115	O 120 INCH		Sidewalk Water			Asphalt	Pavir	ng	1.51	1.39	400	34		285
Comments/Influences			Sewer				Tot	tal Estimated 1	Land Improv	ements Tr	ue Cash	Value =		285
			Electric											
			Gas Curb											
			Street L	ights										
				Utilities										
				und Utils.										
9			Topograph Site	ny of										
		Y	Level											
		11	Rolling											
			Low											
		×	High Landscape	ad a										
		11	Swamp	ca										
			Wooded											
			Pond Waterfrom	nt										
			Ravine											
			1						_				,   _	
			Wetland		Vear	Т	and	Building	∆ < < < < < < < < < < < < < < < < < < <	sed F	Roard of	Tribunal.	/ I T	avahl
			Wetland Flood Pla	ain	Year		and lue	Building Value	Asses Va	sed E lue	Board of Review	Tribunal, Other		
		Wh	Flood Pla			Va		۱ -		lue			r	Valu
			Flood Pla	n What	2017	Va EXE	lue	Value	Va	lue MPT			r	Valu EXEMP
The Equalizer. Copyrig Licensed To: County of		RM AH	Flood Pla o When M 05/23/20 09/28/20		2017 TRY 2016 TRY 2015	Va EXE EXE	lue MPT	Value EXEMPT	Va EXE	lue MPT MPT			r :	axabl Valu EXEMP EXEMP 9,301

<sup>\*\*\*</sup> Information herein deemed reliable but not guaranteed\*\*\*

2000 Gal Septic

Lump Sum Items:

Printed on

11/29/2016

Cntr.Sup:

X Asphalt Shingle

Chimney: Brick

<sup>\*\*\*</sup> Information herein deemed reliable but not guaranteed\*\*\*

Grantor	Grantee			Sale	Sale Date	Inst. Type	Ter	rms of Sale		iber Page	Ver By	ified	Prcnt Trans
COUNTY OF MUSKEGON TREAS	UR CITY OF MUSKEGON	I - CNS		0	12/17/2015	QC	OTE	HER	40	073/223	DOC		0.0
SIEGEL MARCELLA	COUNTY OF MUSKEG	GON		0	03/31/2015	OT	OTE	HER	40	053/679	DOC		0.0
BAUER JAMES R	SIEGEL MARCELLA			0	06/05/2009	QC	OTH	IER	38	316/264	DOC		100.
Property Address		Class: 70	3.EXEMPT	COUNTY	Zoning: R	 −1  Bı	uildin	g Permit(s)		Date	Number	S	tatus
862 STEVENS ST		School:	MUSKEGON	SCHOOI	is								
		P.R.E.	0%										
Owner's Name/Address		MAP #: 24	-31-21-37	6-013									
CITY OF MUSKEGON - CNS			2017 Es	t TCV	0 TCV/TFA:	0.00							
933 TERRACE ST MUSKEGON MI 49440		X Improv	red Va	cant	Land Val	ue Esti	mates	for Land Tabl	Le R14.1.R14	4.1 STEEL	E GENERA	L RESIDENT	IAL
MODILISON PIL 19110		Public						* I	Factors *				
		Improv	ements					ge Depth Fro				n	Value
Tax Description		Dirt R						AL .1530 eet, 0.20 Tota		900 100		Value =	3,900 3,900
CITY OF MUSKEGON		Gravel X Paved	Road		00 AC	.tuai ri	OHC F		ar Acres	TOTAL ES	. Land	value -	
SEC 21 T10N R16W NE 1/4 SW 1/4 SW 1/4		X Storm											
N 66 FT OF S 305 FT		X Sidewa	.1K										
OF W 165 FT OF E 330 FT		X Sewer											
EXC W 33 FT FOR ST Comments/Influences		X Electr	ic										
Commerce, influences		X Gas X Curb											
		Street	Lights										
			rd Utilit										
			round Uti	IS.									
		Topogr Site	aphy of										
		X Level											
Will to		Rollin	ıg										
		High											
		X Landso	aped										
		Swamp	ı										
		Wooded Pond	Į.										
		Waterf	ront										
TO THE PARTY OF TH		Ravine											
		Wetlan Flood			Year	La	and	Building	Assess	sed 1	Board of	Tribunal/	/ Taxabl
						Val	lue	Value	Val	Lue	Review	Other	Value
是一个人,但是一个人的人,但是一个人的人,但是一个人的人的人,但是一个人的人的人的人的人。 第二章		Who W	Ihen	What	2017	EXE	TPT	EXEMPT	EXEM	1PT			EXEMP
		AH 08/15	/2001 INS	PECTE	2016	EXE	MPT	EXEMPT	EXEM	1PT			EXEMP'
	t (c) 1999 <b>-</b> 2009	IDITE 11/01	/1000 TMC	PECTEL	10015		200	11 500	10 5	- 0 0			12 500
The Equalizer. Copyrigh Licensed To: County of M		DAY 11/01	./ I ) ) ) INS		2015	2,0	000	11,500	13,5	000			13,500

<sup>\*\*\*</sup> 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  X Wood Frame  Building Style: 1 1/4 STORY  Yr Built Remodeled 1923 0  Condition for Age: Average  Room List  2 Basement 4 1st Floor 2 2nd Floor	Eavestrough Insulation 0 Front Overhang 0 Other Overhang  (4) Interior  Drywall X Plaster Paneled Wood T&G  Trim & Decoration  Ex X Ord Min Size of Closets  Lg X Ord Small Doors: Solid X H.C.  (5) Floors  Kitchen: Carpeted Other: Hardwood Other: Linoleum	X Gas Oil Elec. Wood Coal Steam  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	Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub 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 Prefab 1 Story Prefab 2 Story Heat Circulator Raised Hearth Wood Stove Direct-Vented Gas  Class: D Effec. Age: 55 Floor Area: 1014 Total Base Cost: 52,056 Total Base New: 72,358 Total Depr Cost: 32,561 Exterior 2 Story Interior 2 Story 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: Bsmnt Garage: Carport Area: Roof:
3 Bedrooms  (1) Exterior  X Wood/Shingle Aluminum/Vinyl Brick  X Insulation  (2) Windows  X Many X Large Avg. Few Small  X Wood Sash Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement Double Glass Patio Doors  X Storms & Screens  (3) Roof  X Gable Hip Gambrel Hip Gambrel Hip Shed  X Asphalt Shingle  Chimney: Brick	(6) Ceilings  X Plaster  (7) Excavation  Basement: 792 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  (9) Basement Finish  Recreation SF Living SF Walkout Doors No Floor SF  (10) Floor Support	No./Qual. of Fixtures    Ex.   X   Ord.   Min     No. of Elec. Outlets     Many   X   Ave.   Few     (13) Plumbing     Average Fixture(s)     1	Stories Exterior 1.25 Story Siding 1 Story Siding Other Additions/Adjus (14) Water/Sewer Public Water Public Sewer (16) Porches WCP (1 Story), Sha (16) Deck/Balcony Treated Wood, Standa Phy/Ab.Phy/Func/Econ/	Foundation Rate Bsmnt-Adj Heat-Adj Size Cost Basement 59.34 0.00 0.83 792 47,655 Overhang 30.15 0.00 0.00 24 724 stments Rate Size Cost 912.00 1 912 912.00 1 912 allow 38.17 24 916

<sup>\*\*\*</sup> Information herein deemed reliable but not guaranteed\*\*\*

Grantor	Grantee			Sale Price	Sale Date	Inst. Type	Terms of Sale		oer Page	Veri By	fied		Prcnt. Trans.
HOFFMAN SHIRLEY L	COUNTY OF MUSKEG	ON		0	04/30/2015	OT	OTHER	40	53/775	DOC			0.0
Property Address			ss: 703.EXEN				lding Permit(s)			mber		Status	
1699 PINE ST			ool: MUSKE	GON SCHOO	LS		. ADD/ALTER/REPAI		11/2003 PM			COMPLE	
Owner's Name/Address		P.R				ELE	CTRICAL		07/2003 PE			COMPLET	
·		MAP	#: 24-31-29	9-380-014		RES	. SINGLE FAMILY	01/	31/2003 PP	030016	6	COMPLET	TE
COUNTY OF MUSKEGON TREASUR 173 E APPLE AVE STE 104	RER		201	7 Est TCV	0 TCV/TFA	: 0.00 RES	. ADD/ALTER/REPAI	R 01/	17/2003 PB	030054	4	COMPLET	TE
MUSKEGON MI 49442		X	Improved	Vacant	Land Va	lue Estima	ates for Land Tab	le R12.1.R12	.1 MCLAUGHLI	IN GEN	ERAL RES		
Tax Description		1	Public Improvements Dirt Road Gravel Road	3	<pre><site pre="" v<=""></site></pre>	alue A> A7	* pontage Depth From PyPICAL .013 and Feet, 0.12 Total	250	00 100			2	alue ,500
CITY OF MUSKEGON REVISED PLAT OF 1903			Paved Road		Land Im	provement	Cost Estimates						
N 7 1/2 FT LOT 22 & ALL LOT 23 BLK 298		X X	Storm Sewer Sidewalk Water Sewer		Descrip D/W/P:	tion 3.5 Concre : Wd, Soli	ete id, 5 ft.	3.44 14.87	1.39	800 140	39 0	·	,492
Comments/Influences		XXX	Electric Gas Curb Street Light Standard Uti Underground	ilities			Total Estimated	<u>-</u>					<b>,</b> 492
St. 10			Topography o	f									
189		1 X 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Level Rolling Low High Landscaped Swamp Wooded Pond Waterfront Ravine Wetland										
Jan	at the state of th		Flood Plain		Year	Land Value		Assesse Valı		d of view	Tribunal Othe		Taxable Value
	- ALE	Who	When	What	2017	EXEMP'	T EXEMPT	EXEM	PT				EXEMP
V		APH	07/25/2003	INSPECTE	D 2016	EXEMP'	T EXEMPT	EXEM	PT				EXEMPT
The Equalizer. Copyright Licensed To: County of Mus	(c) 1999 - 2009.	SKB	01/08/2001	DATA ENT	RY 2015	1,30	0 14,100	15,40	00			1	14,6570
Licensed io. Country of Mus	sacgon, ritchitgan	1			2014	1,30	0 13,300	14,60				-	14,4270

<sup>\*\*\*</sup> Information herein deemed reliable but not guaranteed\*\*\*

Paneled   Wood TAG   File   Radiant (in-floor)   File   Radiant (in-floor)   File   Radiant (in-floor)   File   Radiant (in-floor)   File   Foundation: 18 Inc   Intercom   Radiant (in-floor)   File   Foundation: 18 Inc   Fil	Building Type	(3) Roof (cont.)	(11) Heating/Cooling	(15) Built-ins	(15) Fireplaces	(16) Porches/Decks	(17) Garage
Stories   Stor	Mobile Home Town Home Duplex A-Frame  X Wood Frame  Building Style: 1 STORY  Yr Built Remodeled 0  Condition for Age: Average  Room List  1 Basement 5 1st Floor	Insulation OFront Overhang Other Overhang  (4) Interior  Drywall X Plaster Paneled Wood T&G  Trim & Decoration  Ex X Ord Min Size of Closets  Lg X Ord Small Doors: Solid X H.C.  (5) Floors  Kitchen: Carpeted Other: Tile	Wood Coal Steam  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	Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum	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  Class: C Effec. Age: 49 Floor Area: 982 Total Base Cost: 77,3 Total Base New: 107 Total Depr Cost: 57,4	CntyMult 304 X 1.390 ,453 E.C.F. 417 X 0.500	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 Bsmnt Garage: Carport Area:
X Asphalt Shingle Cntr.Sup: 2000 Gal Septic	3 Bedrooms  (1) Exterior  X Wood/Shingle Aluminum/Vinyl Brick  X Insulation  (2) Windows  X Many Avg. 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 Flat	(6) Ceilings  (7) Excavation  Basement: 814 S.F. Crawl: 168 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  (10) Floor Support Joists: Unsupported Len:	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	Stories Exterior  1 Story Siding Other Additions/Adjust (14) Water/Sewer Public Water Public Sewer (16) Porches WCP (1 Story), Sha Phy/Ab.Phy/Func/Econ, Separately Depreciate (17) Garages Class: C Exterior: Same Cost Automatic Doors County Multiplier = Chy/Ab.Phy/Func/Econ,	Crawl Space 67.46 Crawl Space 67.46 Basement 67.46 stments  allow /Comb.%Good= 51/100/10 ed Items: iding Foundation: 18  1.39 => /Comb.%Good= 72/100/10	6 -9.83 0.00 6 -9.83 0.00 6 0.00 0.00 Rate 1162.00 1162.00 29.64 00/100/51.0, Depr Inch (Unfinished) 19.88 375.00 Cos: 00/100/72.0, Depr Total Depreciated	84 4,841 84 4,841 814 54,912 Size Cost  1 1,162 1 1,162  1 1,423  .Cost = 48,447  432 8,588 1 375  t New = 12,459 .Cost = 8,970 Cost = 57,417
Chimney: Brick Lump Sum Items:	Chimney: Brick		Lump Sum Items:				

<sup>\*\*\*</sup> Information herein deemed reliable but not guaranteed\*\*\*

<sup>\*\*\*</sup> 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 X Wood Frame	Eavestrough Insulation 0 Front Overhang 0 Other Overhang (4) Interior  Drywall Plaster Paneled Wood T&G	X Gas   Oil   Elec. Steam   Forced Air w/o Ducts   Forced Hot Water   Electric Baseboard   Elec. Ceil. Radiant   Radiant (in-floor)	Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood	Interior 1 Story Interior 2 Story 2nd/Same Stack Two Sided Exterior 1 Story Exterior 2 Story Prefab 1 Story Prefab 2 Story	Area Type 120 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
1 3/4 STY  Yr Built Remodeled 1928 0  Condition for Age:	Trim & Decoration  Ex X Ord Min  Size of Closets  Lg X Ord Small  Doors: Solid X H.C.  (5) Floors  Kitchen: Other:	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	Vented Hood Intercom Jacuzzi Tub Jacuzzi repl.Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum	Heat Circulator Raised Hearth Wood Stove Direct-Vented Gas  Class: D +10 Effec. Age: 55 Floor Area: 1306 Total Base Cost: 69,6 Total Base New: 96,7 Total Depr Cost: 31,2 Estimated T.C.V: 15,7	CntyMult 603 X 1.390 748 E.C.F. 279 X 0.503	Finished ?: Auto. Doors: 0 Mech. Doors: 0 Area: 240 % Good: 20 Storage Area: 0 No Conc. Floor: 0  Bsmnt Garage: Carport Area: Roof:
4 Bedrooms  (1) Exterior  X Wood/Shingle Aluminum/Vinyl Brick Insulation  (2) Windows  Many X Avg. X Avg. Few Small	(6) Ceilings  (7) Excavation  Basement: 844 S.F. Crawl: 0 S.F. Slab: 0 S.F. Height to Joists: 0.0  (8) Basement	No./Qual. of Fixtures  Ex.   X   Ord.   Min  No. of Elec. Outlets    Many   X   Ave.   Few  (13) Plumbing    Average Fixture(s)   3 Fixture Bath   2 Fixture Bath   Softener, Auto   Softener, Manual	Security System  Stories Exterior 1.75 Story Siding 1 Story Siding Other Additions/Adju (14) Water/Sewer Public Water Public Sewer (16) Porches WCP (1 Story), St Phy/Ab.Phy/Func/Econ Separately Depreciat (17) Garages	Foundation Rate Mich Bsmnt. 79.56 Basement 55.43 stments  andard /Comb.%Good= 45/ 75/10	Bsmnt-Adj Heat-Ad 6 -4.85 1.27 3 0.00 0.72 Rate 912.00 912.00 24.20	j Size Cost 616 46,804 228 12,802 Size Cost  1 912 1 912 1 912 .Cost = 30,181
Wood Sash Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement Double Glass Patio Doors Storms & Screens  (3) Roof  X Gable Hip Hip Flat Shed  X Asphalt Shingle	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:	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 1 1000 Gal Septic 2000 Gal Septic	Class:D Exterior: S Base Cost Common Wall: 1 Wal County Multiplier =	1.39 => /Comb.%Good= 20/ 75/10	26.85 -1175.00	
Chimney: Brick		Lump Sum Items:				

<sup>\*\*\*</sup> Information herein deemed reliable but not guaranteed\*\*\*

Grantor	Grantee		Sale		Inst.	Terms of Sale	Libe		erified	Prcnt.
			Price		Type		& Pa			Trans.
BELL MARY L	COUNTY OF MUSKEO	ON TREASU		04/29/2015		TAX REVERTED		·	ED	0.0
MUSKEGON COUNTY TREASURER			100	10/17/2012	~	QUIT- CLAIM		·	ED	0.0
MCLAUGHLIN GEORGE L	MUSKEGON COUNTY	TREASURER	0	04/02/2012		FORECLOSURE	3913	3/993 DE	EED	0.0
Property Address		Class: 70	3.EXEMPT COUN	TY Zoning:	R1-RES Bui	  ding Permit(s)		ate Numbe	r St	tatus
2113 HOWDEN ST			USKEGON HEIGH			- 5 (-,				
			0%							
Owner's Name/Address			-000-059-040							
COUNTY OF MUSKEGON TREASUR	RER		2017 Est TC	V O TCV/TFA	0.00					
173 E APPLE AVE STE 104		X Improv				ates for Land Tabl	e 00001.NORTE	  EAST		
MUSKEGON MI 49442		Public		Zana 10			actors *			
		Improv		Descrip	tion Fro	ontage Depth Fro		ite %Adj. Rea:	son	Value
Tax Description		Dirt R	oad	NORTHEA	ST	50.00 125.00 1.00	000 1.0000	80 100		4,000
HT0334 BLK 59 LOT 4		Gravel		50 A	ctual From	nt Feet, 0.14 Tota	II Acres To	tal Est. Land	d Value =	4,000
Comments/Influences		Paved Storm								
CONDEMNED 8/10		Sidewa								
		Water								
		Sewer Electr	ic							
		Gas	10							
		Curb	T. 1. 1.							
			Lights rd Utilities							
			round Utils.							
		Topogr	aphy of							
		Site								
		Level								
		Rollin Low	g							
		High								
为第一个大型,大型子型。 第一个大型子型,大型子型		Landsc	aped							
		Swamp Wooded								
		Pond								
		Waterf								
		Ravine								
		Ravine Wetlan Flood	d	Year	Lan		Assessed			
		Wetlan	d		Valu	e Value	Value	Revie		Value
		Wetlan	d			e Value		Revie		Value
	(2) 1000 2000	Wetlan Flood Who W	d Plain	t 2017 D 2016	Valu	e Value T EXEMPT	Value	Revie		Value EXEMP1
The Equalizer. Copyright Licensed To: County of Mus		Wetlan Flood Who W	d Plain hen Wha	t 2017	Value EXEMP	e Value T EXEMPT T EXEMPT	Value EXEMPT	e Revie		

<sup>\*\*\*</sup> 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  X Wood Frame  Building Style: 1 STY  Yr Built Remodeled 1925  Condition for Age: Average Room List  Basement 1st Floor	Eavestrough Insulation 0 Front Overhang 0 Other Overhang (4) Interior    Drywall   Plaster Paneled   Wood T&G   Trim & Decoration   Ex   X   Ord   Min   Size of Closets   Lg   X   Ord   Small   Doors:   Solid   X   H.C.   (5) Floors   Kitchen:   Other:	X Gas Wood Oil Elec. Steam  Forced Air w/o Ducts X 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	Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi Tub Jacuzzi Tub Jacuzzi repl.Tub Oven Microwave Standard Range Sauna Trash Compactor Central Vacuum  Interior 1 Story Interior 2 Story 2nd/Same Stack Two Sided Exterior 1 Story Exterior 2 Story Story Foundation: Exterior 2 Story Foundation: Finished ?: Auto. Doors: Mech. Doors: Area: % Good: Storage Area: No Conc. Floor: Car Capacity: Car Capacity: Class: Exterior: Brick Ven.: Stone Ven.: Common Wall: Foundation: Finished ?: Auto. Doors: Area: % Good: Storage Area: No Conc. Floor: Carport Area: Carport Area: Carport Area: Car Capacity: Class: Carport Area: Car Capacity: Carport Area: C
2nd Floor	Other:	100 Amps Service	Security System Estimated T.C.V: 3,858 Roof:
Bedrooms		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	Stories   Exterior   Foundation   Rate   Bsmnt-Adj   Heat-Adj   Size   Cost

Parcel Number: 61-26-185-059-0004-00

<sup>\*\*\*</sup> Information herein deemed reliable but not guaranteed\*\*\*

Grantor	Grantee		Sal Pric		Sale Date	Inst. Type	Terms of Sale	Libe & Pa		Ver By	ified	Prcn Tran
SANDERS J ARTHUR	COUNTY OF MUSKEG	ON TREASU		0 04/	/29/2015	WD	TAX REVERTED	405	3/872	DEE	D	0
Property Address		Class. 70	3.EXEMPT COU	NITV 7	oning	Pui	lding Permit(s)		ate	Number	le	tatus
						Bul	reimic(s)					Latus
2116 JEFFERSON ST			USKEGON HEIG	HTS S	CHOOLS			07/2	9/2002	B-222-0	JZ	
Owner's Name/Address			-000-052-200									
COUNTY OF MUSKEGON TREASU	RER	MAP #: 20	2017 Est T		TCV/TFA:	0.00						
173 E APPLE AVE STE 104 MUSKEGON MI 49442		X Improv	ed Vacan	t	Land Val	lue Estim	ates for Land Tab	le 00013.ORAN	E E			
HOURDOON HI 19112			Public * Factors *									
		Improv	ements				ontage Depth Fr 40.00 125.00 1.0	ont Depth Ra	te %Adj 80 100		n	Value 3,200
Tax Description		Dirt R Gravel					nt Feet, 0.12 Tot				Value =	3,200
HT0280 BLK 52 S 40 FT OF Comments/Influences	LOT 20	X Paved X Storm	Road	-								
		Topograsite X Level Rollin Low High Landsc Swamp Wooded	Lights rd Utilities round Utils. aphy of g									
	MANAGEM C		d Plain hen Wh	at :	Year 2017 2016	Lan Valu EXEMP	T EXEMPT	Value EXEMP	1	oard of Review	Tribunal Othe	
The Equalizer. Copyright Licensed To: County of Mu	(c) 1999 - 2009.	ROB 01/26	/1992 REVIEW /2012 REVIEW	L	2015	1,60						8,90

<sup>\*\*\*</sup> 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  X Wood Frame  Building Style: 1 STY  Yr Built Remodeled 1920  Condition for Age: Average  Room List  Basement 1st Floor 2nd Floor	Eavestrough Insulation 0 Front Overhang 0 Other Overhang (4) Interior  Drywall Plaster Paneled Wood T&G  Trim & Decoration  Ex X Ord Min Size of Closets  Lg X Ord Small Doors: Solid X H.C. (5) Floors  Kitchen: Other:	X Gas Wood Coal Elec. Wood Coal Steam Forced Air w/o 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	Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum	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  Class: D Effec. Age: 57 Floor Area: 936 Total Base Cost: 46,525 Total Depr Cost: 24,736 Estimated T.C.V: 11,750  Area Type 40 WSEP (1 Story) Clasry Area Type Cotyput	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: Bsmnt Garage: Carport Area: Roof:
Bedrooms   (1) Exterior   X   Wood/Shingle   Aluminum/Vinyl   Brick   Insulation   (2) Windows   Many   X   Avg.   Few   Small   Wood Sash   Metal Sash   Vinyl Sash   Double Hung   Horiz. Slide   Casement   Double Glass   Patio Doors   Storms & Screens   (3) Roof   X   Gable   Hip   Mansard   Shed   X   Asphalt Shingle   Chimney: Brick   Aluminum   Chimney: Brick   Aluminum   Aluminum   Chimney: Brick   Chimney: Brick   Chimney: Brick   Chimney: Brick   Chimney: Brick   Called   Chimney: Brick   Chimney: Chimne		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 Wains Ceramic Tile Wains 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:	Stories Exterior  1 Story Siding  1 Story Siding  Other Additions/Adjus (14) Water/Sewer  Public Water  Public Sewer (16) Porches  WSEP (1 Story), Sta Phy/Ab.Phy/Func/Econ/ ECF (ORANGE)	912.00 912.00 andard 48.39	480 23,938 456 18,828 Size Cost  1 912 1 912  1 912  40 1,936  2.Cost = 24,736

