July 13, 2016 RFP 16- HHFDEMO3-2016

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 16- HHFDEMO3-2016" will be accepted at the Muskegon County Land Bank, 173 East Apple Avenue, Suite 104. Muskegon, Michigan 49442 until 3:00 p.m. July 26, 2016.

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 52 residential structures located in Muskegon Heights, MI 49444

Bid Packet

Bid packets will be available starting July 13, 2016. 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. July 26, 2016.

Bid documents may be obtained at www.cityofmuskegoheights.org or the Builders Exchange of Michigan. A pre-bid voluntary conference will be held on July 21, 2016 from 1:00 PM to 1:30 PM at Muskegon Heights, City Hall, Council Chambers (2715 Baker, Muskegon Heights, MI). Inquiries can be made by the following means: Phone 231-724-6170 Timothy Burgess or via email at BurgessTi@co.muskegon.mi.us

No late bids will be accepted. The Muskegon County Land Bank / City of Muskegon Heights reserves the right to accept or reject any or all bids and reserves the right to waiver formalities and to take such actions as it deems necessary in the best interest of Muskegon County Land Bank / 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: July 13, 2016

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.

City/State/Zip Code _____

Bidder:

Street Address:

Phone Number: _		
FAX:		
E- Mail: _		
Signature: _		
Title: _		
Date Certified:		
Bid Breakdown Asbestos Aba Demolition To Disposal Tota Fill: Landscaping 1	otal: I:	
Total Bid Amount:		

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 is 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:
	d, suspended, proposed for debarment, declared overed transactions by any Federal department or
of or had a civil judgment rendered again in connection with obtaining, attempting Local) transaction or contract under a pu	year period preceding award of this bid been convicted not them for commission of fraud or a criminal offense g to obtain, or performing a public (Federal, State or ablic transaction; violation of Federal or State antitrust t, theft, forgery, bribery, falsification or destruction of eiving stolen property;
	for or otherwise criminally charged by a governmental mission of any of the offenses enumerated in
(d) [] Have [] have not within a three-transactions (Federal, State or Local) ten	year period preceding bid had one or more public minated for cause or default.
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	July 13, 2016
2.	Pre-bid Meeting	July 21, 2016
3.	Submission of Request for Qualifications and Cost Proposal Due	July 26, 2016
4.	Bid Awarded by the Muskegon County Land Bank Apx	July 28, 2016
5.	Work commence by	August 9, 2016
6.	Demolition Completed	Sept 16, 2016

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

The Muskegon County Land Bank / 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 waiver 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.
- 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 bid process.

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 / 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 June 3, 2016 and shall be completed by July 1, 2016. All requests for payment along with approved completion inspection reports shall be submitted to the Muskegon County Land Bank no later than August 01, 2016. 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 \$1,000,000. The contractor must also comply with local laws governing the work place 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 there from, 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.

B. Deconstruction Company

At the time of the Request for Qualification and Cost Proposal solicitation, the Prime Demolition Contractor must identify and enter into partnership with a deconstruction company, which will either be a full partner or a subcontractor for the purpose of this contract. The Prime Demolition Contractor will be responsible for deconstruction activities on the sites. The deconstruction company will be employed by and responsible to the Prime Demolition Contractor. (If applicable)

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 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/Performance Bond

Within 5 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 with 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

324 E. DELANO	25 E. LINCOLN
3129 GLENDALE	247 W. ROTTERDAM
3129 5TH	2440 WOOD
3113 5TH	2433 ELWOOD
3109 GLENDALE	2428 REYNOLDS
3100 9TH	2408 BAKER
3045 MAFFETT	2328 MAFFETT
3031 PECK	2325 WOOD
2916 JEFFERSON	2305 BAKER
2905 HOWDEN	2232 RIORDAN
2829 JEFFERSON	2225 WOOD
2819 RIORDAN	3332 9th
2813 RIORDAN	2200 RIORDAN
2813 6TH	2145 MCILLWRAITH
2809 6TH	2133 WOOD
263 E. SUMMIT	2124 6TH
2622 HOYT	2113 SUPERIOR
2544 LEAHY	2110 5TH
2536 JEFFERSON	2040 WOOD
2532 RIORDAN	2023 7TH
2532 JEFFERSON	2016 PARK
2529 MAFFETT	2008 7TH
2528 RIORDAN	1998 PARK
2521 JEFFERSON	160 E. SHERMAN
252 W. ROTTERDAM	3332 9TH
2516 JEFFERSON	119 W Barney

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 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.
- 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 5 lbs of seed per 50x100 city lot
 - 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.