Parcel Number: 61-26-185-052-0020-00

<sup>\*\*\*</sup> Information herein deemed reliable but not guaranteed\*\*\*

Grantor	Grantee			Sale Price	Sale Date	Inst. Type	Terms of Sale	Liber & Page		ified	Prcnt Trans
HUGHES TYRONE	COUNTY OF MUSKEGO	N TREAS	JE	0	04/29/2015	WD	TAX REVERTED	4053/8	B73 DEE	D	0.0
Property Address		21 7	02 EVEN	DE COLINI	Ty Zanina.	D :	lding Permit(s)	Dat	te Number		tatus
					TY Zoning:	Bul	.iding Permit(s)	Dat	e Number	51	
2124 SANFORD ST		P.R.E.	0%	N HEIGH'	rs schools						
Owner's Name/Address		MAP #: 2	• •	53-180							
COUNTY OF MUSKEGON TREAS		"			J O TCV/TFA:	0.00					
173 E APPLE AVE STE 104	_	X Impro		Vacant			ates for Land Table	00013.ORANGE			
MUSKEGON MI 49442		Publi		11000000				actors *			
			vements				ontage Depth From	nt Depth Rate		n	Value
Tax Description		Dirt					50.00 125.00 1.000		0 100	T.T 1	4,000
HT0302 BLK 53 LOT 18		Grave X Paved	l Road		50 A	ctual Fro	nt Feet, 0.14 Total	Acres Tota	al Est. Land	value =	4,000
Comments/Influences		X Paved									
		X Sidew	alk								
	1	X Water									
		X Sewer X Elect									
		X Gas	110								
		X Curb									
		X Stree X Stand									
			ground								
		Topog Site	raphy o	f							
		X Level									
		Rolli									
		Low	9								
		High	,								
300		Swamp	caped								
		Woode									
		Pond									
		Water	front								
		Wetla									Т
		Flood	Plain		Year	Lan Valu		Assessed	Board of	,	1
		Th o	Whor	TaTle - 4	2017	EXEME		Value EXEMPT	Review	Other	EXEMP'
			When	What REVIEWE		EXEMP		EXEMPT			EXEMP'
The Equalizer. Copyrigh				REVIEWE		2,00		13,400			13,2420

2014

2,000

11,600

13,600

13,034C

<sup>\*\*\*</sup> 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 X Wood Frame  Building Style: 1 STY  Yr Built Remodeled 1920 0  Condition for Age: Average Room List  Basement 1st Floor 2nd Floor	Eavestrough Insulation 0 Front Overhang 0 Other Overhang (4) Interior    Drywall   Plaster   Wood T&G   Trim & Decoration   Ex   X   Ord   Min   Size of Closets   Lg   X   Ord   Small   Doors:   Solid   X   H.C. (5) Floors  Kitchen: Other:	X Gas Oil Elec. Wood Coal Steam  Forced Air w/o 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	Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum	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  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	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: Bsmnt Garage: Carport Area: Roof:
Bedrooms   (1) Exterior	(6) Ceilings  (7) Excavation  Basement: 936 S.F. Crawl: 0 S.F. Slab: 60 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:	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:	Stories Exterior  1 Story Siding  1 Story Siding  Other Additions/Adjus  (14) Water/Sewer  Public Water  Public Sewer  (16) Porches  CCP (1 Story), Star	1025.00 1025.00 undard 21.23	936 52,790 60 2,787 Size Cost 1 1,025 1 1,025 208 4,416 38,808

<sup>\*\*\*</sup> Information herein deemed reliable but not guaranteed\*\*\*

Grantor	Grantee			Sale	Sale	Inst.	Terms of Sale	Liber	r V	erified	Prcnt.
				Price	Date	Type		& Pag	ge B	У	Trans.
JONES BRANDON K	COUNTY OF MUSKE	GON TREASU	JE	0	02/09/2015	JUD	FORECLOSURE	4054,	/35 D	DEED	
MUSKEGON COUNTY TREASURER	JONES BRANDON K			350	10/17/2012	QC	QUIT-CLAIM	3928,	/316 D	EED	0.0
NELSON EDITH J	MUSKEGON COUNTY	TREASURE	3	0	04/02/2012		FORECLOSURE	3914,	/243 D	EED	0.0
ROSS VIRGINIA	NELSON EDITH J			0	03/14/1995	QC	QUIT-CLAIM	3686,	/505 D	EED	0.0
Property Address		Class: 7	03.EXEMPT	COUNT	Y Zoning: I	R1-RES Bui	lding Permit(s)	Da	ate Numb	er :	Status
2140 MCILWRAITH ST		School:	MUSKEGON :	HEIGHT	S SCHOOLS			04/30	0/2002 B-10	7-02	
(-)		P.R.E.	0%					10/06	5/2000 B-33	3-00	
Owner's Name/Address		MAP #: 2	6-052-007	-270							
COUNTY OF MUSKEGON TREASUR 173 E APPLE AVE STE 104	RER		2017 E	st TCV	0 TCV/TFA:	0.00					
MUSKEGON MI 49442		X Impro	ved Va	acant	Land Va	lue Estima	ates for Land Ta	ble 00001.NORTHE	EAST		
		Publi						Factors *			_
		_	vements		Descrip NORTHEA		ontage Depth F 75.00 120.00 1.	ront Depth Rat	te %Adj. Rea 80 100	son	Value 6,000
Tax Description		Dirt	koad l Road				nt Feet, 0.21 To		tal Est. Lan	d Value =	6,000
HT5919 OAK PARK ADD'N BLK 29	7 LOTS 27 28 &	X Paved	Road								
Comments/Influences X Storm X Sidew											
		X Water									
LOSS 6/2010: WATER OFF DE		X Sewer									
MAINTENANCE: REPAIRS/RENOV	VATION	X Elect	ric								
		X Curb									
			t Lights ard Utili	tion							
			ground Ut:								
		Topog	raphy of								
		Site									
		X Level									
		Rolli Low	ng								
		High									
	"TIME	Lands	-								
		Swamp Woode									
	CART :	Pond	u								
		Water									
		Ravin Wetla									
	Comment of		na Plain		Year	Lan		~ I			
						Value			Revi	ew Othe	er Value
		Who	When	What	2017	EXEMP'	r EXEMP	T EXEMPT			EXEMPT
The Fauclines Convints	(a) 1000 2000	RJ 12/3	1/1998 RE	VIEWED		EXEMP'					EXEMPT
The Equalizer. Copyright Licensed To: County of Mus	(c) 1999 - 2009. skegon, Michigan	ROB 12/3	1/2011 RE	VIEWED	2015	3,00					9,000S

<sup>\*\*\*</sup> 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  X Wood Frame  Building Style: 1 STY  Yr Built Remodeled 1940  Condition for Age: Average  Room List  Basement 1st Floor 2nd Floor Bedrooms  (1) Exterior  X Wood/Shingle Aluminum/Vinyl Brick Insulation  (2) Windows  Many X Avg. X Avg. Few  Wood Sash Metal Sash Vinyl Sash Double Hung Horiz. Slide	Eavestrough Insulation 0 Front Overhang 0 Other Overhang (4) Interior    Drywall   Plaster   Wood T&G   Trim & Decoration   Ex   X   Ord   Min     Size of Closets   Lg   X   Ord   Small     Doors:   Solid   X   H.C. (5) Floors   Kitchen: Other: Other: Other:     (6) Ceilings	(11) Heating/Cooling  X Gas Oil Elec. Coal Steam  Forced Air w/o 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  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 5 Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor	Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi Tub Jacuzzi repl.Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum Security System  Stories Exterior 1 Story Siding Other Additions/Adjus (14) Water/Sewer Public Water Public Water Public Sewer (16) Porches WSEP (1 Story), Sta WCP (1 Story), Sta Phy/Ab.Phy/Func/Econ/	Interior 1 Story Interior 2 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  Class: D Effec. Age: 57 Floor Area: 1149 Total Base Cost: 56,80 Total Base New: 78,95 Total Depr Cost: 23,05 Estimated T.C.V: 11,61  Foundation Foundation Mich Bsmnt. 47.10 thents  and ard Ind ard I	CntyMult X 1.390 E.C.F. X 0.503  Bsmnt-Adj Heat-Adj -4.06 Rate 912.00 912.00 35.10 29.63 0/ 65/29.3, Depr	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: Bsmnt Garage: Carport Area: Roof: j Size Cost 1149 50,211 Size Cost 1 912 1 912 1 912 75 2,633 72 2,133 .Cost = 23,094
Horiz. Slide Casement Double Glass Patio Doors Storms & Screens  (3) Roof  X Gable Hip Flat Shed  X Asphalt Shingle  Chimney: Brick	(9) Basement Finish  Recreation SF Living SF Walkout Doors No Floor SF  (10) Floor Support					

<sup>\*\*\*</sup> Information herein deemed reliable but not guaranteed\*\*\*

Grantor	Grantee			Sale Price	Sale Date	Inst. Type	Terms of Sale	Liber & Pag	1 -	rified	Prcnt Trans
HUGHES TYRONE	COUNTY OF MUSKEO	GON TE	REASUI	0	04/29/2015	5 WD	TAX REVERTED	4053/	873 DEF	ED	0.
Property Address			s: 703.EXE			Bu	ilding Permit(s)	Dat	te Number	S	tatus
2124 SANFORD ST			ol: MUSKEG	ON HEIGHT	S SCHOOLS						
7.11		P.R.	E. 0%								
wner's Name/Address		MAP	#: 26-000-	053-180							
OUNTY OF MUSKEGON TREASU 73 E APPLE AVE STE 104	RER		201	7 Est TC	0 TCV/TFA	: 0.00					
USKEGON MI 49442		XI	mproved	Vacant	Land Va	lue Esti	mates for Land Table	e 00013.ORANGE			
		Pı	ublic					actors *			
			mprovement	s			rontage Depth From			on	Value
ax Description			irt Road				50.00 125.00 1.000 ont Feet, 0.14 Total		0 100 al Est. Land	Value =	4,000 4,000
T0302 BLK 53 LOT 18			ravel Road aved Road						<u>ar 200, 2011</u>		
omments/Influences			torm Sewer								
			idewalk								
			ater ewer								
			ewer lectric								
		XG									
		X C									
			treet Ligh								
			tandard Ut								
			opography ite	oi							
			evel								
		•	olling								
	N. Carlotte		OW								
		9	igh								
			andscaped wamp								
THE RESERVE OF THE PARTY OF THE			wamp looded								
			ond								
			aterfront								
			avine								
			etland 'lood Plain		Year	La	nd Building	Assessed	Board of		/ Taxabl
			,			Val	ue Value	Value	Review	Othe	r Valu
		Who	When	What	2017	EXEM	PT EXEMPT	EXEMPT			EXEM
		CEI	12/31/1992	REVIEWE	2016	EXEM	PT EXEMPT	EXEMPT			EXEMP
		1000	12/01/1002	1121121121			1				
The Equalizer. Copyright icensed To: County of Mu	(c) 1999 - 2009.	CED	06/01/2000	REVIEWE	2015	2,0	00 11,400	13,400			13,242

<sup>\*\*\*</sup> Information herein deemed reliable but not guaranteed\*\*\*

Decilding Heres	(2) Doof (cont.)	(11) Heating/Cooling	(1E) D.::1+ inc	(1E) Eimanlage	(16) Damahaa / Daalaa	(17) Company
Building Type	(3) Roof (cont.)	(11) Heating/Cooling	(15) Built-ins	(15) Fireplaces	(16) Porches/Decks	, ,
Room List  Basement 1st Floor	Eavestrough Insulation 0 Front Overhang 0 Other Overhang  (4) Interior    Drywall   Plaster   Wood T&G   Trim & Decoration   Ex   X   Ord   Min   Size of Closets   Lg   X   Ord   Small   Doors:   Solid   X   H.C.   (5) Floors  Kitchen: Other:	X Gas Wood Coal Elec. Steam  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	Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi Tub Jacuzzi repl.Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum	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  Class: CD -5 Effec. Age: 57 Floor Area: 996 Total Base New: 86, Total Depr Cost: 38, Estimated T.C.V: 18,	CntyMult 043 X 1.390 240 E.C.F. 808 X 0.475	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: Bsmnt Garage: Carport Area: Roof:
2nd Floor Bedrooms	(6) Ceilings	100 Amps Service No./Qual. of Fixtures	Security System Stories Exterior		Bsmnt-Adj Heat-Ad	i Size Cost
(1) Exterior	, (1, 301111190	Ex.   X   Ord.   Min	1 Story Siding	Basement 56.4		936 52,790
X Wood/Shingle Aluminum/Vinyl Brick  Insulation  (2) Windows  Many X Avg. X Avg. Few  Wood Sash Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement Double Glass Patio Doors Storms & Screens  (3) Roof  X Gable Hip Gambrel Hip Mansard Flat Shingle  Chimney: Brick	(7) Excavation  Basement: 936 S.F. Crawl: 0 S.F. Slab: 60 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:	Ex.   X   Ord.   Min     No. of Elec. Outlets     Many   X   Ave.   Few     (13) Plumbing     Average Fixture(s)     3 Fixture Bath     2 Fixture Bath     5 Softener, Auto     Softener, Manual     Solar Water Heat     No Plumbing     Extra Toilet     Extra Sink     Separate Shower     Ceramic Tile Floor     Ceramic Tile Wains     Ceramic Tile Wains     Ceramic Tub Alcove     Vent Fan     (14) Water/Sewer     Public Water     Public Water     Public Sewer     Water Well     1000 Gal Septic     2000 Gal Septic     Lump Sum Items:	1 Story Siding Other Additions/Adjus (14) Water/Sewer Public Water Public Sewer (16) Porches CCP (1 Story), Sta	Slab 56.4 stments andard /Comb.%Good= 45/100/1	0 -9.95 0.00 Rate 1025.00 1025.00 21.23	60 2,787 Size Cost 1 1,025 1 1,025 208 4,416 .Cost = 38,808

Parcel Number: 61-26-185-053-0018-00

<sup>\*\*\*</sup> Information herein deemed reliable but not guaranteed\*\*\*

Period   Date   Type   Stage	Parcel Number: 61-26-185-	-066-0023-00	Jurisdicti	on: 26 CITY	OF MUSKEGON	HTS	County: MUSKEGON		Printed on		11/29/2016	
MSSENDENC COUNTY TREASURER BROWN TREASURER BROWN TREASURER ALIAN WISHERGON COUNTY TREASURER ALIAN WISHERGON COUNTY TREASURER ALIAN WISHERGON COUNTY TREASURER ALIAN SIGN 0.00 702/2012 0C 0UTT-CLAIM 3933/862 DEED 0.00 702/2012 0C 0UTT-CLAIM 3	Grantor	Grantee	rantee				Terms of Sale		-   '	rified	Prcnt. Trans.	
PARKER ALMA MUNKEGON COUNTY TREASURER 6.50 04/02/2002   CC   QUIT-CLAIM 3013/862   DEED   0.0   PARKER KELVIN   PARKER ALBAN   0 03/02/2002   CC   QUIT-CLAIM 3003/752   DEED   0.0   PARKER KELVIN   PARKER ALBAN   CLaus: 703.EXEMUT COUNTY   County: English   County of Muskegon Institute   Claus: 703.EXEMUT COUNTY   County of Muskegon Institute   County   Cou	BROWN TERRANCE L	COUNTY OF MUSKEO	GON TREASUR	0	03/31/2015	QC	TAX REVERTED	4053	/885 DEE	ED	0.0	
PARKER ALMAN	MUSKEGON COUNTY TREASURER	BROWN TERRANCE I		650	10/17/2012	QC	QUIT- CLAIM		/228 DEF	ED	0.0	
Property Address	PARKER ALMA	MUSKEGON COUNTY	TREASURER	650	04/02/2012	QC	QUIT- CLAIM	3913	/862 DEE	ED	0.0	
School: MUSKEGON REIGHTS SCHOOLS	PARKER MELVIN	PARKER ALMA		0	03/02/2009	QC	QUIT-CLAIM	3803	/752 DEE	ED	0.0	
Name	Property Address		Class: 70	3.EXEMPT COUNT	TY Zoning:	R1-RES Bui	lding Permit(s)	Di	ate Number	St	atus	
MAP 4: 26-000-066-230	2204 HOYT ST		School: M	USKEGON HEIGHT	S SCHOOLS							
Mar #   2000-000-250			P.R.E.	0%								
133 E APPLE AVE STE 104	Owner's Name/Address		MAP #: 26	-000-066-230								
MISKEGON MI 49442		RER		2017 Est TCV	O TCV/TFA	: 0.00						
### Public			X Improv	ed Vacant	Land Va	lue Estim	stimates for Land Table 00001.NORTHEAST					
Dirk Road   Crawel Road   Front Feet, 0.14 Total Acres   Total Est. Land Value = 4,000   4,000   4,000   4,000   6   100   4,000   6   100   100	13112		Public				*	Factors *				
Tax Description   Find   Find   Feet						ontage Depth Fr	ont Depth Ra		on			
HT0495 BLK 66 LOT 23 COmments/Influences  NO ADDRESS LISTED ON QC DEED  X Sidewalk X Water X Sewer X Electric X Gas X Curb Street Lights Standard Utilities Underground Utils.  Topography of Site Rolling Low High Landscaped Swamp Wooded Pond Waterfront Ravine Welland Flood Plain  The Equalizer. Copyright (c) 1999 - 2009. Licensed To: County of Muskeon, Michigan  Topography of Site Water X Level Rolling Low Who When What 2017 EXEMPT E	Tax Description											
NO ADDRESS LISTED ON QC DEED  X Sidewalk X Water X Sewer X Electric X Gas X Curb Street lights Standard Utilities Underground Utils.  Topography of Site When What Swamp Wooded Pend Water Food Plain Pend Walue Walue Assessed Swamp Wooded Pend Water Food Plain Value Value Review Other Value The Equalizer. Copyright (c) 1999 - 2009. Licensed To: County of Muskegon, Michigan Discovery of Muskegon, Michigan Value Review Other Value Review Other Value Value Review Other Value Value Review Other Value Value Review Other Value Value Value Value Review Other Value Value Value Value Value Value Value Value Review Other Value Val	HT0495 BLK 66 LOT 23		- Graver road									
X Mater 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 Flood	Comments/Influences											
X Level Rolling Low High Landscaped Swamp Wooded Pond Waterfront Ravine Wetland Flood Plain  The Equalizer. Copyright (c) 1999 - 2009. Licensed To: County of Muskegon, Michigan  Site  X Level Rolling Low High Landscaped Swamp Wooded Pond Waterfront Ravine Wetland Flood Plain  Year Land Value Value Value Value Review Other Value  CEJ 06/30/1999 REVIEWED CEJ 06/30/1999 REVIEWED 2016 EXEMPT 12,2008			X Sewer X Electric X Gas X Curb Street Lights Standard Utilities									
Ravine Wetland Flood Plain  Year  Land Value  Value  Value  Value  Value  Review  Other  Value  Who When What 2017 EXEMPT  The Equalizer. Copyright (c) 1999 - 2009.  Licensed To: County of Muskegon, Michigan			X Level Rollin Low High Landsc Swamp Wooded Pond	g aped								
The Equalizer. Copyright (c) 1999 - 2009. Licensed To: County of Muskegon, Michigan 2015 2,000 10,200 12,200 12,200			Ravine Wetlan Flood	d Plain hen What	2017	Valu EXEMP	T EXEMPT	Value EXEMPT	Review	1	Value EXEMPT	
Licensed To: County of Muskegon, Michigan			- CEO 00/30	/ TOOO INDVIEWEL								
	Licensed To: County of Mus	skegon, Michigan			2013	·	·				13,000s	

<sup>\*\*\*</sup> 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 X Wood Frame  Building Style: 1 1/2 STY  Yr Built Remodeled 1915 0  Condition for Age: Average Room List  Basement 1 lst Floor 2 2nd Floor	Eavestrough   Insulation   O Front Overhang   O Other Overhang   (4) Interior   Drywall   X Plaster   Paneled   Wood T&G   Trim & Decoration   Ex   X   Ord   Min   Size of Closets   Lg   X   Ord   Small   Doors:   Solid   X   H.C.   (5) Floors   Kitchen: Hardwood Other: Softwood Other: Tile	X Gas Oil Elec. Wood Coal Steam  Forced Air w/o 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	Standard Range Self Clean Range Sauna Trash Compactor	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  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  Area Type  140 WGEP (1 Story)  Coty WGEP (1 Story)  Area  Type  140  For all Story  Coty NGEP (1 Story)  Area  Type  140  For all Story  Area  140  For all Sto	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: Bsmnt Garage: Carport Area: Roof:
3 Bedrooms (1) Exterior  X Wood/Shingle Aluminum/Vinyl Brick Insulation (2) Windows  Many X Avg. X Avg. Few X Mood Sash X Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement X Double Glass Patio Doors X Storms & Screens (3) Roof  X Gable Hip Flat X Asphalt Shingle  Chimney: Brick	I .	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:	Stories Exterior 1.5 Story Siding 1 Story Siding Other Additions/Adjus (14) Water/Sewer Public Water Public Sewer (16) Porches WGEP (1 Story), Sta Phy/Ab.Phy/Func/Econ/ ECF (NORTHEAST)	1025.00 1025.00 andard 35.80	624 50,794 102 5,531 Size Cost 1 1,025 1 1,025 1 1,025 140 5,012 39,649

Parcel Number: 61-26-185-066-0023-00

<sup>\*\*\*</sup> Information herein deemed reliable but not guaranteed\*\*\*

Grantor	Grantee		Sale Price		Inst. Type	Terms of Sale	Liber & Page	Ver By	ified	Prcnt. Trans.
DYE ROBERT	COUNTY OF MUSKEO	ON TREASUR	0	04/29/201	5 WD	TAX REVERTED	4053/87	8 DEE	D	0.0
MUSKEGON COUNTY TREASURER	DYE ROBERT		1,200	08/12/200	QC QC	TAX DEEDS	3822/31	3 DEE	D	100.0
DYE LOUIS C	MUSKEGON COUNTY	TREASURER	0	04/02/200	) CD	ASSIGNMENT	3808/46	0 DEE	D	0.0
Property Address	Address		3 EYEMPT COIN	TV Zoning:	R1-RES Bui	  ding Permit(s)	Date	Number	9	tatus
2228 RIORDAN ST			USKEGON HEIGH		THE THEO BUT	Taing remite (b)	06/30/2			
ZZZO KIOKDIW SI			0%	15 501100115			00/30/2	001   B 11 0	1	
Owner's Name/Address			-000-063-170							
COUNTY OF MUSKEGON TREASUR	RER	MAF #. 20	2017 Est TC	V/ O TCV/TEN	• 0 00					
173 E APPLE AVE STE 104		X Improv				ates for Tand Tah	le 00001.NORTHEAS			
MUSKEGON MI 49442		Public		Land V	Tue Escino		Factors *	1		
		Improve		Descri	otion Fro		ont Depth Rate	%Adi. Reasc	on	Value
Tax Description		Dirt R		NORTHE	AST	50.00 125.00 1.0	000 1.0000 80	100		4,000
HT0416 BLK 63 LOT 17		Gravel		50 2	Actual From	nt Feet, 0.14 Tot	al Acres Total	Est. Land	Value =	4,000
Comments/Influences		X Paved X								
VACANT/ SUBSTANDARD 6/09		X Sidewa								
		Standa	ic Lights rd Utilities round Utils.							
		Site X Level	aphy of							
		Rolling Low High Landsc Swamp Wooded Pond Waterf Ravine Wetlan	aped							
		Flood	Plain	Year	Lan Valu	.	Assessed Value	Board of Review	Tribunal, Other	
-		Who W	hen Wha	t 2017	EXEMP'	r EXEMPT	EXEMPT			EXEMPT
		CEJ 12/30	/1999 REVIEWE	D 2016	EXEMP'	T EXEMPT	EXEMPT			EXEMPT
The Equalizer. Copyright Licensed To: County of Mus	(c) 1999 - 2009.	RJ 06/04	/2009 REVIEWE	D 2015	2,00	3,200	5,200			5,200S