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 with the regulations of the utility concerned.

- a. **Note:** Natural gas and electrical disconnects have be done prior to the pre-bid conference and cost should **not** be included in the bid. However the contractor is responsible for confirming service disconnections prior to 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 service 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.
- 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 spread of dust; provide water and necessary connections therefore.
- 9. Do no blasting on the project site.
- 10. Burn no materials or debris on the premises

- 11. 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.
- 12. Leave no demolished material of any sort in any basement.
- 13. 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.
- 14. 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).
- 15. Properly grade soil to match existing surrounding neighborhood topography.

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 36 units.
Page 8:	Per location itemization of the bid
Page 7:	Identification of asbestos abatement subcontractor (if not the same as the demolition company).
Page 8:	Copies of asbestos abatement contractor license(s).
Pages 9+	Business History/ Experience in Deconstruction and Demolition. Project list references, with contact person's name and telephone numbers. ** Evidence of a minimum of five (5) years of proven experience providing professional licensed demolition services or similar scope/scale must be provided in this section.



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

May 27, 2016

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 25 E. Lincoln St., Muskegon Heights, MI 49444

Parcel ID: 61-26-635-269-0002-00

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 25 E. Lincoln 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 912 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 vinyl 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 rear entry.

VISUAL INSPECTION AND SAMPLING

Asbestos Containing Materials Inspection

Mr. Aaron Paquet of Red Cedar Consulting (Red Cedar), an accredited State Of Michigan/EPA Asbestos Building Inspector (Accreditation Number A30955) whom completed training per the Michigan Asbestos Workers Accreditation Act 440 completed an inspection of the Subject Property on May 15, 2016 for suspected asbestos containing building materials.

Muskegon County Land Bank Parcel ID: 61-26-635-269-0002-00

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
- Drywall
- Glazing
- Plaster

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

Hazardous Materials Inspection

On May 15, 2016 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: 61-26-635-269-0002-00

INSPECTION RESULTS AND RECOMMENDATIONS

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

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

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

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

Presumed Asbestos Containing Material

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

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

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

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

Friable ACM's

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

Category I ACM

Asphalt roof samples collected during the completion of the inspection were found to contain up to 80% Chrysotile asbestos. The assessment to quantify the extent of this material identified 1,664 sq. ft. of asphalt roofing materials on the Building.

Muskegon County Land Bank Parcel ID: 61-26-635-269-0002-00

Category II ACM

Plaster samples, collected from the Living Room, NE Bedroom, SE Bedroom and Kitchen were each found to contain up to 2.25% asbestos following analysis. The assessment to quantify the extent of this material identified approximately 3,080 sq. ft. of plaster within the Building.

RECOMMENDATIONS

Asbestos Containing Materials

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 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:

- Smoke Detector (2)
- 5-Gallon Container Misc. Paint (3)
- Gallon Container Misc. Paint (2)
- Spray Can Misc. Paint (1)
- Automobile Tire (3)
- Gallon Container Misc. (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.

Muskegon County Land Bank Parcel ID: 61-26-635-269-0002-00

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: 61-26-635-269-0002-00

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

(Laron Pogwet

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: 25 E. Lincoln St.

Report To:

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

ARI Report # 16-64874

Date Collected: 05/15/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 30%

Other - 70%

Lab ID #: 64874 - 01

Cust. #: LS-HM-01A

Material: Asphalt Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 2

Asbestos Present: YES

Chrysotile - 80%

Other - 20%

Lab ID #: 64874 - 01a Cust. #: LS-HM-01A

Material: Fibrous Material

Location:

Appearance: white, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 64874 - 02

Asbestos Present: NO

No Asbestos Observed

Cellulose - 30% Other - 70%

Cust. #: LS-HM-01B

Material: Asphalt 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: 25 E. Lincoln St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64874
Date Collected: 05/15/16
Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64874 - 02a

Cust. #: LS-HM-01B Material: Fibrous Material

Location:

NOT ANALYZED

Asbestos Present:

Appearance: Layer: 2 of 2

Lab ID #: 64874 - 03

Cust. #: LS-HM-02A

Material: Beige Linoleum

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

Asbestos Present: NO

No Asbestos Observed

Cellulose - 20%

Fiberglass - 10%

Other - 70%

Lab ID #: 64874 - 03a

Cust. #: LS-HM-02A

Material: Flooring

Location:

Appearance: blue, fibrous, nonhomogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Cellulose - 35%

Other - 65%

ppearance. blue, norous, normomogenous

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

Robert T. Letarte Jr., Laboratory Director

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QAJVN



Test Method, Polarized Light Microscopy (PLM)

Project: 25 E. Lincoln St.

Report To:

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

ARI Report # 16-64874

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64874 - 04

Cust. #: LS-HM-02B

Material: Beige Linoleum

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 20% Fiberglass - 10%

Cellulose - 35%

Other - 65%

Other - 70%

Lab ID #: 64874 - 04a

Cust. #: LS-HM-02B

Material: Flooring

Location:

Appearance: blue, fibrous, nonhomogenous

Layer: 2 of 2

Lab ID #: 64874 - 05 Cust. #: LS-HM-03A

Material: White Linoleum

Asbestos Present: NO

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

Cellulose - 20%

Fiberglass - 10%

Other - 70%

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: 25 E. Lincoln St.

Report To:

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

ARI Report # 16-64874

Date Collected: 05/15/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 20%

Fiberglass - 10%

Other - 70%

Lab ID #: 64874 - 06 Cust. #: LS-HM-03B

Material: White Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 64874 - 07

Cust. #: LS-HM-04A

Material: Grey Linoleum

Asbestos Present: NO

Cellulose - 20%

No Asbestos Observed

Fiberglass - 10%

Other - 70%

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 64874 - 08

Cust. #: LS-HM-04B

Material: Grey 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

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Test Method, Polarized Light Microscopy (PLM)

Project: 25 E. Lincoln St.

Report To:

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

ARI Report # 16-64874

Date Collected: 05/15/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 35%

Other - 65%

Lab ID #: 64874 - 09

Cust. #: LS-HM-05A

Material: Floral Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 35%

Other - 65%

Lab ID #: 64874 - 10 Cust. #: LS-HM-05B

Material: Floral Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 64874 - 11

Cust. #: LS-HM-06A

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: 25 E. Lincoln St.

Report To:

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

ARI Report # 16-64874

Date Collected: 05/15/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Other - 100%

Lab ID #: 64874 - 11a

Cust. #: LS-HM-06A

Material: Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Lab ID #: 64874 - 12

Cust. #: LS-HM-06B

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 64874 - 13

Cust. #: LS-HM-07A

Material: Glazing

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

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: 25 E. Lincoln St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64874

Date Collected: 05/15/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64874 - 14

Cust. #: LS-HM-07B

Material: Glazing

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO**No Asbestos Observed

Other - 100%

Other - 100%

Lab ID #: 64874 - 15 Cust. #: LS-HS-01A

Material: Plaster Texture

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 3

Lab ID #: 64874 - 15a

Cust. #: LS-HS-01A

Material: Plaster Finish Coat

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: 25 E. Lincoln St.

Report To:

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

ARI Report # 16-64874

Date Collected: 05/15/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: YES

POINT COUNT RESULT

Chrysotile - 2.25%

Non-Asbestos

Cellulose - 2%

Other - 95.75%

Lab ID #: 64874 - 15b

Cust. #: LS-HS-01A

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 3 of 3

Asbestos Present: **NO**

No Asbestos Observed

Other - 100%

Lab ID #: 64874 - 16 Cust. #: LS-HS-01B

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 64874 - 16a

Cust. #: LS-HS-01B

Material: Plaster Base Coat

Location:

Appearance: grey, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: YES

Chrysotile - 1.75%

POINT COUNT RESULT

Cellulose - 2%

Other - 96.25%

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)

Project: 25 E. Lincoln St.

Report To:

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

ARI Report # 16-64874

Date Collected: 05/15/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64874 - 17

Cust. #: LS-HS-01C

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 64874 - 17a

Cust. #: LS-HS-01C

Material: Plaster Base Coat

Asbestos Present: YES

Chrysotile - 2.00%

POINT COUNT RESULT

Cellulose - 2%

Other - 96%

Location:

Appearance: grey, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 64874 - 18 Cust. #: LS-HS-01D Asbestos Present: YES

POINT COUNT RESULT

Chrysotile - 1.50%

Cellulose - 2% Other - 96.5%

Material: Plaster Base Coat

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: 25 E. Lincoln St.