<sup>\*\*\*</sup> 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 X Gas Interior 1 Story | Area Type Eavestrough Oil Elec. Appliance Allow. Year Built: Mobile Home Insulation Mood Coal Steam Cook Top Interior 2 Story Car Capacity: Town Home 0 Front Overhang Dishwasher 2nd/Same Stack Class: Forced Air w/o Ducts Duplex 0 Other Overhang Garbage Disposal Two Sided Exterior: X Forced Air w/ Ducts Bath Heater A-Frame Exterior 1 Story Brick Ven.: (4) Interior Forced Hot Water Vent Fan Exterior 2 Story Stone Ven.: X Wood Frame Electric Baseboard Drywall Plaster Hot Tub Prefab 1 Story Common Wall: Elec. Ceil. Radiant Paneled Wood T&G Unvented Hood Prefab 2 Story Foundation: Radiant (in-floor) Vented Hood Heat Circulator Finished ?: Building Style: Trim & Decoration Electric Wall Heat Raised Hearth Intercom Auto. Doors: 1 STY Space Heater Ex X Ord Jacuzzi Tub Wood Stove Mech. Doors: Yr Built Remodeled Wall/Floor Furnace Direct-Vented Gas Jacuzzi repl.Tub Area: Size of Closets 1910 Forced Heat & Cool % Good: Oven Lg X Ord Small Heat Pump Class: D Condition for Age: Microwave Storage Area: No Heating/Cooling Effec. Age: 55 Solid X H.C. Doors: Standard Range No Conc. Floor: Average Floor Area: 560 CntvMult Central Air Self Clean Range (5) Floors Room List X 1.390 Bsmnt Garage: Total Base Cost: 28,273 Wood Furnace Sauna Total Base New: 39,299 E.C.F. Kitchen: Basement. Trash Compactor x 0.503 Carport Area: (12) Electric Total Depr Cost: 12,379 Other: 1st Floor Central Vacuum Roof: Estimated T.C.V: 6,227 Other: 100 Amps Service 2nd Floor Security System Bedrooms No./Oual. of Fixtures (6) Ceilings Stories Exterior Foundation Rate Bsmnt-Adj Heat-Adj Size Cost (1) Exterior Story Siding Crawl Space 56.43 -9.86 0.66 560 26,449 X Ord. Other Additions/Adjustments Rate Size Cost X Wood/Shingle No. of Elec. Outlets (14) Water/Sewer Aluminum/Vinvl Public Water 912.00 1 912 Manv | X Ave. Few Brick (7) Excavation Public Sewer 912.00 912 (13) Plumbing Phy/Ab.Phy/Func/Econ/Comb.%Good= 45/100/ 70/100/31.5, 12,379 Basement: 0 S.F. Depr.Cost = Insulation Average Fixture(s) Functional Depreciation because of: SIZE/SUBSTANDARD/DISREPAIR Crawl: 560 S.F. (2) Windows 1 3 Fixture Bath Slab: 0 S.F. ECF (NORTHEAST)  $0.503 \Rightarrow TCV \text{ of Bldq: } 1 =$ 6,227 2 Fixture Bath Manv Large Height to Joists: 0.0 Softener, Auto X Ava. X Ava. (8) Basement Softener, Manual Small Few Solar Water Heat Conc. Block Wood Sash Poured Conc. No Plumbing Metal Sash Stone Extra Toilet Vinvl Sash Treated Wood Extra Sink Double Hung Separate Shower Concrete Floor Horiz. Slide Ceramic Tile Floor (9) Basement Finish Casement. Ceramic Tile Wains Double Glass Recreation Ceramic Tub Alcove Patio Doors Living SF Vent. Fan Storms & Screens Walkout Doors (14) Water/Sewer No Floor (3) Roof 1 Public Water X Gable (10) Floor Support Gambrel 1 Public Sewer Hip Mansard Joists: Water Well Flat Shed Unsupported Len: 1000 Gal Septic Cntr.Sup: 2000 Gal Septic X Asphalt Shingle Lump Sum Items: Chimney: Brick

<sup>\*\*\*</sup> Information herein deemed reliable but not guaranteed\*\*\*

Parcel Number: 61-26-185-	103-0017-00	Jurisdicti	on: 26 CITY	OF MUSKEGO	N HTS	County:	MUSKEGON		Prin	ted on		11/29/2016
Grantor	Grantee		Sale Price		Inst. Type	Terms	of Sale		Liber & Page	Ver By	ified	Prcnt. Trans.
ANDERSON JOSEPH	COUNTY OF MUSKEO	GON TREASU	C	03/31/201	5 QC	QUIT-	CLAIM	4	4053/905	DEE	D	0.0
WILLIS ARIEAL	ANDERSON JOSEPH		C	03/17/201	4 QC	QUIT-	CLAIM	4	4014/741	DEE	D	0.0
MUSKEGON COUNTY TREASURER	WILLIS ARIEAL		400	10/17/201	2 QC	QUIT-	CLAIM		3928/246	DEE	D	0.0
PARAMOUNT LAND HOLDINGS LI	MUSKEGON COUNTY	TREASURER	C	04/02/201	2	FORECI	LOSURE		3914/33	DEE	D	0.0
Property Address	I	Class: 70	3.EXEMPT COUN	TY Zoning:	R1-RES Bu	ilding P	Permit(s)		Date	Number	S	tatus
2324 WOOD ST		School: M	USKEGON HEIGH	TS SCHOOLS				С	9/11/2002	B-275-	02	
		P.R.E.	0 응					C	9/29/1998	B-338-	98	
Owner's Name/Address		MAP #: 26	-000-103-170									
COUNTY OF MUSKEGON TREASUR	ER		2017 Est TO	V 0 TCV/TFA	: 0.00							
173 E APPLE AVE STE 104 MUSKEGON MI 49442		X Improv	ed   Vacant	Land V	alue Estin	nates fo	or Land Tab	le 00001.NG	ORTHEAST			
FIGUREON HI 49442		Public						Factors *				
		Improv				contage	Depth Fr	ont Depth	Rate %Ad		n	Value
Tax Description		Dirt R		NORTHE			125.00 1.0 , 0.14 Tot	000 1.0000	80 100 Total Est		V21110 -	4,000 4,000
HT1281 BLK 103 LOT 17		Gravel X Paved		30	ACTUAL FIC		., 0.14 100	ar Acres	TOTAL EST	. Lanu	value –	4,000
Comments/Influences		X Storm										
		Standa Underg	Lights rd Utilities round Utils.									
	*	Site X Level	aphy of									
		Rollin Low High Landsc Swamp Wooded Pond Waterf Ravine Wetlan	aped									
	a remandum uu			Year	Lai	nd	Building	Asses	ssed  B	oard of	Tribunal/	/ Taxable
		Flood	Plain		Val	ue	Value	Vá	alue	Review	Other	
		Flood	Plain hen Wha				Value EXEMPT		EMPT	Review		r Value
		Flood Who W		t 2017	Val	PT		EXI	EMPT	Review EXEMPTM		r Value
The Equalizer. Copyright Licensed To: County of Mus	(c) 1999 - 2009.	Flood Who W	hen Wha	t 2017	Val:	PT PT	EXEMPT	EXI	EMPT			

<sup>\*\*\*</sup> Information herein deemed reliable but not guaranteed\*\*\*

Grantor	Grantee	e		Sale Date	Inst. Type	Terms of Sale	Libe & Pa		rified	Prcnt
WILLIAMS SABRINA	COUNTY OF MUSKEO	GON TREASUE	0	03/31/2015	OC	OUIT- CLAIM		3/899 DEE	ID.	0.0
JONES JUANITA ET AL	WILLIAMS SABRINA	A	55,000	05/24/2006	WD	WARRANTY DEED	3704	1/744 DEE	D.	100.0
JONES, JUANITA	JONES, JUANITA E	ET AL	0	03/13/1998	LC	OUIT-CLAIM	2076	5/94 DEE	ID.	0.0
<u> </u>	· ·		0	05/07/1996	DC	COURT ORDER	1900	0:0609 DEE	D.	0.0
Property Address		Class: 703				lding Permit(s)		Date Number		tatus
2332 HOYT ST			JSKEGON HEIGHT							
		P.R.E. (	 )%							
Owner's Name/Address		MAP #: 26-	-000-099-160							
COUNTY OF MUSKEGON TREA	ASURER	11111    1 2 0	2017 Est TC	/ O TCV/TFA:	0.00					
173 E APPLE AVE STE 104	1	X Improve				ates for Land Tab	 	HEAST		
MUSKEGON MI 49442		Public	vacant	Edila va	Tuc Bocim		Factors *	11101		
		Improve	ements	Descrip	tion Fro	ontage Depth Fro		ate %Adj. Reaso	on	Value
Tax Description		Dirt Ro		NORTHEA	ST	50.00 125.00 1.00	000 1.0000	80 100		4,000
HT1182 BLK 99 LOT 16		Gravel		50 A	ctual From	nt Feet, 0.14 Tota	al Acres To	otal Est. Land	Value =	4,000
Comments/Influences		X Paved F								
		X Sidewal								
		X Water								
		X Sewer								
		X Electri X Gas	LC							
		X Curb								
		Street								
			rd Utilities round Utils.							
B.	Key set Con	Topogra Site	iphy of							
PAR PER NY		X Level								
		Rolling	7							
		Low	•							
		High								
		Landsca Swamp	apea							
		Wooded								
		Pond								
		Waterfr Ravine	ront							
		Ravine   Wetland	3							
Name of the last		Flood F	Plain	Year	Lan	_	Assessed			
Take 1					Valu		Value		Other	
			nen What		EXEMP		EXEMP			EXEMP
The Equalizer. Copyric	rh+ (a) 1000 2000	CEJ 06/30/	/1999 REVIEWEI		EXEMP		EXEMP			EXEMP
The Equalizer. Copyrig				2015	2,00	11,300	13,300			13,300
<b>4</b> -	2 , 3.			2014	2,00	0 12,100	14,100			14,100

<sup>\*\*\*</sup> 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 X Gas Interior 1 Story | Area Type Eavestrough Oil Elec. Appliance Allow. Year Built: Mobile Home Insulation Mood Coal Steam Cook Top Interior 2 Story Car Capacity: Town Home 0 Front Overhang Dishwasher 2nd/Same Stack Class: Forced Air w/o Ducts Duplex 0 Other Overhang Garbage Disposal Two Sided Exterior: X Forced Air w/ Ducts Bath Heater A-Frame 1 Exterior 1 Story Brick Ven.: (4) Interior Forced Hot Water Vent Fan Exterior 2 Story Stone Ven.: X Wood Frame Electric Baseboard Drywall X Plaster Hot Tub Prefab 1 Story Common Wall: Elec. Ceil. Radiant Paneled Wood T&G Prefab 2 Story Unvented Hood Foundation: Radiant (in-floor) Vented Hood Heat Circulator Finished ?: Building Style: Trim & Decoration Electric Wall Heat Raised Hearth 1 1/4 STY Intercom Auto. Doors: Space Heater Ex X Ord Min Jacuzzi Tub Wood Stove Mech. Doors: Yr Built Remodeled Wall/Floor Furnace Direct-Vented Gas Jacuzzi repl.Tub Area: Size of Closets 1930 Forced Heat & Cool % Good: Oven Lg X Ord Small Heat Pump Class: CD Condition for Age: Microwave Storage Area: No Heating/Cooling Effec. Age: 55 Solid X H.C. Doors: Standard Range No Conc. Floor: Average Floor Area: 1050 CntvMult Central Air Self Clean Range (5) Floors Room List X 1.390 Bsmnt Garage: Total Base Cost: 70,209 Wood Furnace Sauna Total Base New: 97,591 E.C.F. Kitchen: Hardwood Basement. Trash Compactor x 0.503 Carport Area: (12) Electric Total Depr Cost: 43,916 Other: Carpeted 2 1st Floor Central Vacuum Roof: Estimated T.C.V: 22,090 Other: Tile 2nd Floor 100 Amps Service Security System 2 Bedrooms No./Oual. of Fixtures (6) Ceilings Stories Exterior Foundation Rate Bsmnt-Adj Heat-Adj Size Cost (1) Exterior 1.25 Story Siding Basement. 71.41 0.00 0.00 840 59.984 X Plaster X Ord. Other Additions/Adjustments Rate Size Cost Wood/Shingle No. of Elec. Outlets (9) Basement Finish Aluminum/Vinvl Basement Recreation Finish 11.25 420 4,725 Manv | X Ave. Few Brick (7) Excavation (14) Water/Sewer X Composition (13) Plumbing Basement: 840 S.F. Public Water 1025.00 1,025 X Insulation Average Fixture(s) Public Sewer 1025.00 1,025 Crawl: 0 S.F. (2) Windows 1 3 Fixture Bath Slab: 0 S.F. (15) Built-Ins & Fireplaces 2 Fixture Bath Manv Large Height to Joists: 0.0 Fireplace: Exterior 1 Story 3450.00 3,450 Softener, Auto X Ava. X Avg. Phy/Ab.Phy/Func/Econ/Comb.%Good= 45/100/100/100/45.0, Depr.Cost = 43,916 (8) Basement Softener, Manual ECF (NORTHEAST) Small  $0.503 \Rightarrow TCV \text{ of Bldg: } 1 =$ 22,090 Few Solar Water Heat Conc. Block Wood Sash Poured Conc. No Plumbing X Metal Sash Stone Extra Toilet Vinvl Sash Treated Wood Extra Sink Double Hung Separate Shower Concrete Floor Horiz. Slide Ceramic Tile Floor (9) Basement Finish Casement. Ceramic Tile Wains Double Glass 420 Recreation Ceramic Tub Alcove Patio Doors Living SF Vent. Fan X Storms & Screens Walkout Doors (14) Water/Sewer No Floor (3) Roof 1 Public Water (10) Floor Support X Gable Gambrel 1 Public Sewer Hip Mansard Joists: Water Well Flat Shed Unsupported Len: 1000 Gal Septic Cntr.Sup: 2000 Gal Septic X Asphalt Shingle Lump Sum Items:

Chimney: Brick

<sup>\*\*\*</sup> Information herein deemed reliable but not guaranteed\*\*\*

Grantor	Grantee		Sale Price	Sale Date	Inst. Type	Terms of S	ale	Liber & Page	Ver By	ified	Prcnt. Trans.
SMITH RAYMOND	COUNTY OF MUSKE	GON TREASUE	0	03/31/2015	QC	QUIT- CLAII	M	4053/910	) DEE	D	0.0
SMITH RAYMOND/WIFE	SMITH RAYMOND		0	02/07/2014	DC	DEATH CERT	IFICATE	4010/69	7 DEE	D	0.0
Property Address		Class 70	3.EXEMPT COUNT	ZV Zoning. F	D1_DEC Bui	lding Permit	- (e)	Date	Number	C+	atus
2405 HOWDEN ST		School: MUS			(I KES BUI.	raing reimit	. (3)	07/20/20			
2400 HOWDEN 51			O%	.5 SCHOOLS				07/20/20	D-170-	0.9	
Owner's Name/Address											
COUNTY OF MUSKEGON TRE	ASIIRER	MAP #: 26	-000-115-020								
173 E APPLE AVE STE 10			2017 Est TCV								
MUSKEGON MI 49442		X Improve	ed Vacant	Land Va	lue Estima	ates for Lan		001.NORTHEAS	r		
Tax Description		Public Improve		NORTHEA	ST	50.00 125.0	0 1.0000 1.	Depth Rate 9	100		Value 4,000
HT1538 BLK 115 LOT 2		Gravel		50 A	ctual Fror	nt Feet, 0.1	4 Total Acr	res Total	Est. Land	Value =	4,000
HT1538 BLK 115 LOT 2 X Paved F X Storm 9											
PO ADD CHNG, 7/12 OWNE DECEASED/DEFERRED MAIN		Standa: Underg	ic Lights rd Utilities round Utils.								
		X Level Rolling Low High Landsca Swamp Wooded Pond Waterf Ravine Wetlan	aped								
		Flood	Plain	Year	Land Value	е	Value	Assessed Value	Board of Review	Tribunal/ Other	
			hen What		EXEMP'		XEMPT	EXEMPT			EXEMP'
The Equalizer. Copyri	ght (c) 1999 - 2009		/1999 REVIEWEI		EXEMP'		XEMPT	EXEMPT	EXEMPTM		EXEMP'
Licensed To: County of		`		2015	2,00		7,000	9,000			9,000
- 2	J .	1		2014	2 00	0	9 700	11 700			11 700

2014

2,000

11,700

9,700

11,700s

<sup>\*\*\*</sup> 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 (4) Interior	X Gas Wood Coal Elec. Steam Forced Air w/o Ducts X Forced Air w/ Ducts Forced Hot Water	Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan	Interior 1 Story Interior 2 Story 2nd/Same Stack Two Sided Exterior 1 Story Exterior 2 Story	Area Type 212 WGEP (1 Story)	Year Built: 1925 Car Capacity: Class: D Exterior: Siding Brick Ven.: 0 Stone Ven.: 0
X Wood Frame  Building Style: 2 STY  Yr Built Remodeled 1925  Condition for Age: Poor  Room List  Basement 1 1st Floor 2 2nd Floor 3 Bedrooms	Drywall X Plaster Paneled Wood T&G  Trim & Decoration  Ex X Ord Min  Size of Closets  Lg X Ord Small  Doors: Solid X H.C.  (5) Floors  Kitchen: Hardwood Other: Carpeted Other: Tile	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	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	Prefab 1 Story Prefab 2 Story Heat Circulator Raised Hearth Wood Stove Direct-Vented Gas  Class: D Effec. Age: 55 Floor Area: 2028 Total Base Cost: 92,2 Total Base New : 128, Total Depr Cost: 27,0 Estimated T.C.V: 13,5	276 E.C.F. 28 X 0.503	Common Wall: Detache Foundation: 18 Inch Finished ?: Auto. Doors: 0 Mech. Doors: 0 Area: 400 % Good: 10 Storage Area: 0 No Conc. Floor: 0 Bsmnt Garage: Carport Area: Roof:
(1) Exterior  X Wood/Shingle Aluminum/Vinyl Brick Insulation	(6) Ceilings  X Plaster  (7) Excavation  Basement: 1014 S.F.  Crawl: 0 S.F.	No./Qual. of Fixtures  Ex.   X   Ord.   Min  No. of Elec. Outlets  Many   X   Ave.   Few  (13) Plumbing  Average Fixture(s)	Stories Exterior 2 Story Siding Other Additions/Adju (13) Plumbing 3 Fixture Bath (14) Water/Sewer Public Water Public Sewer	Mich Bsmnt. 77.02	Bsmnt-Adj Heat-Ad -4.19 1.31 Rate 1650.00 912.00 912.00	j Size Cost 1014 75,178 Size Cost 1 1,650 1 912 1 912
(2) Windows    Many   Large     X Avg.   X Avg.     Few   Small     X Wood Sash     Metal Sash	Slab: 0 S.F. Height to Joists: 0.0  (8) Basement  Conc. Block Poured Conc. Stone	2 3 Fixture Bath 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet	(16) Porches WGEP (1 Story), St Phy/Ab.Phy/Func/Econ Separately Depreciat (17) Garages	/Comb.%Good= 45/ 50/10	28.74 0/100/22.5, Depr	212 6,093 .Cost = 26,504
Vinyl Sash Double Hung Horiz. Slide Casement X Double Glass Patio Doors X Storms & Screens  (3) Roof	Treated Wood Concrete Floor  (9) Basement Finish  Recreation SF Living SF Walkout Doors No Floor SF	Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan  (14) Water/Sewer	County Multiplier =	/Comb.%Good= 10/ 50/10	Cos	t New = 10,481 Cost = 524 Cost = 27,028
X Gable Gambrel Hip Mansard Flat Shed  X Asphalt Shingle  Chimney: Brick	(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:				

<sup>\*\*\*</sup> Information herein deemed reliable but not guaranteed\*\*\*

Parcel Number: 61-26-185-1	16-0022-00	Jurisdicti	on: 26 CITY	OF MUSKEGON	HTS	County: MUSKEGON		Printed on		11/29/2016
Grantor	Grantee		Sale Price		Inst. Type	Terms of Sale	Libe & Pa		rified	Prcnt. Trans.
ANDERSON DONALD SR	COUNTY OF MUSKES	ON TREASU	0	03/31/2015	QC	QUIT- CLAIM	4053	3/913 DEE	ID.	0.0
ROWAN JAMES/ANDERSON DONAL	MATTOX LARRY B/J	AMES ROWAI	0	11/02/2011	. QC	QUIT- CLAIM	3895	5/126 DEE	D.	0.0
MATTOX LARRY B/JAMES ROWAN	ANDERSON DONALD	SR	0	11/02/2011	. QC	QUIT- CLAIM	3895	5/126 DEE	ID.	0.0
ROWAN JAMES	ROWAN JAMES/DONA	LD ANDERS	0	01/09/2003	g QC	QUIT-CLAIM	3519	9/301 DEE	D.	0.0
Property Address		Class: 70	3.EXEMPT COUN	TY Zoning:	R1-RES Bui	.lding Permit(s)	D	ate Number	S	tatus
2408 HOYT ST		School: M	USKEGON HEIGH	TS SCHOOLS						
		P.R.E.	0%							
Owner's Name/Address		MAP #: 26	-000-116-220							
COUNTY OF MUSKEGON TREASURI	ER		2017 Est TC	V 0 TCV/TFA	: 0.00					
173 E APPLE STE 104 MUSKEGON MI 49442		X Improv	ed Vacant	d   Vacant   Land Value Estimates for Land Table 00001.NORTHEAST						
Tax Description HT1582 BLK 116 LOT 22		Public Improversity Dirt R Gravel X Paved	ements oad Road	Descrip NORTHEA 50 A	ST	ontage Depth Fr 50.00 125.00 1.0 nt Feet, 0.14 Tot	000 1.0000	te %Adj. Reaso 80 100 tal Est. Land		Value 4,000 4,000
Comments/Influences		X Storm X Sidewa X Water X Sewer X Electr X Gas X Curb Street Standa Underg	Sewer lk  ic  Lights rd Utilities round Utils. aphy of  g  aped  ront							
		Flood		Year	Lar Valı	-		1		
		Who W	hen Wha	t 2017	EXEM	T EXEMPT	EXEMPT	1		EXEMPT
San	- No. 31 21.	CEJ 08/30	/1999 REVIEWE	D 2016	EXEM	T EXEMPT	EXEMPT	EXEMPTM		EXEMP
The Equalizer. Copyright				2015	2,00	9,400	11,400			11,4008
Licensed to: County of Musi	ensed To: County of Muskegon, Michigan			2014	2,00	12,600	14,600			12,8520

<sup>\*\*\*</sup> 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  X Wood Frame	Eavestrough Insulation 0 Front Overhang 0 Other Overhang (4) Interior  Drywall X Plaster Paneled Wood T&G	X Gas Wood Coal Elec. Steam  Forced Air w/o Ducts X Forced Hot Water Electric Baseboard Elec. Ceil. Radiant	Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood	Interior 1 Story Interior 2 Story 2nd/Same Stack Two Sided Exterior 1 Story Exterior 2 Story Prefab 1 Story Prefab 2 Story	Area Type  126 WSEP (1 Story) 18 CPP	Year Built: Car Capacity: Class: D Exterior: Sidin Brick Ven.: 0 Stone Ven.: 0 Common Wall: De Foundation: 18	etache
Building Style: 1 STY  Yr Built Remodeled 1915  Condition for Age: Average  Room List	Trim & Decoration  Ex X Ord Min Size of Closets  Lg X Ord Small Doors: Solid X H.C.  (5) Floors	Radiant (in-floor) Electric Wall Heat Space Heater Wall/Floor Furnace Forced Heat & Cool Heat Pump No Heating/Cooling  Central Air Wood Furnace	Vented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi repl.Tub Oven Microwave Standard Range Self Clean Range Sauna	Heat Circulator Raised Hearth Wood Stove Direct-Vented Gas  Class: D +10 Effec. Age: 55 Floor Area: 1104 Total Base Cost: 76,	CntyMult X 1.390	Finished ?: Auto. Doors: 0 Mech. Doors: 0 Area: 192 % Good: 20 Storage Area: 0 No Conc. Floor: Bsmnt Garage:	0
Basement 1st Floor 2nd Floor	Kitchen: Vinyl Other: Hardwood Other: Carpeted	(12) Electric  100 Amps Service	Trash Compactor Central Vacuum Security System	Total Base New: 106 Total Depr Cost: 36, Estimated T.C.V: 18,	411 X 0.503	Carport Area: 3 Roof: Tar & Gra	
Bedrooms (1) Exterior	(6) Ceilings X Plaster	No./Qual. of Fixtures    Ex.   X   Ord.     Min	Stories Exterior 1 Story Siding 1 Story Siding	Foundation Rate Basement 52.2 Crawl Space 52.2		816 43,	Cost ,215 ,655
X Wood/Shingle Aluminum/Vinyl Brick	(7) Excavation	No. of Elec. Outlets   Many   X   Ave.   Few	Other Additions/Adju (9) Basement Finish	stments	Rate	Size C	Cost
Insulation	Basement: 816 S.F. Crawl: 288 S.F.	(13) Plumbing  Average Fixture(s)	Basement Recreatio (14) Water/Sewer Public Water	n Finish	9.65 912.00	,	912
(2) Windows   Many   Large	Slab: 0 S.F. Height to Joists: 0.0	1 3 Fixture Bath 2 Fixture Bath	Public Sewer (16) Porches		912.00	<del>-</del>	912
X Avg. X Avg. Small Wood Sash	(8) Basement  Conc. Block Poured Conc.	Softener, Auto Softener, Manual Solar Water Heat No Plumbing	WSEP (1 Story), St CPP, Standard Phy/Ab.Phy/Func/Econ Separately Depreciat	/Comb.%Good= 45/ 80/1	28.17 30.29 00/100/36.0, Depi	18	,549 545 ,859
Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement	Stone Treated Wood X Concrete Floor  (9) Basement Finish	Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains	(17) Carports Tar & Gravel County Multiplier =			st New = $3$ ,	,418 ,361 538
Double Glass Patio Doors Storms & Screens  (3) Roof	816 Recreation SF Living SF Walkout Doors No Floor SF	Ceramic Tub Alcove Vent Fan (14) Water/Sewer	Class:D Exterior: S Base Cost County Multiplier =	iding Foundation: 18  1.39 => /Comb.%Good= 20/ 80/1	23.75 Cos	st New = 6,	,560 ,338 ,014
X Gable Gambrel Hip Mansard Flat Shed  X Asphalt Shingle	(10) Floor Support  Joists: Unsupported Len: Cntr.Sup:	1 Public Water 1 Public Sewer Water Well 1000 Gal Septic 2000 Gal Septic	ECF (NORTHEAST)		Total Depreciated 0.503 => TCV of Bldg	d Cost = 36,	,411 ,315
Chimney: Brick		Lump Sum Items:					

<sup>\*\*\*</sup> Information herein deemed reliable but not guaranteed\*\*\*

Grantor	Grantee		Sale Price	Sale Date	Inst. Type	Terms of Sale	Libe & Pa	-	rified	Prcnt. Trans.
SCOTT MAVIS	MUSKEGON COUNTY	TREASURER	0	03/31/2015	QC QC	QUIT- CLAIM	4053	/919 DEF	ED	0.0
Property Address		Class: 401	RESIDENTIAL	Zoning:	Bui	.lding Permit(s)		ate Number		tatus
2420 7TH ST			SKEGON HEIGHT	S SCHOOLS			11/0	2/2011 H-143-	11	
Owner's Name/Address			000 105 170							
MUSKEGON COUNTY TREASURER	<u> </u>	MAP #: 26-	2017 Est TCV	7	• 0 00					
173 E APPLE AVE STE 104 MUSKEGON MI 49442		X Improve				ates for Land Ta	ble 00013.ORANG	E		
MUSREGON MI 49442		Public				*	Factors *			
		Improve	ments			ontage Depth E			on	Value
Tax Description		Dirt Ro Gravel				75.00 125.00 1. nt Feet, 0.22 To		80 100 tal Est. Land	Value =	6,000 6,000
HT1749 BLK 125 LOT 17 & S Comments/Influences	7 7 7 101 10		ewer k  c  Lights d Utilities ound Utils.  phy of							
	02/02/2012	Landsca Swamp Wooded Pond Waterfr Ravine Wetland Flood F	ont	Year	Lar Valu EXEMF	ie Valu	e Value	Review	1	
			1992 REVIEWE		EXEME					EXEMPT
The Equalizer. Copyright		12/31/		2015	3,00					15,400S
Licensed To: County of Mu	ıskegon, Mıchıgan			2014	3,00	12,60	0 15,600	-	1	15,600s

<sup>\*\*\*</sup> 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
2 STY Yr Built Remodeled 1935 0 Condition for Age: Average Room List Basement 1st Floor	Eavestrough Insulation 0 Front Overhang 0 Other Overhang (4) Interior  Drywall Plaster Paneled Wood T&G  Trim & Decoration  Ex X Ord Min  Size of Closets  Lg X Ord Small  Doors: Solid X H.C. (5) Floors  Kitche: Other:	X Gas Wood Coal Elec. Wood Coal Steam  Forced Air w/o 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	Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum	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  Class: CD Effec. Age: 57 Floor Area: 1728 Total Base Cost: 104,229 Total Base New: 144,879 Total Depr Cost: 42,377  Total Depr Cost: 42,377  Total Total Story 120 WSEP (1 Story)  Contymult Total 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 Bsmnt Garage: Carport Area: Roof:
2nd Floor Bedrooms -	Other:  (6) Ceilings	No./Qual. of Fixtures	Stories Exterior 2 Story Siding	Foundation Rate Bsmnt-Adj Heat-Adj Mich Bsmnt. 95.93 -4.56 0.00	
X   Wood/Shingle   Aluminum/Vinyl   Brick	(7) Excavation	Ex.   X   Ord.   Min   No. of Elec. Outlets   Many   X   Ave.   Few	Other Additions/Adju (9) Basement Finish Basement Recreatio (13) Plumbing	stments Rate	Size Cost 864 9,720
Insulation	Basement: 864 S.F.	(13) Plumbing  Average Fixture(s)	3 Fixture Bath	1975.00	1 1,975
(2) Windows	Crawl: 0 S.F. Slab: 0 S.F.	2 3 Fixture Bath 2 Fixture Bath	Public Water	1025.00	1 1,025
Many Large X Avg. Small	Height to Joists: 0.0 (8) Basement	Softener, Auto Softener, Manual	Public Sewer (16) Porches WSEP (1 Story), St	1025.00 andard 30.34	1 1,025 120 3,641
Wood Sash Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement Double Glass Patio Doors Storms & Screens  (3) Roof  X Gable Gambrel Hip Mansard Flat Shed  X Asphalt Shingle  Chimney: Brick	Conc. Block Poured Conc. Stone Treated Wood Concrete Floor  (9) Basement Finish  864 Recreation SF Living SF Walkout Doors No Floor SF  (10) Floor Support  Joists: Unsupported Len: Cntr.Sup:	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:	(17) Garages Class:CD Exterior: Base Cost	Siding Foundation: 18 Inch (Unfinished) 19.75	400 7,900 Cost = 42,377

<sup>\*\*\*</sup> Information herein deemed reliable but not guaranteed\*\*\*

### PAPER   Date   Date   Type   4 Fage   Dy   Trans   Type   MISSTORY   COUNTY OF MUSKEON TREASY   0 04/27/2018   0 0 04/27/2018   0 04/27/2	Parcel Number: 61-26-185-	159-0008-00	Jurisdicti	on: 26 CITY (	F MUSKEGON	HTS	County: MUSKEGON		Printed on		11/29/2016
MUSERGON COUNTY TREASURES   DATE TOWESTHENTS LLC   300 10/13/2011   QC   QUIT-CLAIM   3897/738   DEED   100.1   SARDER ARTHORY R   MUSERGON COUNTY TREASURER   0/04/1/2011   QC   QUIT-CLAIM   3807/738   DEED   0.1   DEED   100.1   D	Grantor	Grantee					Terms of Sale			rified	Prcnt. Trans.
SAMIDER ANTHONN R MINEREAGN COUNTY TERASURER	PAYNE INVESTMENTS LLC	COUNTY OF MUSKE	ON TREASUE	0	04/29/2015	WD	TAX REVERTED	4053,	/965 DEF	D .	0.0
BLOCK DEVELOPMENT   L C	MUSKEGON COUNTY TREASURER	PAYNE INVESTMENT	S LLC	300	10/13/2011	QC	QUIT- CLAIM	3892,	/738 DEI	D .	100.0
Property Address	SANDER ANTHONY R	MUSKEGON COUNTY	TREASURER	0	04/01/2011	QC	QUIT- CLAIM	3880,	/758 DEF	D .	0.0
School: MUSKEGON HEIGHTS SCHOOLS   10/01/1999   B-346-99	BLOCK DEVELOPMENT L L C	SANDER ANTHONY F	ξ	47,849	01/31/2007	LC	LAND CONTRACT		DEF	ID	100.0
P.R.E. 08	Property Address	l .	Class: 703	3.EXEMPT COUNT	Y Zoning:	R1-RES Bui	.lding Permit(s)	Da	ate Number	St	 tatus
MAR #: 26-000-159-080	2529 RAY ST		School: M	JSKEGON HEIGHT	S SCHOOLS			10/01	/1999 B-346-	99	
April   Country   OF MUSKEGON TREASURER   1/3 E RPELE NVG STE 104   MUSKEGON MI 9442			P.R.E.	) %							
173 E APPLE AVE STE 104	Owner's Name/Address		MAP #: 26	-000-159-080							
MUSECON MI 49442   X   Improved   Vacant   Land Value Estimates for Land Table 00001,NORTHEAST		RER	1	2017 Est TCV	0 TCV/TFA	: 0.00					
Public   Improvements   Dirt Road   Gravel Road   Gravel Road   Stems of Steward Value   Steward Road   Steward Value   Stew			X Improve	ed Vacant	Land Va	lue Estim	ates for Land Tab	le 00001.NORTH	EAST		
MATER OFF 6/09 CONDEMNED: 9/20/2011   X   Paved Road   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   Value   Review   Other   Value   Review   Other   Value   Review   Other   Value   Calumbridge   Calum	Public Improv  ax Description Dirt F		oad	NORTHEA	ST	ontage Depth Fr 100.00 125.00 1.0	ont Depth Rat	30 100		8,000	
WATER OFF 6/09 CONDEMNED: 9/20/2011  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 Year Value Value Value Review Value Review Tother Value Value Value Review Tother Value Value Value Value Review Tother Value Value Value Value Review Tother Value Va											
X Mater 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 Flood											
Site  X Level Rolling Low High Landscaped Swamp Wooded Pond Waterfront Ravine Wetland Flood Plain  The Equalizer. Copyright (c) 1999 - 2009. Licensed To: County of Muskegon, Michigan  To County of Muskegon, Michigan  Site  X Level Rolling Low High Landscaped Swamp Wooded Pond Waterfront Ravine Wetland Flood Plain  Year Land Value Value Value Value Value Review Other Value  CEJ 08/30/1999 REVIEWED OCID 08/30/1999 REVIEWED AND OCID 08/2009 REVIEWED OCID 08/30/1999 REVI	X W X S X E X G X C S S		X Sewer X Electr: X Gas X Curb Street Standar	Lights							
Rolling Low High Landscaped Swamp Wooded Pond Waterfront Ravine Wetland Flood Plain  Year  Land Value Value Value Value Review Other Value  Who When What 2017 EXEMPT The Equalizer. Copyright (c) 1999 - 2009. Licensed To: County of Muskegon, Michigan  Rolling Low High Landscaped Swamp Wooded Pond Waterfront Ravine CEJ 08/30/1999 REVIEWED Rolling Low High Landscaped Swamp Wooded Pond Waterfront Ravine CEJ 08/30/1999 REVIEWED Rolling Low High Landscaped Swamp Wooded Pond Waterfront Ravine CEJ 08/30/1999 REVIEWED Rolling Low High Landscaped Swamp Wooded Pond Waterfront Ravine Wetland Value Value Value Review Other Value  EXEMPT EXEMPT EXEMPT EXEMPT EXEMPT EXEMPT EXEMPT Dolling Low High Landscaped Swamp Wooded Pond Waterfront Ravine Wetland Flood Plain Value Value Value Review Other Value Dolling Low High Landscaped Swamp Wooded Pond Waterfront Ravine Wetland Flood Plain Value Value Value Review Other Value Dolling Low High Landscaped Swamp Wooded Pond Waterfront Ravine Wetland Flood Plain Value Value Value Review Other Value Dolling Low High Landscaped Swamp Wooded Pond Waterfront Ravine Wetland Flood Plain Value Value Value Review Other Value Dolling Low High Landscaped Swamp Wooded Pond Waterfront Ravine Wetland Flood Plain Value Value Value Review Other Value Dolling Low High Landscaped Swamp Waterfront Ravine Wetland Flood Plain Value Value Value Review Other Value Dolling Low High Landscaped Swamp Waterfront Ravine Wetland Flood Plain Value Value Value Review Other Value Dolling Landscaped Swamp Value Value Review Other Value Landscaped Swamp Value Review Other Value Landscaped Swamp Value Review Other Value Landscaped Swamp Value Value Value Review Other Value Landscaped Swamp Value Value Review Other Value Landscaped Swamp Value Landscaped Swamp Value Review Other Value Landscaped Swamp Value Review Ot			Site	phy of							
Flood Plain  Flood			Rolling Low High Landsca Swamp Wooded Pond Waterfa	aped							
Who When What 2017 EXEMPT EXEMPT EXEMPT EXEMPT  The Equalizer. Copyright (c) 1999 - 2009. RJ 06/08/2009 REVIEWED Licensed To: County of Muskegon, Michigan					Year						
The Equalizer. Copyright (c) 1999 - 2009. Licensed To: County of Muskegon, Michigan CEJ 08/30/1999 REVIEWED 2016 EXEMPT EXEMPT EXEMPT EXEMPT EXEMPT EXEMPT EXEMPT 10,400		A Charles of the last	Who Mi	nen What	2017						
The Equalizer. Copyright (c) 1999 - 2009. RJ 06/08/2009 REVIEWED 2015 4,000 6,400 10,400 10,400		SALE SALE									
Licensed To: County of Muskegon, Michigan			RJ 06/08	/2009 REVIEWED							
	Licensed To: County of Mus	kegon, Michigan			2014		,				10,8008

<sup>\*\*\*</sup> 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 X Wood Frame Building Style:	Eavestrough Insulation 0 Front Overhang 0 Other Overhang (4) Interior  X Drywall Plaster Paneled Wood T&G	X Gas Wood Coal Elec. Steam Forced Air w/o Ducts X Forced Hot Water Electric Baseboard Elec. Ceil. Radiant Radiant (in-floor)	Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood	Interior 2 Story 2nd/Same Stack Two Sided Exterior 1 Story Exterior 2 Story Prefab 1 Story Prefab 2 Story	Year Built: Car Capacity: Class: Exterior: Brick Ven.: Stone Ven.: Common Wall: Foundation: Finished ?:
1 STY  Yr Built Remodeled 1925 0  Condition for Age: Average  Room List	Trim & Decoration  Ex   X   Ord   Min  Size of Closets  Lg   X   Ord   Small  Doors:   Solid   X   H.C.  (5) Floors	Electric Wall Heat Space Heater Wall/Floor Furnace Forced Heat & Cool Heat Pump No Heating/Cooling  Central Air Wood Furnace	Intercom Jacuzzi Tub Jacuzzi repl.Tub Oven Microwave Standard Range Self Clean Range Sauna	Raised Hearth Wood Stove Direct-Vented Gas  Class: D -10 Effec. Age: 55 Floor Area: 784 Total Base Cost: 43,740  CntyMult X 1.390	Auto. Doors: Mech. Doors: Area: % Good: Storage Area: No Conc. Floor: Bsmnt Garage:
Basement 1st Floor 2nd Floor Bedrooms	Kitchen: Vinyl Other: Softwood Other:	(12) Electric  100 Amps Service	Trash Compactor Central Vacuum Security System	Total Base New: 60,798 E.C.F. Total Depr Cost: 24,623 X 0.503 Estimated T.C.V: 12,385	Carport Area: Roof:
Bedrooms   (1) Exterior		No./Qual. of Fixtures    Ex.   X   Ord.   Min     No. of Elec. Outlets     Many   X   Ave.   Few     (13) Plumbing     Average Fixture(s)     1		912.00 912.00 andard 24.42	784 33,540 Size Cost  1 912 1 912 343 8,376 Cost = 24,623

<sup>\*\*\*</sup> Information herein deemed reliable but not guaranteed\*\*\*

Parcel Number: 61-26-185-1	49-0009-00	Jurisdicti	on: 26 CITY	OF MUSKEGON	HTS	County: MUSKEGON		Printed on		11/29/2016
Grantor	Grantee		Sale Price		Inst. Type	Terms of Sale	Libe & Pa		rified	Prcnt. Trans.
TATRY ZACHODNIE LLC	COUNTY OF MUSKEC	ON TREASUR	0	03/31/2015	QC	QUIT- CLAIM	4053	3/932 DEF	ED	0.0
MUSKEGON COUNTY TREASURER	TATRY ZACHODNIE	LLC	1,400	10/17/2012	QC	QUIT- CLAIM	3928	3/265 DEF	ED	0.0
CROSS JASPER R/ RAMONA MCE	MUSKEGON COUNTY	TREASURER	0	04/02/2012		FORECLOSURE	3914	1/5 DEI	ED	0.0
CROSS JR JASPER (	CROSS JASPER R/	RAMONA MCE	0	09/04/2000	QC	QUIT-CLAIM	3082	2/592 DEF	ED	0.0
Property Address				TY Zoning: 1	R1-RES Bu	ilding Permit(s)	D	ate Number	S	tatus
2533 REYNOLDS ST		School: M	USKEGON HEIGH	rs schools			07/2	2/1999 H-61-9	9	
			 0응							
Owner's Name/Address		1	-000-149-090							
COUNTY OF MUSKEGON TREASURE	ER		2017 Est TC	V O TCV/TFA	0.00					
173 E APPLE AVE STE 104		X Improv				mates for Land Tab	le 00001.NORTE	  EAST		
MUSKEGON MI 49442		Public		Edild Vd			Factors *	12101		
		Improve		Descrip	tion F	rontage Depth Fr		te %Adi. Reaso	on	Value
Tax Description		Dirt R	oad	NORTHEA	ST	50.00 125.00 1.0	000 1.0000	80 100		4,000
HT2299 BLK 149 LOT 9		Gravel		50 A	ctual Fro	ont Feet, 0.14 Tot	al Acres To	tal Est. Land	Value =	4,000
Comments/Influences		X Paved X								
HOUSE IN DISREPAIR, DEFERRE WATER OFF 9/2009	ED MAINTENANCE	Standa Underg	ic Lights rd Utilities round Utils.							
No.		Site  X Level Rollin Low High Landsc Swamp Wooded Pond Waterf Ravine Wetland	aped ront	Year	La	nd  Building	Assessed	l Board of	Tribunal/	/ Taxabl
		Flood			Val	ue Value	Value	Review		Valu
			hen Wha		EXEM		EXEMPT			EXEMP'
The Equalizer. Copyright (	(c) 1999 - 2009	CEJ 08/30	/1999 REVIEWE		EXEM					EXEMP'
Licensed To: County of Musk				2015	2,0		·			14,500
-				2014	2,0	00 14,300	16,300	)		16,300

<sup>\*\*\*</sup> 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  X Wood Frame  Building Style: 2 STY  Yr Built Remodeled 1920  Condition for Age: Average Room List  Basement 1st Floor 2nd Floor	Eavestrough Insulation 0 Front Overhang 0 Other Overhang (4) Interior  Drywall Plaster Paneled Wood T&G  Trim & Decoration  Ex X Ord Min Size of Closets  Lg X Ord Small Doors: Solid X H.C. (5) Floors  Kitchen: Other:	X Gas Wood Coal Elec. Steam  Forced Air w/o Ducts  X 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	Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub 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  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	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: Bsmnt Garage: Carport Area: Roof:
Bedrooms   (1) Exterior   X   Wood/Shingle   Aluminum/Vinyl   Brick   Insulation   (2) Windows   Many   X   Avg.   Few   Small   Wood Sash   Metal Sash   Vinyl Sash   Double Hung   Horiz. Slide   Casement   Double Glass   Patio Doors   Storms & Screens   (3) Roof   X   Gable   Hip   Mansard   Flat   Shed   X   Asphalt Shingle   Chimney: Brick   Chimney: Chimne	(6) Ceilings  (7) Excavation  Basement: 1251 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  (9) Basement Finish  Recreation SF Living SF Walkout Doors No Floor SF  (10) Floor Support  Joists: Unsupported Len: Cntr.Sup:	No./Qual. of Fixtures  Ex. X Ord. Min  No. of Elec. Outlets  Many X Ave. Few  (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 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:	Stories Exterior 2 Story Siding Other Additions/Adjust (13) Plumbing 3 Fixture Bath (14) Water/Sewer Public Water Public Sewer Phy/Ab.Phy/Func/Econ, ECF (NORTHEAST)	1975.00 1025.00 1025.00	1251 106,485 Size Cost 1 1,975 1 1,025 1 1,025 c.Cost = 48,387

<sup>\*\*\*</sup> Information herein deemed reliable but not guaranteed\*\*\*

Grantor	Grantee		Sale Price		Inst. Type	Terms of Sale	Liber & Page	Ver	ified	Prcnt. Trans.
LOERA ROBERT JR	COUNTY OF MUSKEO	ON TREASUE		02/09/201		FORECLOSURE	4053/999		:D	0.0
LARABEE JEFF	LOERA ROBERT JR	7011 111211001		03/23/201		WARRANTY DEED	3907/816		'IDAVIT	100.0
211111111111111111111111111111111111111	Bolier Roblin on			10/01/199		WARRANTY DEED	1588:005			0.0
			· · · · · · · · · · · · · · · · · · ·							
Property Address		Class: 703	3.EXEMPT COUN	TY Zoning:	Bu	ilding Permit(s)	Date	Number	S	tatus
2633 WOOD ST		School: M	JSKEGON HEIGH	TS SCHOOLS			10/06/20	09 B-236-	09	
		P.R.E. (	) %							
Owner's Name/Address		MAP #: 26-	-037-006-130							
COUNTY OF MUSKEGON TREA			2017 Est TO	V 0 TCV/TF	A: 0.00					
173 E APPLE AVE STE 104 MUSKEGON MI 49442		X Improve	ed Vacant	Land V	alue Esti	nates for Land Tab	le 00001.NORTHEAST	1	ı	
		Public				*	Factors *			
		Improve					ont Depth Rate %		on	Value
Tax Description		Dirt Ro		NORTHE 50		50.00 125.00 1.0 ont Feet, 0.14 Tot		Est. Land	Value =	4,000 4,000
HT5395 LAWSON PARK BLK	6 LOT 13	Gravel Paved F							- Varue	
Comments/Influences		Storm S	Sewer							
FIRE DAMAGE 2014		Sidewal Water Sewer	_ K							
		Electri	C							
		Gas								
		Curb Street	Lights							
		Standar	d Utilities							
		Undergr	round Utils.							
An and the second		Topogra Site	phy of							
一年。 对李朝		Level								
		Rolling	I							
		High								
		Landsca	aped							
		Swamp Wooded								
		Pond								
		Waterfr	ront							
The second of th		Wetland	3							
		Flood F		Year	La	1	Assessed	Board of		
	Service of the servic			0017	Val		Value	Review	Other	
	0   14   5   5   6   11   22   44   5		nen Wha		EXEM		EXEMPT			EXEMPI
The Equalizer. Copyrig	ht. (c) 1999 - 2009	RLJ 07/30	/1990 REVIEWE /2014 FIFTD F	D 2016	EXEM		EXEMPT			EXEMPT
Time and The Country of	Muskagan Michigan	100 04/29/	COTA LIUTIN L	2015	2,0	6,800	8,800			8,8008
Licensed To: County of	Muskegon, Michigan			2014	2,0	00 8,200	10,200			10,200s

<sup>\*\*\*</sup> 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  X Wood Frame  Building Style: 1 STY  Yr Built Remodeled	Eavestrough Insulation 0 Front Overhang 0 Other Overhang (4) Interior  Drywall Plaster Paneled Wood T&G  Trim & Decoration  Ex X Ord Min	X Gas Wood Coal Elec. Wood Coal Steam  Forced Air w/o Ducts Forced Hot Water Electric Baseboard Elec. Ceil. Radiant Radiant (in-floor) Electric Wall Heat Space Heater Wall/Floor Furnace	Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi repl.Tub	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	Year Built: Car Capacity: Class: Exterior: Brick Ven.: Stone Ven.: Common Wall: Foundation: Finished ?: Auto. Doors: Mech. Doors: Area:
1930 0 Condition for Age: Average Room List Basement	Size of Closets  Lg X Ord Small  Doors: Solid X H.C.  (5) Floors  Kitchen:	Forced Heat & Cool Heat Pump No Heating/Cooling  Central Air Wood Furnace	Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor	Class: D Effec. Age: 55 Floor Area: 864 Total Base Cost: 41,896 Total Base New: 58,236  E.C.F.	% Good: Storage Area: No Conc. Floor: Bsmnt Garage:
1st Floor 2nd Floor Bedrooms	Other: Other:	(12) Electric  100 Amps Service	Central Vacuum Security System	Total Depr Cost: 26,206 X 0.503 Estimated T.C.V: 13,182	Carport Area: Roof:
Bedrooms   (1) Exterior   X   Wood/Shingle   Aluminum/Vinyl   Brick   Insulation   (2) Windows   Many   X   Avg.   Few   Small   Wood Sash   Metal Sash   Vinyl Sash   Double Hung   Horiz. Slide   Casement   Double Glass   Patio Doors   Storms & Screens   (3) Roof   X   Gable   Hip   Mansard   Flat   Shed   X   Asphalt Shingle	(6) Ceilings  (7) Excavation  Basement: 864 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  (9) Basement Finish  Recreation SF Living SF Walkout Doors No Floor SF  (10) Floor Support  Joists: Unsupported Len: Cntr.Sup:	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	Stories Exterior  1 Story Siding Other Additions/Adju (14) Water/Sewer Public Water Public Sewer Phy/Ab.Phy/Func/Econ ECF (NORTHEAST)	912.00 912.00	864 40,072 Size Cost  1 912 1 912 2.Cost = 26,206
Chimney: Brick		Lump Sum Items:			

<sup>\*\*\*</sup> Information herein deemed reliable but not guaranteed\*\*\*

Grantor	Grantee		Sale		Inst.	Terms of Sale	Liber	-	ified	Prent.
	1140 GOVERNAGETVG	T110	Price		Type	011777 07.3.734	& Page	Ву		Trans.
HARBOUR PORTFOLIO VII LP	AMO CONTRACTING			02/09/201		QUIT- CLAIM	4039/361			100.0
AMO CONTRACTING INC	COUNTY OF MUSKEG			02/09/201		FORECLOSURE	4053/997			0.0
FANNIE MAE	HARBOUR PORTFOLI	O VII LP		08/21/201		COVENANT DEED		DEE		100.0
SHERIFF	BANK OF AMERICA			22,352 02/24/2012 SI		SHERIFF DEED	3904/423			0.0
Property Address			3.EXEMPT COUN		Bu	ilding Permit(s)	Date	Number		tus
2641 HOWDEN ST			USKEGON HEIGH	TS SCHOOLS			02/22/20	06 B-39-06	5	
Owner's Name/Address			0 응 							
<u> </u>	DED	MAP #: 26	-037-004-115							
COUNTY OF MUSKEGON TREASU: 173 E APPLE AVE STE 104	KEK		2017 Est TC							
MUSKEGON MI 49442		X Improv	ed Vacant	Land V	alue Estim	nates for Land Tabl	e 00001.NORTHEAST	1		
		Public					actors *			_
		Improve		Descri		contage Depth Fro 35.00 125.00 1.00	ont Depth Rate % 100 1.0000 80		n	Value 2,800
Tax Description		Dirt R				ont Feet, 0.10 Tota		Est. Land	Value =	2,800
HT5362 LAWSON PARK BLK 4 11 & S 10 FT OF LOT 12 Comments/Influences	N 25 FT OF LOT	Standa Underg	Sewer lk ic Lights rd Utilities round Utils. aphy of							
		Wetland Flood	d	Year	La: Val:	1 21	Assessed Value	Board of Review	Tribunal/ Other	Taxable Value
	The same and a second	Who W	hen Wha	t 2017	EXEM	PT EXEMPT	EXEMPT			EXEMPT
1513	12 13 6 0 7 - 4 1 1 3 4 1 2 1	VV110 VV								
16.0			/1990 REVIEWE	D 2016	EXEM	PT EXEMPT	EXEMPT			EXEMPT
The Equalizer. Copyright Licensed To: County of Mu	(c) 1999 - 2009.			D 2016 2015	EXEMI		EXEMPT 12,300			EXEMPT 12,300s

<sup>\*\*\*</sup> Information herein deemed reliable but not guaranteed\*\*\*

<sup>\*\*\*</sup> Information herein deemed reliable but not guaranteed\*\*\*

Parcel Number: 61-26-540	-006-0006-00			OF MUSKEGO	N HTS	Coun	nty: MUSKEGON		Printed on		11/29/2016
Grantor	Grantee		Sale Price	Sale Date	Inst. Type	Te	rms of Sale	Libe & Pa	-	rified	Prcnt. Trans.
BLACK LION PROPERTIES	COUNTY OF MUSKEG	ON TREASU	0	02/09/201	.5 JUD	FOR	RECLOSURE	4053	3/998 DE	ED	0.0
GOINS CREIGHTON	BLACK LION PROPE	RTIES	0	11/24/201	.0 WD	WAI	RRANTY DEED	3863	3/468 DE	ED	0.0
ALGER JERALD/LYNDA	GOINS CREIGHTON		56,000	03/22/200	7 WD	WAI	RRANTY DEED	3735	5/630 DE	ED	100.0
SHAFER, CHARLES & NELLIE	ALGER, JERALD &	LYNDA	9,000	07/18/199	7 WD	WAI	RRANTY DEED	201	./992 DEI	ED	0.0
Property Address	,		3.EXEMPT COUNT				ng Permit(s)		ate Number		tatus
2648 RIORDAN ST			USKEGON HEIGHT								
			O응								
Owner's Name/Address			-037-006-060								
COUNTY OF MUSKEGON TREASU	RER	11111    . 20		7 O TCV/TE	0 TCV/TFA: 0.00						
173 E APPLE AVE STE 104		X Improv		- '		matos	for Land Tabl	Lo 00001 NORTI	IEV CL		
MUSKEGON MI 49442		Public		Land v	alue Esti	Liliates		Factors *	ILAS I		
		Improv		Descri	ption F	ronta	ge Depth Fro		ite %Adi. Reas	on	Value
Mary December 2		Dirt R		NORTHE			00 125.00 1.00		80 100		3,360
Tax Description	2 40 55 05 505 6	Gravel		42	Actual Fr	cont F	eet, 0.12 Tota	al Acres To	tal Est. Land	Value =	3,360
HT5388 LAWSON PARK BLK 6 Comments/Influences	S 42 FT OF LOT 6	Paved									
		Storm Sidewa									
		Water									
		Sewer									
		Electr Gas	1C								
		Curb									
			Lights								
			rd Utilities round Utils.								
		Site	aphy of								
		Level		_							
		Rollin	g								
		Low									
		High Landsc	aned								
		Swamp	арса								
		Wooded									
		Pond Waterf	ront								
	- The Table 1	Ravine									
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Wetlan		Voon	т.		Duilding	7.00000	Doomd of	Tribunal/	Taxable
	and the same of	Flood	Plain	Year		and lue	Building Value	Assessed Value			
The second second		Who W	hen What	2017	EXE		EXEMPT	EXEMP	1		EXEMPT
			/1990 REVIEWED		EXE		EXEMPT	EXEMP			EXEMPT
The Equalizer. Copyright	(c) 1999 - 2009.	RJ 02/07	/2007 REVIEWED	2015		700	9,300	11,000			11,000S
Licensed To: County of Mu				2013		700	11,300	13,000			13,0005
				2014	<u></u> ⊥,	100	11,300	13,000	'		13,0008

<sup>\*\*\*</sup> 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  X Wood Frame  Building Style: 1 STY  Yr Built Remodeled 1925  Condition for Age: Average	Eavestrough Insulation 0 Front Overhang 0 Other Overhang (4) Interior    Drywall   Plaster   Wood T&G   Trim & Decoration   Ex   X   Ord   Min   Size of Closets   Lg   X   Ord   Small   Doors:   Solid   X   H.C.	X Gas Oil Elec. Wood Coal Steam Forced Air w/o 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	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	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  Class: CD Effec. Age: 55	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
Room List Basement	(5) Floors  Kitchen: Other:	Central Air Wood Furnace (12) Electric	Self Clean Range Sauna Trash Compactor	Floor Area: 912	Bsmnt Garage: Carport Area:
1st Floor 2nd Floor Bedrooms	Other:  (6) Ceilings	100 Amps Service No./Qual. of Fixtures	Central Vacuum Security System Stories Exterior	Estimated T.C.V: 18,118  Foundation Rate Bsmnt-Adj Heat-Ad	Roof:
(1) Exterior  X Wood/Shingle Aluminum/Vinyl Brick  Insulation  (2) Windows  Many X Avg. X Avg. Few Small  Wood Sash Metal Sash Vinyl Sash Double Hung Horiz. Slide	(7) Excavation  Basement: 912 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	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	Base Cost	1025.00 1025.00 Siding Foundation: 18 Inch (Unfinished) 24.80	912 51,072 Size Cost  1 1,025 1 1,025  1 80 4,464  Cost = 36,020 1 1 = 18,118
Casement Double Glass Patio Doors Storms & Screens  (3) Roof  X Gable Hip Hip Flat Shed  X Asphalt Shingle  Chimney: Brick	(9) Basement Finish  Recreation SF Living SF Walkout Doors No Floor SF  (10) Floor Support  Joists: Unsupported Len: Cntr.Sup:	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:			

<sup>\*\*\*</sup> Information herein deemed reliable but not guaranteed\*\*\*

2014

1,500

9.900

11,400

11,400s

<sup>\*\*\*</sup> Information herein deemed reliable but not guaranteed\*\*\*

Residential Building 1 of 1 Parcel Number: 61-26-185-218-0003-00 Printed on 11/29/2016 Building Type (3) Roof (cont.) (11) Heating/Cooling (15) Built-ins (15) Fireplaces (16) Porches/Decks (17) Garage X Single Family X Gas Interior 1 Story | Area Type Eavestrough Oil Elec. Appliance Allow. Year Built: Mobile Home Insulation Mood Coal Steam Cook Top Interior 2 Story Car Capacity: Town Home 0 Front Overhang Dishwasher 2nd/Same Stack Class: Forced Air w/o Ducts Duplex 0 Other Overhang Garbage Disposal Two Sided Exterior: X Forced Air w/ Ducts Bath Heater A-Frame Exterior 1 Story Brick Ven.: (4) Interior Forced Hot Water Vent Fan Exterior 2 Story Stone Ven.: X Wood Frame Electric Baseboard Drywall Plaster Hot Tub Prefab 1 Story Common Wall: Elec. Ceil. Radiant Paneled Wood T&G Unvented Hood Prefab 2 Story Foundation: Radiant (in-floor) Vented Hood Heat Circulator Finished ?: Building Style: Trim & Decoration Electric Wall Heat Raised Hearth Intercom Auto. Doors: 1 STY Space Heater Ex X Ord Min Jacuzzi Tub Wood Stove Mech. Doors: Yr Built Remodeled Wall/Floor Furnace Direct-Vented Gas Jacuzzi repl.Tub Area: Size of Closets 1945 Forced Heat & Cool % Good: Oven Lg X Ord Small Heat Pump Class: D Condition for Age: Microwave Storage Area: No Heating/Cooling Effec. Age: 57 Solid X H.C. Doors: Standard Range No Conc. Floor: Average Floor Area: 1488 CntvMult Central Air Self Clean Range (5) Floors Room List X 1.390 Bsmnt Garage: Total Base Cost: 71,252 Wood Furnace Sauna Total Base New: 99,041 E.C.F. Kitchen: Basement. Trash Compactor x 0.478 Carport Area: (12) Electric Total Depr Cost: 31,198 Other: 1st Floor Central Vacuum Roof: Estimated T.C.V: 14,913 Other: 100 Amps Service 2nd Floor Security System Bedrooms No./Oual. of Fixtures (6) Ceilings Stories Exterior Foundation Rate Bsmnt-Adj Heat-Adj Size Cost (1) Exterior Story Siding Basement. 44.89 0.00 0.66 1488 67.778 X Ord. Other Additions/Adjustments Rate Size Cost X Wood/Shingle No. of Elec. Outlets (13) Plumbing Aluminum/Vinvl 3 Fixture Bath 1650.00 1,650 Manv | X Ave. Few Brick (7) Excavation (14) Water/Sewer (13) Plumbing Basement: 1488 S.F. Public Water 912.00 912 Insulation Average Fixture(s) Public Sewer 912.00 912 Crawl: 0 S.F. (2) Windows 2 3 Fixture Bath Slab: 0 S.F. Phy/Ab.Phy/Func/Econ/Comb.%Good= 45/100/100/ 70/31.5, Depr.Cost = 31.198 2 Fixture Bath Manv Large Height to Joists: 0.0 Economic Depreciation because of: CODE-REHAB Softener, Auto X Ava. X Ava. ECF (DK GREEN)  $0.478 \Rightarrow TCV \text{ of Bldg: } 1 =$ 14,913 (8) Basement Softener, Manual Small Few Solar Water Heat Conc. Block Wood Sash Poured Conc. No Plumbing Metal Sash Stone Extra Toilet Vinvl Sash Treated Wood Extra Sink Double Hung Separate Shower Concrete Floor Horiz. Slide Ceramic Tile Floor (9) Basement Finish Casement. Ceramic Tile Wains Double Glass Recreation Ceramic Tub Alcove Patio Doors Living SF Vent. Fan Storms & Screens Walkout Doors (14) Water/Sewer No Floor (3) Roof 1 Public Water X Gable (10) Floor Support Gambrel 1 Public Sewer Hip Mansard Joists: Water Well Flat Shed Unsupported Len: 1000 Gal Septic Cntr.Sup: 2000 Gal Septic X Asphalt Shingle

Chimney: Brick

Lump Sum Items:

<sup>\*\*\*</sup> Information herein deemed reliable but not guaranteed\*\*\*

DEAD NAME	Grantor	Grantee		Sale	Sale	Inst.	Terms of Sale	Libe	-	ified	Prcnt.
CRANKER KELLY				Price	Date	Type		& Pa	ige By		Trans.
### REPLE RICKY A/JEANNE R UGANSKT KELLY 27,000 07/01/2004 UD WARRANTY DEED 3616/42 DEED 550 WEITH RANDY WITH RICKY K/TEANNE R 25,000 11/26/2003 [0	HSBC BANK	COUNTY OF MUSKEG	ON TREASU	0	02/09/2015	JUD	FORECLOSURE	4054	1/6 DEE	D	0.0
NOTEL RANDY   NEITH RICRY A/LEANNE R   25,000   11/26/2003   QC   QUIT-CLAIM   3579/794   DED	UGANSKI KELLY	CRABTREE LORINE		52,000	02/04/2005	WD WD	WARRANTY DEED	3645	5/183 DEE	D	100.0
Property Address	WEIHL RICKY A/LEANNE R	UGANSKI KELLY		27,000	07/01/2004	ł WD	WARRANTY DEED	3616	5/42 DEF	D	100.0
School: MUSKEGON HEIGHTS SCHOOLS	WEIHL RANDY	WEIHL RICKY A/LE				1	·-	3579	784 DEF	D	100.0
P.R.E. 05	Property Address		Class: 70	3.EXEMPT COUNT	Y Zoning:	R1-RES Bui	lding Permit(s)	D	ate Number	St	atus
Owner's Name/Address	2827 RIORDAN ST		School: M	USKEGON HEIGHT	'S SCHOOLS						
COUNTY OF MUSKEGON TREASURER   2017 Bet TCV 0 TCV/TFA: 0.09			P.R.E.	0%							
173 E APPLE AVE STE 104   Vacant   Land Value Sesimates for Land Table 00007. SKY BLUE   Value   Val	·		MAP #: 26	-000-249-200							
MISKEGON MI 49442		ER		2017 Est TCV	0 TCV/TFA	: 0.00					
Public	I .		X Improv	ed Vacant	Land Va	lue Estim	ates for Land Tab	le 00007. SKY	BLUE	'	
Dirt Road Gravel Road Gravel Road Storm Sever Stide Water Sewer Stidewalk Water Sewer Stidewalk Standard Utilities Underground Utils.   Topography of Site Wooded Fond Waterfront Ravine Water Standard Utiling Lond Waterfront Ravine Water Standard Utiling Lond Waterfront Ravine Water Standard Utilities Condition Water Standard Utilities Condition Water Standard Utilities			Public				*	Factors *			
Tax Description    Tax Description   Cravel Road   Road   Paved Road			Improv	ements						on	Value
HT3839 BLK 249 LOT 20 MUSKEGON TO TO MUSKEGON TO THE EQUALITY CO'S ANNEX #1  Comments/Influences  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.  Topography of Site X Level Rolling Low High Landscaped Swamp Wooded Pond Waterfront Ravine Wetland Flood Plain Year Land Value Value Review Other The Egualizer. Copyright (c) 1999 - 2009.  ROB 12/31/2012 REVIEWED 2015 1,400 11,200 12,600 11	Tax Description									Value =	2,800 2,800
Comments/Influences  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 Fond Waterfront Ravine Wetland Flood Plain Flood Pl		EGON	X Paved	Road	10 1				- Land		
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 Flod Plain  Who When What 2017 EXEMPT EXEMPT EXEMPT Licensed To: County of Muskegon, Michigan Licensed To: County of Muskegon, Michigan Licensed To: County of Muskegon, Michigan  X Water X Sewer X Electric X Gas X Curb X Level Rolling Low High Landscaped Swamp Wooded Pond Waterfront Ravine Wetland Flod Plain  Year Land Value Value Value Review Other  CEJ 12/31/1998 REVIEWED CEJ 12/31/2012 REVIEWED 2016 EXEMPT EXEMPT EXEMPT ROB 12/31/2012 REVIEWED 2015 1,400 11,200 12,600											
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  Wetland Flood Plain  The Equalizer. Copyright (c) 1999 - 2009. Licensed To: County of Muskegon, Michigan  The Equalizer County of Muskegon, Michigan  X Level Rolling Low High Land Building Assessed Board of Tribunal/ Value Value Value Review Other  The Equalizer Copyright (c) 1999 - 2009. Licensed To: County of Muskegon, Michigan  Topography of Site  X Level Rolling Low How High Land Building Assessed Board of Tribunal/ Value Value Value Review Other  The Equalizer Exempt Exempt Exempt Low Rob 12/31/2012 REVIEWED Low											
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  Who When What 2017 EXEMPT EXEMPT EXEMPT The Equalizer. Copyright (c) 1999 - 2009. The Equalizer Copyright (c) 1999 - 2009. The Equalizer Copyright (c) 1999 - 2009. The Equalizer Copyright (c) 1999 - 2009. Rob 12/31/2012 REVIEWED 2016 EXEMPT EXEMPT EXEMPT I EXEMPT Rob 12/31/2012 REVIEWED 2015 1,400 11,200 12,600											
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 Value Value Value Review Other  The Equalizer. Copyright (c) 1999 - 2009. Licensed To: County of Muskegon, Michigan  ROB 12/31/2012 REVIEWED  ROB 12/31/2012 REVIEWED  2015  1,400  11,200  21,600				10							
Standard Ütilities Underground Utils.  Topography of Site  X Level Rolling Low High Landscaped Swamp Wooded Pond Waterfront Ravine Wetland Flood Plain  Year Land Value Value Value Value Review Tibunal/ Tibunal/ Tibunal/ The Equalizer. Copyright (c) 1999 - 2009. Licensed To: County of Muskegon, Michigan			X Curb								
Underground Utils.  Topography of Site  X Level Rolling Low High Landscaped Swamp Wooded Fond Waterfront Ravine Wetland Flood Plain  Who When What 2017 EXEMPT EXEMPT EXEMPT CEJ 12/31/1998 REVIEWED CEJ 12/31/2012 REVIEWED ROB 12/31/2012 REVIEWED 2015 1,400 11,200 12,600				_							
Site  X Level Rolling Low High Landscaped Swamp Wooded Pond Waterfront Ravine Wetland Flood Plain  The Equalizer. Copyright (c) 1999 - 2009. Licensed To: County of Muskegon, Michigan  Low High Landscaped Swamp Wooded Pond Waterfront Ravine Wetland Flood Plain  Year Land Value Value Value Value Value Review Other  Incepted To: County of Muskegon, Michigan  Licensed To: County of Muskegon, Michigan  X Level Rolling X Level Rolling Low High Landscaped Swamp Wooded Pond Value Value Value Value Value Review Other  Incepted To: County of Muskegon, Michigan  Incepted To: County of Mus											
X Level Rolling Low High Landscaped Swamp Wooded Pond Waterfront Ravine Wetland Flood Plain  Year  Land Value  Year  Land Value  Value  Value  Value  Review  Other  The Equalizer. Copyright (c) 1999 - 2009. Licensed To: County of Muskegon, Michigan  X Level Rolling Low High Landscaped Swamp Wooded Pond Waterfront Ravine Wetland Flood Plain  Year  Land Value Value Value Review  Tribunal/ Other  The Equalizer. Copyright (c) 1999 - 2009. Licensed To: County of Muskegon, Michigan  X Level Rolling Low High Landscaped Swamp Wooded Pond Waterfront Ravine Wetland Flood Plain  Year  Land Value Value Value Review Tribunal/ Other  The Equalizer. Copyright (c) 1999 - 2009. Licensed To: County of Muskegon, Michigan			1	aphy of							
Rolling Low High Landscaped Swamp Wooded Pond Waterfront Ravine Wetland Flood Plain  Who When What 2017 EXEMPT EXEMPT The Equalizer. Copyright (c) 1999 - 2009. Licensed To: County of Muskegon, Michigan  Rolling Low High Landscaped Swamp Wooded Pond Waterfront Ravine Wetland Flood Plain  Year Land Value Value Value Value Review Other  CEJ 12/31/1998 REVIEWED ROB 12/31/2012 REVIEWED 2016 EXEMPT EXEMPT EXEMPT EXEMPT INTERIOR TO TRIBUNAL ASSESSED Review Other  The Equalizer. Copyright (c) 1999 - 2009. Licensed To: County of Muskegon, Michigan											
High Landscaped Swamp Wooded Pond Waterfront Ravine Wetland Flood Plain  The Equalizer. Copyright (c) 1999 - 2009. Licensed To: County of Muskegon, Michigan  High Landscaped Swamp Wooded Pond Waterfront Ravine Wetland Flood Plain  Year Land Building Assessed Board of Tribunal/ To Value Value Value Review Other  TEXEMPT EXEMPT EXEMPT EXEMPT IN THE EQUALIZED PORT OF THE EXEMPT TO	W.			a							
Landscaped Swamp Wooded Pond Waterfront Ravine Wetland Flood Plain  Year Land Building Assessed Board of Tribunal/ Toucher Value Value Value Value Review Other  The Equalizer. Copyright (c) 1999 - 2009. Licensed To: County of Muskegon, Michigan  Landscaped Swamp Wooded Pond Waterfront Ravine Wetland Flood Plain  Year Land Building Assessed Board of Tribunal/ Toucher Value Value Value Review Other  Other  Licensed To: County of Muskegon, Michigan  ROB 12/31/2012 REVIEWED 2016 EXEMPT EXEMPT EXEMPT IN 1,200 12,600 IN 1,200											
Swamp Wooded Pond Waterfront Ravine Wetland Flood Plain  Year Land Value Value Review Other  The Equalizer. Copyright (c) 1999 - 2009. Licensed To: County of Muskegon, Michigan  Swamp Wooded Pond Waterfront Ravine Wetland Flood Plain  Year Land Value Value Value Review Other  To Discussion To Discuss To Discussion To Discu			1 1 2	anad							
Wooded Pond Waterfront Ravine Wetland Flood Plain  Year Land Building Assessed Board of Tribunal/ Toucher Value Value Value Review Other  The Equalizer. Copyright (c) 1999 - 2009. Licensed To: County of Muskegon, Michigan  Wooded Pond Waterfront Ravine Wetland Flood Plain  Year Land Building Assessed Board of Tribunal/ Toucher Value Value Review Other  Year Land Building Assessed Board of Tribunal/ Toucher Value Value Review Other  Year Land Building Assessed Board of Tribunal/ Toucher Value Value Review Other  10				aped							
Waterfront Ravine Wetland Flood Plain  Year  Land Value  Value  Value  Value  Value  Value  Review  Other  The Equalizer. Copyright (c) 1999 - 2009. Licensed To: County of Muskegon, Michigan  Waterfront Ravine Wetland Flood Plain  Year  Land Value  Value  Value  Value  Value  Value  Value  EXEMPT  EXEMPT  EXEMPT  EXEMPT  EXEMPT  Total County of Muskegon, Michigan  ROB 12/31/2012 REVIEWED  2015  1,400  11,200  12,600	THE RESERVE OF THE PARTY OF THE		Wooded								
Ravine Wetland Flood Plain  Year  Land Value  Value  Value  Value  Value  Review  Other  The Equalizer. Copyright (c) 1999 - 2009. Licensed To: County of Muskegon, Michigan  Ravine Wetland Flood Plain  Year  Land Building Assessed Board of Tribunal/ Value  Value  Value  EXEMPT  EXEMPT  EXEMPT  EXEMPT  EXEMPT  EXEMPT  To Exempt  Solution of Muskegon, Michigan  The Equalizer. Copyright (c) 1999 - 2009. Licensed To: County of Muskegon, Michigan  The Equalizer of Muskegon, Michigan  Ravine Wetland  Year  Land Building Assessed Board of Tribunal/ Value  EXEMPT  EXEMPT  EXEMPT  EXEMPT  EXEMPT  Solution of Muskegon, Michigan  11,200  12,600											
Flood Plain  Flood Plain  Flood Plain  Year  Land Value  Value  Value  Value  Value  Value  Review  Other  The Equalizer. Copyright (c) 1999 - 2009. Licensed To: County of Muskegon, Michigan											
Value   Valu			Wetlan	d							
Who When What 2017 EXEMPT EXEMPT EXEMPT  CEJ 12/31/1998 REVIEWED 2016 EXEMPT EXEMPT EXEMPT  The Equalizer. Copyright (c) 1999 - 2009. Licensed To: County of Muskegon, Michigan  ROB 12/31/2012 REVIEWED 2015 1,400 11,200 12,600 1.			Flood	Plain	rear		1				Taxable Value
The Equalizer. Copyright (c) 1999 - 2009. Licensed To: County of Muskegon, Michigan  CEJ 12/31/1998 REVIEWED ROB 12/31/2012 REVIEWED 2016 EXEMPT EXEMPT EXEMPT 2015 1,400 11,200 12,600			Mp o w	ihen What	2017					2 23302	EXEMPT
The Equalizer. Copyright (c) 1999 - 2009. ROB 12/31/2012 REVIEWED 2015 1,400 11,200 12,600	E The second										EXEMPT
Licensed To: County of Muskegon, Michigan											11,147C
	Licensed To: County of Mus	kegon, Michigan			2010		·				10,972C

<sup>\*\*\*</sup> 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
Single Family Mobile Home Town Home X Duplex A-Frame X Wood Frame	Eavestrough Insulation 0 Front Overhang 0 Other Overhang (4) Interior Drywall Plaster	X Gas Oil Elec. Wood Coal Steam  Forced Air w/o Ducts Forced Hot Water Electric Baseboard	Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub	Interior 1 Story Interior 2 Story 2nd/Same Stack Two Sided Exterior 1 Story Exterior 2 Story Prefab 1 Story	Area Type  32 WGEP (1 Story) 150 Treated Wood	Year Built: 1930 Car Capacity: Class: CD Exterior: Siding Brick Ven.: 0 Stone Ven.: 0 Common Wall: Detache
Building Style: 2 STY  Yr Built Remodeled 1930  Condition for Age: Average  Room List  Basement	Paneled Wood T&G  Trim & Decoration  Ex X Ord Min  Size of Closets  Lg X Ord Small  Doors: Solid X H.C.  (5) Floors  Kitchen:	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	Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi repl.Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor	Prefab 1 Story Prefab 2 Story Heat Circulator Raised Hearth Wood Stove Direct-Vented Gas  Class: CD Effec. Age: 55 Floor Area: 800 Total Base Cost: 106 Total Base New: 147 Total Depr Cost: 51,	CntyMult ,252 X 1.390 ,690 E.C.F.	Foundation: 18 Inch Finished ?: Auto. Doors: 0 Mech. Doors: 0 Area: 480 % Good: 20 Storage Area: 0 No Conc. Floor: 0  Bsmnt Garage: Carport Area:
1st Floor 2nd Floor	Other: Other:	100 Amps Service	Central Vacuum Security System	Estimated T.C.V: 24,		Roof:
Bedrooms   (1) Exterior   X   Wood/Shingle   Aluminum/Vinyl   Brick   Insulation   (2) Windows   X   Avg.   X   Avg.   Small   Wood Sash   Metal Sash   Vinyl Sash   Double Hung   Horiz. Slide   Casement   Double Glass   Patio Doors   Storms & Screens   (3)   Roof   X   Gable   Hip   Mansard   Shed   X   Asphalt Shingle   Chimney: Brick   Single   Chimney: Brick   Chimney: Brick   Chimney: Brick   Chimney: Brick   Chimney: Brick   Chimney: Chimney   Chimney: Chimney   Ch		No./Qual. of Fixtures    Ex.   X   Ord.   Min     No. of Elec. Outlets     Many   X   Ave.   Few     (13) Plumbing     Average Fixture(s)     1	Separately Depreciat (17) Garages Class:CD Exterior: Base Cost County Multiplier =	Basement 95.0 Slab 95.0, (@6% more) Bas stments  andard ard /Comb.%Good= 45/ 85/1 ed Items: Siding Foundation: 1  1.39 => /Comb.%Good= 20/ 85/1	0 -8.99 0.00 e cost of Exterior of Rate  1025.00 1025.00 73.37 7.20 00/100/38.3, Depi	364 34,580 36 3,096 20 31 3,096 31 3,096 32 4,696 32 4,696 32 4,696 32 4,696 32 4,696 33 4,696 34 4,696 35 4,696 36 5,160 37 4,202 38 4,696 39 4,286 49 6,205 4,129 40 6,205 51,331

<sup>\*\*\*</sup> Information herein deemed reliable but not guaranteed\*\*\*

<sup>\*\*\*</sup> 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  X Wood Frame  Building Style: 1 1/4 STY  Yr Built Remodeled 1939 0  Condition for Age: Average Room List  Basement 1st Floor 2nd Floor Bedrooms  (1) Exterior  X Wood/Shingle Aluminum/Vinyl Brick Insulation  (2) Windows  Many Large Avg. X Avg. Few Small  Wood Sash Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement Double Glass Patio Doors Storms & Screens  (3) Roof  X Gable Gambrel Hip Mansard Shed X Asphalt Shingle  Chimney: Brick	Eavestrough Insulation 0 Front Overhang 0 Other Overhang (4) Interior    Drywall   Plaster   Wood T&G   Trim & Decoration   Ex   X   Ord   Min     Size of Closets   Lg   X   Ord   Small     Doors:   Solid   X   H.C. (5) Floors   Kitchen: Other:   Other:   Other:     Other:   Other:   Other:   Other:     (6) Ceilings   Os.F.   Height to Joists:   O.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	X Gas   Oil   Elec. Steam   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   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   2 Fixture Bath   Softener, Auto   Softener, Manual   Solar Water Heat   No Plumbing   Extra Toilet   Extra Sink   Separate Shower   Ceramic Tile Wains   Ceramic Tile Wains   Ceramic Tile Wains   Ceramic Tub Alcove   Vent Fan   (14) Water/Sewer   1 Public Sewer   Water Well   1000 Gal Septic   2000 Gal Septic   Lump Sum Items:	Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi Tub Jacuzzi repl.Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum Security System  Stories Exterior 1.25 Story Siding Other Additions/Adjus (14) Water/Sewer Public Water Public Sewer Phy/Ab.Phy/Func/Econ, Economic Depreciation Separately Depreciate (17) Garages Class:D Exterior: S: Base Cost County Multiplier = 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  Class: D Effec. Age: 55 Floor Area: 910 Total Base Cost: 52, Total Base New: 73, Total Depr Cost: 19, Estimated T.C.V: 9,33  Foundation Rate Basement 60.68 stments  /Comb.%Good= 45/100/10 n because of: OBSERVER ed Items: iding Foundation: 18  1.39 => /Comb.%Good= 10/100/10	CntyMult 803	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  Bsmnt Garage: Carport Area: Roof:  1

<sup>\*\*\*</sup> Information herein deemed reliable but not guaranteed\*\*\*

Parcel Number: 61-26-185-	-225-0009-00	Jurisdicti	on: 26 CITY	OF MUSKEGON	HTS	County: MUSKEGON		Printed on		11/29/2016
Grantor	Grantee		Sale Price		Inst. Type	Terms of Sale	Libe & Pa		rified	Prcnt. Trans.
WINDELER CHRIS/ANGELA	COUNTY OF MUSKES	ON TREASU	0	04/29/2015	5 WD	TAX REVERTED	4053	/979 DE	ED	0.0
MUSKEGON COUNTY TREASURER	WINDELER CHRIS/A	NGELA	650	10/13/2011	QC	QUIT- CLAIM	3892	/786 DE	ED	100.0
HULKA WILLIAM	MUSKEGON COUNTY	TREASURER	0	04/01/2011	QC	QUIT- CLAIM	3880	/780 DE	ED	0.0
HARRIS WILLIAM	HULKA WILLIAM		29,900	03/29/2007	7 WD	WARRANTY DEED	3740	/95 DE	ED	100.0
Property Address		Class: 70	3.EXEMPT COUN	TY Zoning:	R1-RES Bui	lding Permit(s)	Di	ate Numbe	r S	tatus
2933 JEFFERSON ST		School: M	USKEGON HEIGH	rs schools			12/2	0/2006 B-361	-06	
		P.R.E.	0%				09/2:	2/1999 H-94-	99	
Owner's Name/Address		MAP #: 26	-000-225-090				09/0	8/1999 B-295	-99	
COUNTY OF MUSKEGON TREASUR	RER		2017 Est TC	V 0 TCV/TFA	: 0.00		08/1	5/1999 B-269	-99	
173 E APPLE AVE STE 104 MUSKEGON MI 49442		X Improv	ed Vacant	Land Va	alue Estim	ates for Land Tab	le 00011.DK GR	EEN		
MOSKEGON MI 49442		Public				*	Factors *			
		Improv	ements	Descrip	otion Fr	ontage Depth Fr	ont Depth Ra		on	Value
Tax Description		Dirt R				50.00 125.00 1.0 nt Feet, 0.14 Tot		60 100 tal Est. Land	7701	3,000 3,000
HT3430 BLK 225 LOT 9		Gravel X Paved		30 F	ACCUAL FIO		al Acres 10	tal ESt. Land	value =	3,000
Comments/Influences		X Storm								
		Topogr Site  X Level Rollin Low High Landsc Swamp Wooded Pond Waterf Ravine Wetlan	aped							
	***************************************	Flood		Year	Lan	_				
					Valu				W Other	1 11
The state of the s	1 5		hen Wha		EXEMP					EXEMPT
The Equalization Convertible	(a) 1000 2000	T .	/1999 REVIEWE		EXEMP	PT EXEMPT	EXEMPT			EXEMPT
The Equalizer. Copyright Licensed To: County of Mus	(C) 1999 – 2009. skegon, Michigan	CED 11/28	/2001 REVIEWE	2015 EVI	1,50	9,300	10,800			10,800s
	, J, J	1100 01/02	/2014 EIEHD K.	2014	1,50	11,400	12,900			12,900s

<sup>\*\*\*</sup> Information herein deemed reliable but not guaranteed\*\*\*

<sup>\*\*\*</sup> Information herein deemed reliable but not guaranteed\*\*\*

Parcel Number: 61-26-770-	001-0010-00	Juri	sdiction:	26 CITY OF	MUSKEGON	HTS	County: MUSKEGON		Printed on		11/29/2016
Grantor	Grantee			Sale Price	Sale Date	Inst. Type	Terms of Sale	Libe & Pa		rified	Prcnt. Trans.
DELAPAZ ROGELIO/DAWN	COUNTY OF MUSKE	GON '	TREASUE	0 0	4/29/2015	WD	TAX REVERTED	4054	/40 DE	ED	0.0
BRININSTOOL JERRY	DELAPAZ ROGELIO/	/DAWI	N	0 0	3/23/2011	QC	QUIT-CLAIM	3872	/923 DE	ED	0.0
BRININSTOOL JERRY D/MARIA	DELAPAZ DAWN C/F	ROGE	LIO	34,500 0	1/02/2004	WD	LAND CONTRACT	9999	/99 DE	ED	100.0
BRININSTOOL JERRY	BRININSTOOL JERF	RY D	/MARIA	0 0	3/26/2003	oc	OUIT-CLAIM	3534	/489 DE	ED	0.0
Property Address		Cla	ss: 703.EX	EMPT COUNTY	Zoning: 1	R1-RES Bui	lding Permit(s)	D	ate Numbe:	s s	tatus
3019 PECK ST				GON HEIGHTS				10/2	5/2011 B-174	-11	
		P.R	.E. 0%								
Owner's Name/Address		MAF	#: 26-061	-001-100							
COUNTY OF MUSKEGON TREASUR	RER	11111		17 Est TCV (	) TCV/TFA	. 0 00					
173 E APPLE AVE STE 104		X	Improved	Vacant			ates for Land Tab	 	WEST		
MUSKEGON MI 49442			Public	vacane	Eana va	TGC EDCIM		Factors *	WEG 1		
			Improvement	cs	Descrip	tion Fr	ontage Depth Fr		te %Adj. Reas	on	Value
Tax Description			Dirt Road		SOUTHWE	ST	50.00 104.00 1.0	000 1.0000	70 100		3,500
HT6638 CHAS M STEELE'S SUE	סיס חוע ז ז ז חיים		Gravel Road		50 A	ctual Fro	nt Feet, 0.12 Tot	al Acres To	tal Est. Land	Value =	3,500
10 & 11	5 D DHK I HOIS		Paved Road Storm Sewe								
Comments/Influences			Sidewalk	-							
			Water								
			Sewer Electric								
			Gas								
			Curb								
			Street Ligh Standard Ut Underground	tilities							
	WIN WEST		Topography Site								
		i	Level								
			Rolling								
			Low								
			High Landscaped								
			Swamp								
		1	Wooded								
			Pond Waterfront								
			Ravine								
			Wetland				1 - 12.11				/
			Flood Plain	n	Year	Lan Valu			Board of Review	1	
		Te7lo -	Table a	What	2017	EXEMP			1/0 / 16/	. Other	EXEMPT
		Who			2017					-	
The Equalizer. Copyright	(c) 1999 - 2009.	LCEJ RIT	10/31/199 08/24/200	8 KEVIEWED 8 KEVIEWED		EXEMP					EXEMPT
Licensed To: County of Mus	skegon, Michigan	ROB	02/18/201	6 FIELD REV	2015	1,80		·			13,3008
					2014	1,80	0 13,600	15,400			15,400S

<sup>\*\*\*</sup> 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  X Wood Frame  Building Style: 1 STY  Yr Built Remodeled 1935 1987  Condition for Age: Average Room List  Basement 1 1st Floor	Eavestrough Insulation 0 Front Overhang 0 Other Overhang  (4) Interior  Drywall X Plaster Paneled Wood T&G  Trim & Decoration  Ex X Ord Min Size of Closets  Lg X Ord Small Doors: Solid X H.C.  (5) Floors  Kitchen: Softwood Other: Tile Other: Carpeted	No Heating/Cooling  Central Air Wood Furnace  (12) Electric	Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum	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  Class: CD Effec. Age: 57 Floor Area: 1040 Total Base Cost: 75, Total Base New: 105 Total Depr Cost: 47, Estimated T.C.V: 22,	98 WGEP (1 Story) 36 WCP (1 Story)  CntyMult 702	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 Bsmnt Garage: Carport Area: Roof:
1 2nd Floor 2 Bedrooms (1) Exterior	(6) Ceilings	100 Amps Service  No./Qual. of Fixtures	Stories Exterior 1 Story Siding	Foundation Rate Basement 58.8	Bsmnt-Adj Heat-Ad	j Size Cost 1040 61,246
X Wood/Shingle Aluminum/Vinyl Brick Insulation (2) Windows  Many X Avg. 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 Shed X Asphalt Shingle  Chimney: Brick		Ex.   X   Ord.   Min   No. of Elec. Outlets	Other Additions/Adjust (14) Water/Sewer Public Water Public Sewer (16) Porches WGEP (1 Story), State (17) Garages Class:CD Exterior: State (17) Base Cost	andard andard Siding Foundation: 1: /Comb.%Good= 45/100/1	Rate  1025.00 1025.00  43.09 43.88  8 Inch (Unfinished) 22.93	Size Cost  1 1,025 1 1,025 98 4,223 36 1,580  288 6,604 2.Cost = 47,352

<sup>\*\*\*</sup> Information herein deemed reliable but not guaranteed\*\*\*

Grantor	Grantee		Sale	Sale	Inst.	Terms of Sale	T.	iber	Ver	ified	Prcnt
Clancol	Grances		Price	Date	Type	Terms or bare		Page	Ву	11100	Trans
KISNER DOUGLAS	COUNTY OF MUSKEG	ON TREASUE	0	04/29/2015	WD	TAX REVERTED	4	054/42	DEE	D	0.
EH POOLED 412 P	KISNER DOUGLAS		2,500	04/18/2013	QC	QUIT- CLAIM	3	949/569	DEE	D	100.
HARBOUR PORTFOLIO VI LP	EH POOLED 412 P		2,640	05/16/2012	QC	QUIT- CLAIM	3	915/63	DEE	D	100.
FANNIE MAE	HARBOUR PORTFOLI	O VI LP	4,255	05/10/2011		WARRANTY DEED	3	884/134	DEE	D	0.
Property Address		Class: 70	3.EXEMPT COUNT	TY Zoning: F	R1-RES Bui	lding Permit(s)		Date	Number	5	Status
3122 SANFORD ST		School: M	JSKEGON HEIGHT	S SCHOOLS			0.9	9/09/2008	B-220-0	08	
		P.R.E.	) ક				0.5	5/31/2006	B-152-0	0.6	
Owner's Name/Address		MAP #: 26	-061-002-290				04	1/27/2006	E-43-06	6	
COUNTY OF MUSKEGON TREASU 173 E APPLE AVE STE 104	JRER		2017 Est TCV	/ 0 TCV/TFA:	0.00		10	0/19/2005	B-277-0	0.5	
MUSKEGON MI 49442		X Improve	ed Vacant	Land Va	lue Estim	ates for Land Tab	le 00010.SO	UTHWEST			
		Public					Factors *				
		Improve		Descrip SOUTHWE		ontage Depth Fro 50.00 104.00 1.00		Rate %Adg 70 100		n	Value 3,500
Tax Description		Dirt Ro				nt Feet, 0.12 Tota		Total Est		Value =	3,500
HT6695A CHAS M STEELE'S S		X Paved I									
OF LOT 28 & ENTIRE LOT 29	8 & S 1/2 OF LOT	X Storm									
Comments/Influences		X Sidewal	LK								
		X Sewer									
		X Electr	Lc								
		X Gas X Curb									
		Street									
			rd Utilities								
			cound Utils.								
		Topogra Site	phy of								
		X Level									
	- 1 × 100 V	Rolling	g.								
		Low									
		Landsca	aped								
		Swamp	-								
	HILL	Wooded									
		Waterf	ront								
		Ravine									
		Wetland Flood		Year	Lan	nd Building	Asses	sed B	oard of	Tribunal	/ Taxabl
		FIOOG	τατΙΙ		Valu	1 2		lue	Review	Othe	*
07/	23/2009 11:39:34	Who W	nen What	2017	EXEMP	PT EXEMPT	EXE	MPT			EXEMP
			/1998 REVIEWEI	2016	EXEMP	PT EXEMPT	EXE	MPT			EXEMP
The Equalizer. Copyright Licensed To: County of Mu		ROB 09/18	/2012 REVIEWEI	2015	1,80	7,700	9,	500			9,500
micensed to. Conntry of Ma	iskegon, MICHIGAN			2014	1,80	9,100	10,	900			10,900

<sup>\*\*\*</sup> 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  X Wood Frame  Building Style: 2 STY  Yr Built Remodeled 1940  Condition for Age: Average  Room List  Basement 1 1st Floor 2 2nd Floor	Eavestrough Insulation 0 Front Overhang 0 Other Overhang (4) Interior    Drywall   X Plaster   Paneled   Wood T&G   Trim & Decoration   Ex   X   Ord   Min   Size of Closets    Lg   X   Ord   Small   Doors:   Solid   X   H.C. (5) Floors  Kitchen: Hardwood Other: Tile Other: Carpeted	X Gas Oil Elec. Wood Coal Steam  Forced Air w/o Ducts X 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	Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi Tub Jacuzzi Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum Security System  Appliance Allow. Interior 1 Story Interior 2 Story Interior 2 Story Prefab 1 Story Prefab 1 Story Prefab 2 Story Prefab 2 Story Heat Circulator Raised Hearth Wood Stove Direct-Vented Gas Class: CD Effec. Age: 55 Floor Area: 1352 Total Base Cost: 77,879 Total Base New: 108,252 Total Depr Cost: 31,664 Exterior 1 Story RMGEP (1 Story) Car Capacity: Car Capacity: Car Capacity: Class: Exterior: Brick Ven.: Stone Ven.: Common Wall: Foundation: Finished ?: Auto. Doors: Area: % Good: Storage Area: No Conc. Floor:  Bsmnt Garage: Carport Area: Roof:
3 Bedrooms  (1) Exterior  Wood/Shingle X Aluminum/Vinyl Brick Insulation  (2) Windows  Many	I .	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 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  (14) Water/Sewer  1 Public Water 1 Public Sewer Water Well 1000 Gal Septic 2000 Gal Septic Lump Sum Items:	Stories

<sup>\*\*\*</sup> Information herein deemed reliable but not guaranteed\*\*\*

Grantor	Grantee		Sale Price		Inst. Type	Terms of Sale	Liber & Page		rified	Prcnt. Trans.
EARTH SMART PROPERTIES LLC	COUNTY OF MUSKE	GON TREASUE	0	04/29/201		TAX REVERTED	4054/4			0.0
3128 GLENDALE TRUST	EARTH SMART PRO	PERTIES LLO	0	08/11/201	2 QC	QUIT- CLAIM	3922/1	L62 DE	ED	100.0
PONIROS EQUITIES LLC	3128 GLENDALE T	RUST		11/15/201		QUIT- CLAIM	3895/5	531 DE	ED	100.0
MUSKEGON COUNTY TREASURER				10/13/201		QUIT- CLAIM	3892/8			100.0
Property Address						lding Permit(s)	Dat			tatus
3128 GLENDALE ST		School: M	USKEGON HEIGH	TS SCHOOLS			06/18/	2008 B-126	-08	
			<u> </u>				06/24/	2004 B-199	-04	
Owner's Name/Address			-061-012-260					2004 B-48-		
COUNTY OF MUSKEGON TREASUR	RER		2017 Est TC	V 0 TCV/TFA	A: 0.00		137, 237			
173 E APPLE AVE STE 104 MUSKEGON MI 49442		X Improve				ates for Land Tabl	e 00010.SOUTHWE	EST		
MUSREGON MI 49442		Public			* Factors *					
		Improve	ements	Descri	ption Fr	ontage Depth Fro	nt Depth Rate		on	Value
Tax Description		Dirt R		SOUTHW		50.00 104.00 1.00		100		3,500
HT7078 CHAS M STEELE'S SUE	B'D BLK 12 LOTS	Gravel X Paved 1		50	Actual Fro	nt Feet, 0.12 Tota	I Acres Tota	al Est. Land	. Value =	3,500
26 & 27		X Paved I								
Comments/Influences		X Sidewalk								
HOUSE REHABILITATED AND BROUGHT UP TO CODE		Standa	ic Lights rd Utilities round Utils.							
		Site  X Level Rolling Low High Landsc Swamp Wooded Pond Waterf Ravine	aped							
Table William		Wetland Flood		Year	Lar Valı	1 31	Assessed Value	Board of Review		
							EXEMPT		+	
		Who W	hen Wha	t 2017	EXEM	PT EXEMPT	EXEMPT			EXEMPT
			hen Wha /1998 REVIEWE		EXEMI		EXEMPT			EXEMPT EXEMPT
The Equalizer. Copyright Licensed To: County of Mus						PT EXEMPT				

<sup>\*\*\*</sup> 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  X Wood Frame  Building Style: 2 STY  Yr Built Remodeled 1930  Condition for Age: Average Room List	Eavestrough Insulation 0 Front Overhang 0 Other Overhang (4) Interior  Drywall Plaster Paneled Wood T&G  Trim & Decoration  Ex X Ord Min Size of Closets  Lg X Ord Small Doors: Solid X H.C. (5) Floors	X Gas Oil Elec. Wood Coal Steam  Forced Air w/o 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	Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi Tub Oven Microwave Standard Range Self Clean Range Self Clean Range
Basement 1st Floor 2nd Floor	Kitchen: Other: Other:	Wood Furnace (12) Electric 100 Amps Service	Sauna Trash Compactor Central Vacuum Security System  Total Base Cost. 69,289  Total Base Cost. 89,289  Total Base New: 124,111  E.C.F. Total Depr Cost: 41,887  Estimated T.C.V: 19,813  Resmnt Garage: Carport Area: Roof:
Bedrooms   (1) Exterior     Wood/Shingle   X Aluminum/Vinyl   Brick   Insulation     (2) Windows   Avg.   Avg.   Few   Small     Wood Sash   Metal Sash   Vinyl Sash   Double Hung   Horiz. Slide   Casement   Double Glass   Patio Doors   Storms & Screens     (3) Roof   X Gable   Gambrel   Hip   Mansard   Shed   X Asphalt Shingle     Chimney: Brick   Cityle   Chimney: Brick   Cityle   Chimney: Brick   Cityle   Cityle   Chimney: Brick   Cityle   Cityl	(6) Ceilings  (7) Excavation  Basement: 624 S.F. Crawl: 0 S.F. Slab: 100 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:	No./Qual. of Fixtures  Ex. X Ord. Min  No. of Elec. Outlets  Many X Ave. Few  (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 Wains Ceramic Tile Wains 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:	Stories   Exterior   Foundation   Rate   Bsmnt-Adj   Heat-Adj   Size   Cost

<sup>\*\*\*</sup> Information herein deemed reliable but not guaranteed\*\*\*

COOK MARSHALL/SONYA	Grantor	Grantee		Sale Price	Sale Date	Inst. Type	Terms of Sale	Liber & Pag	-	ified	Prcnt. Trans.
NUMBERSON COUNTY TREASURER   COOK MARSHALL/SONYA   20   10/13/2011   CC   OUTT-CLAIM   3880/643   DEED   10	COOK MADCHALL (CONVA	COLINER OF MICKE	ON TREACIT				MAY DEVEDED			D	0.0
### HOUTCHISON JAMES H											100.0
MRST MI POSTAL SVC CREDIT   HUTCHISON JAMES   Sold   Sold   O7/03/2009   OF   FORECLOSURE PURCHASS   3823/348   DEED   10						1					0.0
Property Address						~					
School: MUSKEGON HEIGHTS SCHOOLS		HUTCHISON JAMES				1.					100.0
County Of MUSREGON TREASURER   AND #1 * 26-061-032-160						KI-KES BU	llaing Permit(s)	Dat	te Number	51	latus
Map #: 26-061-032-160	3135 /TH ST				SCHOOLS						
2017   Set TOV   TOV/TFA: 0.00   Tov/TFA: 0.	Owner's Name/Address										
13 2 APPLE AVE STE 104		)FD	MAP #: 26								
Public   Improvements   Description   Frontage Depth Front Depth Rate %Adj. Reason   Value   SOUTHWEST   75.00 104.00 1.0000 1.0000   70 100   5.256   Gravel Road   Storm Sewer   Storm Sewer   Storm Sewer   Storm Sewer   Sidewalk   X Sewer   X Electric   X Gas   X Curb   Street Lights   Standard Utilities   Underground Utils   Street Lights   Standard Utilities   Underground Utils   Copyraphy of Site   Storm Saver   X Everl Road   Storm Sewer   X Electric   X Gas   X Curb   Street Lights   Standard Utilities   Underground Utils   Steet Road   Standard Utilities   Underground Utils   Steet Road   Storm Sewer   X Everl Lights   Standard Utilities   Underground Utils   Steet Road   Storm Sewer   X Everl Road   Standard Utilities   Underground Utils   Steet Road   Storm Sewer   X Everl Road   X Everl Road   Storm Sewer   X Everl Road   X Everl R		VER.									
Improvements	MUSKEGON MI 49442		X Improve	ed Vacant	Land Va	lue Estim			EST		
A pave Nau Storm Sewer X Sidewalk X Storm Sewer X Sidewalk X Water X Sewer X Sidewalk X Water X Sewer X Sidewalk X Curb Street Lights Standard Utilities Underground Utils.  7.000 Tool Street Lights Standard Underground Utils.  8.000 Tool Street Lights Standard Underground Utils.  8.000 Tool Street Lights Standard Underground Utils.  9.000 Tool Street Lights Standard Underground Underground Utils.  9.000 Tool Street Lights Standard Underground U	<u> </u>		Improve Dirt Ro Gravel	oad Road	SOUTHWE	ST	rontage Depth Fro 75.00 104.00 1.00	ont Depth Rate	0 100		Value 5,250 5,250
Description   Rate CountyMult. Size %Good Cash Value					Land Im	provement	Cost Estimates				
X   Water   Shed: Metal Prefab   7.34   1.37   120   43   518					Descrip	tion		Rate Count	yMult. Size	%Good Ca	ash Value
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 2017 EXEMPT EXEMPT EXEMPT EXEMPT The Equalizer. Copyright (c) 1999 - 2009.  GG 1/07/1999 DATA ENTER BJ G/22/2009 EXYLEWED DG 01/07/1999 DATA ENTER BJ G/22/2009 EXYLEWED BJ GR G 01/07/1999 DATA ENTER BJ G 01/07/1999 D	7/31/2013:VACANT/DISREPAIR	3	X Water		Shed: M	etal Pref					519 519
Site  X Level Rolling Low High Landscaped Swamp Wooded Pond Waterfront Ravine Wetland Flood Plain  Who When What 2017 EXEMPT EXEMPT EXEMPT  The Equalizer. Copyright (c) 1999 - 2009. Licensed To: County of Muskegon, Michigan RJ 04/22/2009 REVIEWED Licensed To: County of Muskegon, Michigan RJ 04/22/2009 REVIEWED  X Level Rolling Low Rolling Low High Landscaped Swamp Wooded Pond Waterfront Ravine Wetland Flood Plain  Year Land Value Value Value Value Review Other Va  EXEMPT EXEMPT EXEMPT EXEMPT EXEMPT EXEMPT EXEMPT FIXEMPT			X Curb Street Standa: Underg:	rd Utilities round Utils.							
Rolling Low High Landscaped Swamp Wooded Pond Waterfront Ravine Wetland Flood Plain  Year  Land Value  Year  Land Value  Year  Value  Value  Value  Who When What  CEJ 12/31/1998 REVIEWED  The Equalizer. Copyright (c) 1999 - 2009. Licensed To: County of Muskegon, Michigan  RJ  04/22/2099 REVIEWED  ROLL  Assessed Board of Tribunal/ Value Value  Value  Value  EXEMPT  Assessed Board of Tribunal/ Value  Value  Other  Value  CEJ 12/31/1998 REVIEWED  CALUATION OF Muskegon, Michigan  RJ  04/22/2099 REVIEWED  RJ  04/22/2099 REVIEWED  7,70		NA NA IN	Site	aphy of							
Flood Plain  Year  Land Value  Value  Value  Value  Value  Value  Review  Other  Value  Texasor  Other  Other  Value  Texasor  Other  Other  Value  Texasor  Other  Texasor  Other  Value  Texasor  Other  Other  Value  Texasor  Other  Value  Texasor  Other  Other  Value  Texasor  Other  Other  Texasor  Other  Other  Value  Texasor  Other  Other  Other  Other  Value  Texasor  Other  Ot			Rolling Low High Landsca Swamp Wooded Pond Waterf:	aped							
Who When What 2017 EXEMPT EXEM					Year						
CEJ 12/31/1998 REVIEWED 2016 EXEMPT E	No.	augaine ug magaine	Who	hen What	2017				1.0.10	0 01101	EXEMP'
The Equalizer. Copyright (c) 1999 - 2009. DG 01/07/1999 DATA ENTER Licensed To: County of Muskegon, Michigan RJ 04/22/2009 REVIEWED 7,7	12 400										EXEMP
Licensed To: County of Muskegon, Michigan RJ 04/22/2009 REVIEWED	The Equalizer. Copyright	(c) 1999 - 2009.									7,700
2014   2,600   5,900   8,500   8,50	Licensed To: County of Mus	skegon, Michigan	RJ 04/22	/2009 REVIEWED	2015		,	8,500			8,500

<sup>\*\*\*</sup> Information herein deemed reliable but not guaranteed\*\*\*

Story Siding Basement   Sand   Sand	Building Type	(3) Roof (cont.)	(11) Heating/Cooling	(15) Built-ins	(15) Fireplaces (16)	Porches/Decks	(17) Garage
1 Sty	Mobile Home Town Home Duplex A-Frame  X Wood Frame	Insulation 0 Front Overhang 0 Other Overhang (4) Interior  Drywall Plaster Paneled Wood T&G	Wood Coal Steam  Forced Air w/o Ducts X Forced Air w/ Ducts Forced Hot Water Electric Baseboard Elec. Ceil. Radiant Radiant (in-floor)	Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood	Interior 2 Story 2nd/Same Stack Two Sided Exterior 1 Story Exterior 2 Story Prefab 1 Story Prefab 2 Story	WSEP (1 Story) Treated Wood	Car Capacity: Class: Exterior: Brick Ven.: Stone Ven.: Common Wall: Foundation:
Second   Content   Conte	1 STY Yr Built Remodeled 1930 0 Condition for Age: Average Room List	Ex X Ord Min Size of Closets  Lg X Ord Small Doors: Solid X H.C.  (5) Floors	Space Heater Wall/Floor Furnace Forced Heat & Cool Heat Pump No Heating/Cooling Central Air	Jacuzzi Tub Jacuzzi repl.Tub Oven Microwave Standard Range Self Clean Range Sauna	Wood Stove Direct-Vented Gas  Class: D Effec. Age: 55 Floor Area: 652 Total Base Cost: 41,693	CntyMult X 1.390	Mech. Doors: Area: % Good: Storage Area: No Conc. Floor:
Stories   Stor	1st Floor 2nd Floor	Other:	100 Amps Service	Central Vacuum Security System	Total Depr Cost: 19,588	X 0.473	_
Hip Mansard Joists: Flat Shed Unsupported Len:  X Asphalt Shingle Cntr.Sup:  Water Well 1000 Gal Septic 2000 Gal Septic Lump Sum Items:	(1) Exterior    Wood/Shingle   X Aluminum/Vinyl   Brick     Insulation   (2) Windows     Many	(7) Excavation  Basement: 652 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  (9) Basement Finish  Recreation SF Living SF Walkout Doors No Floor SF	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 Story Siding Other Additions/Adju (14) Water/Sewer Public Water Public Sewer (16) Porches WSEP (1 Story), St Phy/Ab.Phy/Func/Econ Separately Depreciat (16) Deck/Balcony Treated Wood,Stand County Multiplier = Phy/Ab.Phy/Func/Econ	Basement 53.90 Cost Financial Streets Financial Streets Financial Street F	0.00 0.66 Rate  2.00 2.00 0.23 0/33.8, Depr. 7.11 Cost 0/36.0, Depr. cal Depreciated	652 35,573 Cost  1 912 1 912  1 12 3,386 19,132  128 910 1,265 Cost = 455 Cost = 19,588
	Hip Mansard Shed  X Asphalt Shingle	Joists: Unsupported Len:	Water Well 1000 Gal Septic 2000 Gal Septic				

<sup>\*\*\*</sup> Information herein deemed reliable but not guaranteed\*\*\*

Grantor	Grantee		Sale Price		Inst. Type	Terms of Sale	Liber & Pac	-	rified	Prcnt. Trans.
PROGRESSIVE HOLDING CO LLC	COLUMBY OF MICHE	CON EDEACH					4054	_	1.0	0.0
				04/29/2015		TAX REVERTED	40347			
MUSKEGON COUNTY TREASURER				10/17/2012	~	QUIT- CLAIM	2014	DEI		0.0
LAMB LURAINE	MUSKEGON COUNTY	TREASURER		04/02/2012		FORECLOSURE		'259 DEI		0.0
				05/18/1992		QUIT-CLAIM	1786:			0.0
Property Address					R1-RES Bui.	lding Permit(s)	Da	te Number	St	atus
3200 GLENDALE ST			JSKEGON HEIGH	rs schools						
Owner's Name/Address			) 응							
		MAP #: 26-	-061-013-390							
COUNTY OF MUSKEGON TREASUR: 173 E APPLE AVE STE 104	EK		2017 Est TC	J 0 TCV/TFA:	0.00					
MUSKEGON MI 49442		X Improve	ed Vacant	Land Va	lue Estima	tes for Land Table		/EST		
		Public					ctors *			
		Improve		Descrip SOUTHWE		ontage Depth From 50.00 104.00 1.000	it Depth Rat	te %Adj. Reas: 70 100	on	Value 3,500
Tax Description		Dirt Ro Gravel				nt Feet, 0.12 Total		al Est. Land	Value =	3,500
HT7131 CHAS M STEELE'S SUB	'D BLK 13 LOTS	X Paved F		Land Im	nrovement	Cost Estimates				
39 & 40 Comments/Influences		X Storm S		Descrip		- CODE EDCIMACED	Rate Count	yMult. Size	%Good Ca	ash Value
<u> </u>	DEDDECTARION	X Sidewal	.k	-	iberglass			37 100	35	2,721
BOVE GROUND POOL, MINIMUM DEPRECIATION		X Sewer			-	Total Estimated La	and Improvemen	nts True Cash	Value =	2,721
			Lights rd Utilities round Utils.							
		Topogra Site	phy of							
		X Level Rolling Low High Landscaped Swamp Wooded Pond Waterfront Ravine								
	A SHE	Wetland Flood H		Year	Land Value	1 21	Assessed Value	Board of Review		
		Who Wh	nen Wha	2017	EXEMP	r EXEMPT	EXEMPT			EXEMP
	4 1 1000 0000	CEJ 12/30,	/1998 REVIEWE	2016	EXEMP'	r exempt	EXEMPT			EXEMP
The Equalizer. Copyright Licensed To: County of Mus	(C) 1999 - 2009. kegon. Michigan	RJ 09/22,	/2009 REVIEWE	2015	1,800	9,700	11,500			11,5008
				2014						

<sup>\*\*\*</sup> 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 Wood Frame  Building Style: 1+ STY  Yr Built Remodeled 1920 1997  Condition for Age: Average  Room List  Basement 2 1st Floor	Eavestrough Insulation 0 Front Overhang 0 Other Overhang (4) Interior  Drywall X Plaster Paneled Wood T&G  Trim & Decoration  Ex X Ord Min  Size of Closets  Lg X Ord Small  Doors: Solid X H.C.  (5) Floors  Kitchen: Softwood Other: Carpeted	X Gas   Oil   Elec. Steam   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   Cool   Cool	Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum	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  Class: D Effec. Age: 55 Floor Area: 912 Total Base Cost: 55,286 Total Base New: 76,847 Total Depr Cost: 34,581  154 WGEP (1 Story) Treated Wood  Totaly Story Contymult Story Treated Wood  Totaly Story Contymult Story Treated Wood  Totaly Story Contymult 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: Bsmnt Garage: Carport Area: Roof:	
	Other: Tile  (6) Ceilings  X Plaster	No./Qual. of Fixtures  Ex.   X   Ord.   Min	Security System  Stories Exterior  1+ Story Siding Other Additions/Adjus	Foundation Rate Bsmnt-Adj Heat-Adj Basement 51.58 0.00 0.66	
Wood/Shingle X Aluminum/Vinyl Brick Insulation	(7) Excavation  Basement: 912 S.F.  Crawl: 0 S.F.	No. of Elec. Outlets    Many   X   Ave.   Few   (13) Plumbing   Average Fixture(s)	(14) Water/Sewer Public Water Public Sewer (16) Porches WGEP (1 Story), Sta	912.00 912.00	1 912 1 912 1 912
(2) Windows    Many   Large   X Avg.   Small	Slab: 0 S.F. Height to Joists: 0.0  (8) Basement  Conc. Block	1 3 Fixture Bath 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat	(16) Deck/Balcony Treated Wood,Standa	ard 7.60	100 760 Cost = 34,581
Wood Sash X Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement X Double Glass Patio Doors X Storms & Screens  (3) Roof  X Gable Hip Hip Mansard Flat Shed X Asphalt Shingle  Chimney: Brick	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:	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:			

<sup>\*\*\*</sup> Information herein deemed reliable but not guaranteed\*\*\*

~ .	la .			~ 2								
Grantor	Grantee			Sale Price	Sale Date	Inst. Type	Terms of Sale		iber Page	Ver By	rified	Prcnt Trans
ZHU RONGLI	COUNTY OF MUSKE	GON TREA	SUE	0	04/29/2015	WD	TAX REVERTED	40	054/45	DEE	D	0.0
MUSKEGON COUNTY TREASURER	ZHU RONGLI			600	10/17/2012	QC	QUIT- CLAIM	39	928/326	DEE	D	0.0
BERGHUIS JUANTITA/RYAN COR	MUSKEGON COUNTY	TREASUR	ER	0	04/02/2012		FORECLOSURE	39	914/256	DEE	D	0.0
BERGHUIS JUANITA	BURGHUIS JUANITA	A/RYAN C	ORE	0	07/07/2009	QC	QUIT-CLAIM	38	319/197	DEE	D	0.0
Property Address	ı	Class:	703.EXE	MPT COUNT	Y Zoning:	R1-RES Bui	lding Permit(s)		Date	Number	S	tatus
3205 SANFORD ST		School:	MUSKEG	ON HEIGHT:	S SCHOOLS							
		P.R.E.	0%									
Owner's Name/Address		MAP #: 26-061-008-030										
COUNTY OF MUSKEGON TREASUR	ER	2017 Est TCV (			0 TCV/TFA	0.00						
173 E APPLE AVE STE 104 MUSKEGON MI 49442		X Impr	oved	Vacant	Land Va	lue Estima	ates for Land Tab	le 00010.SOU	JTHWEST			
11001120011 111 13112		Publ	ic				*	Factors *				
		Impr	ovements	3	Descrip		ontage Depth Fr				on	Value
Tax Description		Dirt Road Gravel Road			SOUTHWE		50.00 104.00 1.00 at Feet, 0.12 Total		70 10 Total Es		Value =	3,500 3,500
HT6895 CHAS M STEELE'S SUB	'D BLK 8 LOTS 3	1 1	el Road d Road		30 1	CCUAI IIO			10001 15	C. Dana	varue	
& 4			m Sewer									
Comments/Influences	Comments/Influences		walk									
		X Wate										
		X Elec										
		X Gas										
		X Curb	et Ligh	+ 0								
			dard Ut:									
		Unde	rground	Utils.								
			graphy o	of								
	<b>建设建设等</b>	Site										
		X Leve										
ACTION OF IN		Roll Low	ing									
		High										
			scaped									
4-11		Swam Wood	-									
		Pond										
			rfront									
		Ravi Wetl										
The state of the s	AND THE PARTY OF T		d Plain		Year	Lan		Assess		Board of		
	A CONTRACTOR					Valu		Val		Review	Other	
		Who	When	What	2017	EXEMP		EXEM				EXEMP
The Foundation Committee	(~) 1000 2000	CEJ 12/	31/1998	REVIEWED	2016	EXEMP	T EXEMPT	EXEM	1PT			EXEMP
The Equalizer. Copyright Licensed To: County of Mus	kegon, Michigan	DG 12/	09/1998	DATA ENT	ER 2015	1,80	0 3,900	5,7	700			5,700
	- , , 9 411				2014	1,80	0 11,700	13,5	- 0 0			12,912

<sup>\*\*\*</sup> 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  X Wood Frame  Building Style: 1+ STY  Yr Built Remodeled 1935  Condition for Age: Average	Eavestrough Insulation 0 Front Overhang 0 Other Overhang (4) Interior  Drywall Plaster Paneled Wood T&G  Trim & Decoration  Ex X Ord Min Size of Closets  Lg X Ord Small Doors: Solid X H.C.	X Gas Wood Coal Elec. Wood Coal Steam  Forced Air w/o 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	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	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  Class: D Effec. Age: 55 Floor Area: 832	Area Type  119 CPP 32 WSEP (1 Story)  CntyMult	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
Room List	(5) Floors	Central Air Wood Furnace	Self Clean Range Sauna	Total Base Cost: 55,	721 X 1.390	Bsmnt Garage:
Basement 1st Floor 2nd Floor	Kitchen: Other: Other:	(12) Electric  100 Amps Service	Trash Compactor Central Vacuum Security System	Total Base New: 77, Total Depr Cost: 16, Estimated T.C.V: 7,7	349 X 0.473	Carport Area: Roof:
Bedrooms	(6) Ceilings	No./Qual. of Fixtures	Stories Exterior		Bsmnt-Adj Heat-Ad	2
(1) Exterior  X Wood/Shingle Aluminum/Vinyl Brick Insulation (2) Windows  Many X Avg. X Avg. Few  Wood Sash Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement Double Glass Patio Doors Storms & Screens  (3) Roof  X Gable Hip Hip Flat Shed X Asphalt Shingle  Chimney: Brick	(7) Excavation  Basement: 832 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  (9) Basement Finish  Recreation SF Living SF Walkout Doors No Floor SF  (10) Floor Support	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+ Story Siding Other Additions/Adju (14) Water/Sewer Public Water Public Sewer (16) Porches CPP, Standard WSEP (1 Story), St Phy/Ab.Phy/Func/Econ Separately Depreciat (17) Garages Class:C Exterior: S Base Cost County Multiplier = Phy/Ab.Phy/Func/Econ	Basement 52.7 stments  andard /Comb.%Good= 45/ 50/1 ed Items: iding Foundation: 18  1.39 => /Comb.%Good= 20/ 50/1	2 0.00 0.66 Rate  912.00 912.00  13.00 54.18  00/100/22.5, Depr  Inch (Unfinished) 25.85  Cos	832 44,412 Size Cost  1 912 1 912  1 912  119 1,547  32 1,734  Cost = 15,486   240 6,204  t New = 8,624  Cost = 862  Cost = 862  Cost = 16,349

<sup>\*\*\*</sup> Information herein deemed reliable but not guaranteed\*\*\*

Parcel Number: 61-26-770-	-028-0006-00	Jurisdic	tion:	26 CITY OF	MUSKEGON	HTS	County: MUSKEGON		Printed on		11/29/2016
Grantor	Grantee			Sale Price	Sale Date	Inst. Type	Terms of Sale	Libe & Pa		rified	Prcnt. Trans.
COOK MARSHALL D	COUNTY OF MUSKEG	ON TREAS	UF	0 0	4/29/2015	WD	TAX REVERTED	4054	/64 DE	ED	0.0
HOLMES CAROLYN J	BEANE MARILYN			0 1	0/17/2007	QC	QUIT-CLAIM	3758	/526 DE	ED	0.0
CULP MARILYN D	COOK MARSHALL			4,000 1	0/17/2007	QC	QUIT-CLAIM	3758	/581 DE	ED	100.0
CULP MARILYN D	HOLMES CAROLYN J	Г		0 1	0/15/2007	QC	QUIT-CLAIM	3758	/324 DE	ED	0.0
Property Address		Class:	703.EXE	MPT COUNTY	Zoning: 1	R1-RES Bui	lding Permit(s)	D	ate Numbe	r S	tatus
3213 6TH ST		School:	MUSKEG	ON HEIGHTS	SCHOOLS			08/0	1/2000 B-233	-00	
		P.R.E.	0%								
Owner's Name/Address		MAP #: 2	26-061-	028-060							
COUNTY OF MUSKEGON TREASUR	RER		201	7 Est TCV	O TCV/TFA:	: 0.00					
173 E APPLE AVE STE 104 MUSKEGON MI 49442		X Impro	oved	Vacant	Land Va	lue Estima	ates for Land Tab	le 00010.SOUTH	WEST		
MOSKEGON MI 49442		Publi	ablic				*	Factors *			
		Impro	vements	S			ontage Depth Fr			on	Value
Tax Description			Road		SOUTHWE		50.00 104.00 1.0 nt Feet, 0.12 Tot		70 100 tal Est. Land	1 772]110 -	3,500 3,500
HT7629 CHAS M STEELE'S SU	JB'D BLK 28,	Grave	el Road		J0 A			ai Acres ic	cai Est. Danc	varue –	<b>3,</b> 300
LOTS 6 & 7	LOTS 6 & 7  Comments/Influences X Sto		n Sewer								
Comments/Influences											
		X Water X Sewer									
		X Elect									
		X Gas									
		X Curb	et Ligh	t s							
				ilities							
		Under	rground	Utils.							
		Topog Site	graphy o	of							
		X Level	1								
		Rolli	ing								
		Low High									
	W.	-	scaped								
		Swamp									
		Pond									
			rfront								
		Ravir									
		Wetla	and d Plain		Year	Lan	d Building	Assessed	Board o	f Tribunal	/ Taxable
						Valu	e Value	Value	Revie	w Othe	r Value
一 一	7 7008 11 84101	Who	When	What	2017	EXEMP	T EXEMPT	EXEMPT			EXEMPT
	STELL ST	CEJ 12/	31/1998	REVIEWED	2016	EXEMP	T EXEMPT	EXEMPT			EXEMPT
The Equalizer. Copyright Licensed To: County of Mus	(c) 1999 - 2009.	DG 01/0	04/1999	DATA ENTE	2015	1,80	0 5,700	7,500			7,500s
Election 10. Country of Mus	Jacquii, michilyali				2014	1,80	0 6,700	8,500			8,500s

<sup>\*\*\*</sup> Information herein deemed reliable but not guaranteed\*\*\*

<sup>\*\*\*</sup> Information herein deemed reliable but not guaranteed\*\*\*

Parcel Number: 61-26-770-	-018-0011-00	Jurisdi	ction:	26 CITY C	F MUSKEGON	HTS (	County: MUSKEGON		Printed on		11/29/2016
Grantor	Grantee			Sale Price	Sale Date	Inst. Type	Terms of Sale	Liber & Page	-	ified	Prcnt. Trans.
THE LANGLOIS GROUP LLC	COUNTY OF MUSKEO	GON TREA	SUF	0	04/29/2015	WD	TAX REVERTED	4054/5	4 DEE	D	0.0
MUSKEGON COUNTY TREASURER	THE LANGLOIS GRO	OUP LLC		800	10/17/2012	QC	QUIT- CLAIM	3928/3	29 DEE	D	0.0
DREAM ANGEL INVESTMENTS LI	MUSKEGON COUNTY	TREASUR	ER	0	04/02/2012	2	FORECLOSURE	3914/2	60 DEE	D	0.0
STONECREST INVESTMENTS LLC	DREAM ANGEL INVE	ESTMENTS	LI	4,000	11/21/2008	g QC	QUIT-CLAIM	3798/8	84 DEE	D	100.0
Property Address	<u> </u>	Class:	703.EXE	MPT COUNT	Y Zoning:	R1-RES Bui	lding Permit(s)	Date	e Number	St	atus
3225 GLENDALE ST		School	: MUSKEG	ON HEIGHT	S SCHOOLS			05/14/2	2003 B-104-	03	
		P.R.E.	0%					06/15/2	2000 B-170-	00	
Owner's Name/Address		MAP #:	26-061-	018-110				03/21/2	2000 B-74-0	0	
COUNTY OF MUSKEGON TREASUR	RER				0 TCV/TFA	: 0.00					
173 E APPLE AVE STE 104		X Impi		Vacant			ates for Land Table	00010.SOUTHWE	ST		
MUSKEGON MI 49442		Publ						actors *			
			rovement	S	Descrip	tion Fro	ontage Depth From		%Adj. Reaso	n	Value
Tax Description		Dirt	Road		SOUTHWE		75.00 104.00 1.000		100		5,250
HT7287 CHAS M STEELE'S SUE	R'D BIK 18 LOTS		rel Road	l	/5 A	ctual Fron	nt Feet, 0.18 Total	l Acres Tota	l Est. Land	Value =	5 <b>,</b> 250
11 12 & 13	5		ed Road cm Sewer								
Comments/Influences		X Side									
		X Wate									
		X Sewe									
		X Gas									
		X Curk	)								
			eet Ligh								
				ilities Utils.							
			graphy								
		Site		OI							
		X Leve	el								
			Ling								
	THE COLUMN	Low									
		High Land	ı dscaped								
		Swan	-								
		Wood									
	100	Pond	d erfront								
		Ravi									
		Wet]	Land				1 - 12.11	- 1		, /	
	Charles III	Floo	od Plain	1	Year	Lan Valu	7	Assessed Value	Board of Review	Tribunal/ Other	Taxable Value
09/1	9/2008 14775:12	Who	When	What	2017	EXEMP'		EXEMPT		001101	EXEMPT
		RTT 12.	/31/1998	REVIEWED	2016	EXEMP'		EXEMPT			EXEMPT
			,					·		I	
The Equalizer. Copyright Licensed To: County of Mus	(c) 1999 - 2009.	DG 12,	/18/1998	B DATA ENT	<sup>ER</sup> 2015	2,60	0 12,500	15,100			15,100s

<sup>\*\*\*</sup> 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  X Wood Frame  Building Style: 1 3/4 STY  Yr Built Remodeled 1940  Condition for Age: Average  Room List  Basement 1st Floor 2nd Floor	Eavestrough Insulation 0 Front Overhang 0 Other Overhang  (4) Interior  Drywall Plaster Paneled Wood T&G  Trim & Decoration  Ex X Ord Min Size of Closets  Lg X Ord Small Doors: Solid X H.C.  (5) Floors  Kitchen: Other:	X Gas Wood Coal Elec. Wood Coal Steam 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	Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi Tub Jacuzzi Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum Security System  Interior 1 Story Interior 2 Story Interior 1 Story Interior 1 Story Interior 2 Story Interior 1 Story Interior 2 Story Interior 1 Story Interi
Bedrooms	(6) Ceilings  (7) Excavation  Basement: 770 S.F. Crawl: 0 S.F. Slab: 308 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	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 1 2 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 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:	Security System

<sup>\*\*\*</sup> Information herein deemed reliable but not guaranteed\*\*\*

Price   Date   Trans.   Price   Date   Type   & Fage   Dy   Trans.	Parcel Number: 61-26-770-	027-0001-00	Jurisdicti	on: 26 CITY	OF MUSKEGON	HTS	County: MUSKEGON		Prin	ted on		11/29/2016
Record   R	Grantor	Grantee					Terms of Sale			-	rified	Prcnt. Trans.
SERIE MOUNTAIN PROPERTIES   RT REAL ESTATE DEVILOPMENT   0   10/18/2002   CC   QUIT-CLARM   3505/189   DEED   0.0	HOPE LIGHTHOUSE CHURCH	COUNTY OF MUSKEG	ON TREASU	0	04/29/2015	WD	TAX REVERTED	405	4/63	DEE	ID.	0.0
TERRETY SAVINGS BANK   GREEN MOUNTAIN PROPERTIES   15,000 05/22/2008   TA   APPIDAVIT   DEED   Date   DEED   Date   Dat	RT REAL ESTATE DEVELOPMENT	HOPE LIGHTHOUSE	CHURCH	17,000	03/22/2005	WD	WARRANTY DEED	364	3/603	DEE	D	100.0
Property Address	GREEN MOUNTAIN PROPERTIES	RT REAL ESTATE D	EVELOPMEN'	0	10/18/2002	QC	QUIT-CLAIM	350	5/189	DEE	D	0.0
School: MUSREGON HEIGHTS SCHOOLS   G9/30/2006 B-281-06	LIBERTY SAVINGS BANK	GREEN MOUNTAIN P	ROPERTIES	15,000	05/22/2001	TA	AFFIDAVIT			DEE	D	0.0
P.R.E. 08	Property Address		Class: 70	3.EXEMPT COUNT	TY Zoning:	R1-RES Bui	.lding Permit(s)		Date	Number	S	tatus
MMP #: 26-061-027-010	3301 6TH ST		School: M	USKEGON HEIGHT	S SCHOOLS			08/	30/2006	B-281-	06	
OUNTY OF MUSERSON TREASURER   194   2017 Est TCV 0 TCV/TFR: 0.00   193 E AFFLE NV 5TE 104   19			P.R.E.	0%				05/	22/2006	B-140-	06	
Table   Ave   Steel   104	Owner's Name/Address		MAP #: 26	-061-027-010								
MISKEGON MI 49442    X   Improve   Vacant   Land Value Estimates for Land Table 00010.SOUTHWEST   Factors		RER	2017 Est TCV (		/ 0 TCV/TFA	: 0.00						
Public			X Improv	ed Vacant	Land Va	lue Estim	ates for Land Tab	le 00010.SOUT	'HWEST			
Diff Road   Crave   Road   SOUTHWEST   So.00   11.000   1.000   70   100   3,500   10   10   1000   1.000   1.000   70   100   3,500   10   10   10   10   10   10   10	110011110011 111 19112		Public				*	Factors *				
Tax Description  From the Tributal Control of Marked Control of Pool o			Improv	ements							n	
HT7604 CHAS M STEELE'S SUB'D BLK 27 LOTS  5 2 Comments/Influences  X Paved Road X Storm Sewer X SidewAlk X Mater X Sewer X Electric X Gas X Curb Street Lights Standard Utilities Underground Utils.  Topography of Site X Level Rolling Low High Landscaped Swamp Mooded Fond Naterfront Ravine Wetland Flood Plain  The Equalizer. Copyright (c) 1999 - 2009. Licensed To: County of Mushegon, Michigan Roy 10/27/2009 REVIEWED Licensed To: County of Mushegon, Michigan Roy 10/27/2009 REVIEWED 2015 1,800 7,500 9,300 9,3005	Tax Description										Value =	
Comments/Influences  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 Fond Waterfront Ravine Wetland Flood Plain Wetland Flood Plain  Who When What 2017 EXEMPT EXEMPT EXEMPT EXEMPT Licensed To: County of Muskegon, Michigan RJ 10/27/2009 REVIEWED RJ 10/27/2009 REVIEWE	HT7604 CHAS M STEELE'S SUE	B'D BLK 27 LOTS	X Paved	Road	50 A	Ctual Fro	nt reet, 0.13 fot	al Acres	Otal Est	. Land	value =	3,500
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 Plood Plain Who When What 2017 EXEMPT The Equalizer. Copyright (c) 1999 - 2009. Licensed To: County of Muskegon, Michigan Licensed To: County of Muskegon, Michigan Licensed To: County of Muskegon, Michigan X Sewer X Sewer X Sewer X Sewer X Electric X Gas X Curb Street Lights Strandard Utilities Underground Utils.  Topography of Site X Level Rolling Low High Landscaped Swamp Wooded Pond Waterfront Ravine Wetland Plood Plain Value Value Value Review Other Value Value Value Other Value Value Value Review Other Value Value Value Other Value Value Value Other Value Value Value Other Value Value Value Other Value Value Other Value Value Other Value Value Other Value Value Value Other Value Other Value Value Other O												
X Level Rolling Low High Landscaped Swamp Wooded Pond Waterfront Ravine Wetland Flood Plain  The Equalizer. Copyright (c) 1999 - 2009. Licensed To: County of Muskegon, Michigan  To Site  X Level Rolling Low High Landscaped Swamp Wooded Pond Waterfront Ravine Wetland Flood Plain  Year Land Value Value Value Value Review Other Value  Who When What 2017 EXEMPT EXEMPT EXEMPT  CEJ 08/31/1998 REVIEWED AND TO SEMPT EXEMPT  Licensed To: County of Muskegon, Michigan  The Equalizer Copyright (c) 1999 - 2009. RJ 10/27/2009 REVIEWED 2015  1,800  7,500  9,300  9,300			X Electr X Gas X Curb Street Standa	Lights rd Utilities								
Rolling Low High Landscaped Swamp Wooded Pond Waterfront Ravine Wetland Flood Plain  Year Land Value Value Value Review Other Value  Who When What 2017 EXEMPT OCEJ 08/31/1998 REVIEWED RJ 10/27/2009 REVIEWED 2015 1,800 7,500 9,300			1	aphy of								
Flood Plain  Flood			Rollin Low High Landsc Swamp Wooded Pond Waterf Ravine	aped								
CEJ 08/31/1998 REVIEWED   2016   EXEMPT   EXEM					Year							
The Equalizer. Copyright (c) 1999 - 2009. RJ 10/27/2009 REVIEWED 2015 1,800 7,500 9,300 9,300S	1979	012000 24145324	Who W	hen What	2017	EXEME	T EXEMPT	EXEM	T			EXEMPT
Licensed To: County of Muskegon, Michigan			CEJ 08/31	/1998 REVIEWEI		EXEME	T EXEMPT	EXEMI	T			EXEMPT
Licensed To: County of Muskegon, Michigan	The Equalizer. Copyright	(c) 1999 - 2009.	RJ 10/27	/2009 REVIEWEI	2015	1,80	7,500	9,30	0			9,300s
	Licensed To: County of Mus	skegon, michigan			2014	1,80	8,900	10,70	0			10,700s

<sup>\*\*\*</sup> 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  X Wood Frame  Building Style: 1 1/4 STY  Yr Built Remodeled 1935 1997  Condition for Age: Average  Room List  Basement 1 1st Floor 2 2nd Floor	Eavestrough Insulation 0 Front Overhang 0 Other Overhang (4) Interior    Drywall   X Plaster   Wood T&G   Trim & Decoration   Ex   X Ord   Min   Size of Closets   Lg   X Ord   Small   Doors:   Solid   X H.C. (5) Floors  Kitchen: Hardwood Other: Carpeted Other: Tile	X Gas Wood Coal Elec. Wood Coal Steam Forced Air w/o 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	Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum	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  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  Area Type  280 WGEP (1 Story)  Cntyyll  CntyMult E.C.F.  CntyMult X 1.390 E.C.F.	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: Bsmnt Garage: Carport Area: Roof:
3 Bedrooms  (1) Exterior  X Wood/Shingle Aluminum/Vinyl Brick  Insulation  (2) Windows  X Many Avg. X Avg. Few  Wood Sash  Vinyl Sash Double Hung Horiz. Slide Casement Double Glass Patio Doors Storms & Screens  (3) Roof  X Gable Hip Flat  X Asphalt Shingle  Chimney: Brick		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	1025.00 1025.00 andard 27.21	616 37,588 308 18,582 Size Cost  1 1,025 1 1,025  280 7,619  30,887

Parcel Number: 61-26-770-027-0001-00

<sup>\*\*\*</sup> Information herein deemed reliable but not guaranteed\*\*\*

Grantor	Grantee		Sale Price		Inst. Type	Terms of Sale	Liber & Page	Verifi By	ed	Prcnt. Trans.		
PICKERING MYRON	COUNTY OF MUSKEO	ON TREASUR	(	02/09/20		FORECLOSURE	4053/995	DEED		0.0		
KIANROKH HAMIDREZA	PICKERING MYRON		(	08/05/20	14 QC	QUIT- CLAIM	4029/78	DEED		100.0		
PLNIROS EQUITIES LLC	KIANROKH HAMIDRE	ZZA	(	11/18/20	13 OC	QUIT- CLAIM	4008/923	DEED		100.0		
MUSKEGON COUNTY TREASURER	TREASURER PLNIROS EQUITIES LLC			10/17/20		QUIT-CLAIM	3928/290	DEED		0.0		
Property Address ( 3327 7TH ST		Class: 703.EXEMPT COUNTY				ilding Permit(s)	Date	Number	Stati	us		
		School: M	USKEGON HEIGH	TS SCHOOLS			01/10/200	6 SR-7-06				
		P.R.E.	 0응									
		MAP #: 26	-031-011-090									
COUNTY OF MUSKEGON TREASURER 173 E APPLE AVE STE 104 MUSKEGON MI 49442		2017 Est TCV 0 T			A: 0.00							
		X Improv	ed Vacant	Land '	/alue Estin	nates for Land Tab	ole 00010.SOUTHWEST					
MOSINEGON MI 49442		Public			* Factors *							
		Improve	ements				cont Depth Rate %A			Value		
Tax Description		Dirt R		SOUTH		40.00 100.00 1.0 ont Feet, 0.09 Tot		00 st. Land Val	116 =	2,800 2,800		
HT5092 HOME LAWN ADD'N BLE	11 LOT 9	Gravel Road Paved Road Storm Sewer			TICCULT II					2,000		
Comments/Influences												
		Sidewa	lk									
		Water Sewer										
		Electr	ic									
		Gas										
		Curb	Lights									
	Standard Utilities											
		Underg	round Utils.									
		Topogra Site	aphy of									
		Level										
	MY Page	Rollin	g									
		Low										
		Landsc	aped									
		Swamp										
	The state of the s	Wooded Pond										
THE RESERVE AND ADDRESS OF THE PARTY OF THE		Waterf	ront									
	North Williams	Ravine										
	EASTER STATE OF THE STATE OF TH		<b>a</b>	Year	La	nd Building	Assessed	Board of T	ribunal/	Taxable		
		Wetlan	Plain	TCGT	1					Idnabic		
			Plain	licar	Val	ue Value	Value	Review	Other			
	0/05/2011	Flood	Plain hen Wha					Review	Other	Value		
	0 (DEV/2011)	Who W	hen Wha	t 2017	Val	PT EXEMPT	EXEMPT	Review	Other	Value EXEMPT		
The Equalizer. Copyright Licensed To: County of Mus	(c) 1999 - 2009.	Who W	hen Wha	t 2017	Val EXEM	PT EXEMPT EXEMPT	EXEMPT EXEMPT	Review	Other	Value EXEMPT EXEMPT 7,600S		

<sup>\*\*\*</sup> 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  X Wood Frame  Building Style: 1 STY  Yr Built Remodeled 1935  Condition for Age: Average  Room List  Basement 1st Floor	Eavestrough Insulation 0 Front Overhang 0 Other Overhang (4) Interior  Drywall Plaster Paneled Wood T&G  Trim & Decoration  Ex X Ord Min Size of Closets  Lg X Ord Small Doors: Solid X H.C. (5) Floors  Kitchen: Other:	No Heating/Cooling Central Air Wood Furnace (12) Electric	Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum	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  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  Area Type Year Built: Car Capacity: Class: CD Exterior: Siding Brick Ven.: 0 Stone Ven.: 0 Common Wall: Detained Foundation: 18 Indicated Foundation: 1
2nd Floor Bedrooms  (1) Exterior  X Wood/Shingle	(6) Ceilings	No./Qual. of Fixtures  Ex. X Ord. Min	Security System Stories Exterior Story Siding Other Additions/Adju	Foundation Rate Bsmnt-Adj Heat-Adj Size Cos Basement 62.01 0.00 0.00 816 50,60
X Wood/Shingle Aluminum/Vinyl Brick  Insulation  (2) Windows  Many X Avg. X Avg. Few  Wood Sash Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement Double Glass Patio Doors Storms & Screens  (3) Roof  X Gable Hip Flat Shed X Asphalt Shingle  Chimney: Brick	(7) Excavation  Basement: 816 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  (9) Basement Finish  Recreation SF Living SF Walkout Doors No Floor SF  (10) Floor Support  Joists: Unsupported Len: Cntr.Sup:	No. of Elec. Outlets    Many   X   Ave.   Few	(14) Water/Sewer Public Water Public Sewer Phy/Ab.Phy/Func/Econ Separately Depreciate (17) Garages Class:CD Exterior: Base Cost County Multiplier =	1025.00 1 1,02 1025.00 1 1,02 /Comb.%Good= 45/ 75/100/100/33.8, Depr.Cost = 24,70 ed Items: Siding Foundation: 18 Inch (Unfinished) 20.85 352 7,33

<sup>\*\*\*</sup> Information herein deemed reliable but not guaranteed\*\*\*