Report To:

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

ARI Report # 16-64874

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64874 - 19

Cust. #: LS-HS-01E

Material: Plaster Texture

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 3

Asbestos Present: **NO**

No Asbestos Observed

Other - 100%

Lab ID #: 64874 - 19a Cust. #: LS-HS-01E

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 3

Asbestos Present: YES

Cellulose - 2%

Lab ID #: 64874 - 19b Cust. #: LS-HS-01E

Chrysotile - 1.50%

Other - 96.5%

Material: Plaster Base Coat

POINT COUNT RESULT

Location:

Appearance: grey,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.

NVLAP Lab Code 102118-0

APEX Research Inc., 11054 Hi Tech Drive, Whitmore Lake, MI 48189 (734) 449-9990, Fax (734) 449-9991

64874

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	oa. lofa
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	Received by: Date:		Reinquished by: Date:		Date:	Date: 5-17-16
	d		D.1:	10 HUDO 1000	- 1	Relinquiched by:
				Daywall	LS-HM-OUA	3
					LS-4M-05B	Ó
				Floral Linoleum	LS- HM- 05A	2
				Grey Linoleum	CS-HM-04B	8
				Grey Linoleum	LS-HM-04A	7
				White Linoleum	LS- HM-03B	6
				White Linoleum	L5-HM-03A	5
				Bejge Linoteurs	LS-4M-02B	4
				Beige Linoleum	LS-HM-02A	W
			e	Asphalt Shingle	LS-HM-01B	دو
			P	Asphalt Shingle	LS- HM- 0/A	
Results	Ārea	Volume	ocation	Material/Location	Client ID#	Lab ID#
	EPA Level II		7400 Bulk/NOB	cept Plaster TEM: AHERA 7400	_ (IIF) All Samples Except	Omet :
Viable	Other Vi	BioSIS	Tape			\
	PaintSoil	Air Pa	Wipe	Lead: Bulk		48 hour 77 hour
-	PCM	Point Count	Wipe	Asbestos: Bulkx		
nsulting.net :5% ACM.	apaquet@redcedarconsulting.net with a detection of <5% ACM.	apaq all samples with a	600, PC	Circle One) PLM EPA	Ind Times: (Circle One)	Turn Around
! [']	n Paquet	t Person: Aaron	_ Contact Perso	: (888) 448-8739	9-4566 Fax:	Phone: (888) 449-456
			Project #:		Lansing, MI 48901	City, St., Zip: _
Report	Lincoln St.	iŋ	_ Project:		PO Box 13216	Address:
Lab Use Only	5-15-16	Date of Survey: 5:	_ Date of	Br	Red Cedar Consulting	Client Name:

Rev: 12/03 Work Forms: COC

ADEX 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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APEX	040

Relinquished by Date: 5-(7-) Rev: 12/03 Work Forms: COC	7	3	Y	X	7		5	14	13	7	Lab ID#		Other:	48 hour 72 hour	Rush 24 hour	Turn Arou	Phone: (888) 449-456	City, St., Zip: _	Address:	Client Name: _1
Received by: Date:	5		15-15-014	410-5H-57	LS-4S-01C	15-HS-01B	L5-H5- 01A	8to-MH-SJ	LS-HM-07A	LS- HM-06B	Client ID#		(TTP) All samples Except			Around Times: (Circle One)	9-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
WAY 172		i i i	Distr	Plaster	Plaster	Plaster	Plaster	(5)@Z\04	Glazing	Dywall	Material/Location	TEM: AHERA 7400		Lead: Bulk Wipe	Asbestos: Bulk Wipe	PLM EPA 60	148-8739	Proj	Pro	
1 by: Received by: Date :											Volume Area	Bulk/NOB EPA Level II	BioSIS Other V	Air Paint Soil _	Point Count PCM	ടമா	Contact Person: Aaron Paquet		Project: 25 E. Lincoln St.	Date of Survey: ケートール
											Results		Viable		ı	onsulting.net <5% ACM.			Report	Lab Use Only

Rev: 12/03 Work Forms: COC

Red Cedar Consulting

Tables

Table 1 - Summary of Hazardous Materials, 25 E. Lincoln St., Muskegon Heights, Michigan

	Hazardous Materials Description and Location							
Location	Material Description	Quantity						
Exterior	5 Gallon Container Misc. Paint	3						
Exterior	Gallon Container Misc. Paint	2						
Exterior	Spray Can Misc. Paint	1						
Exterior	Automobile Tire	3						
Living	Smoke Detector	1						
Dining	Smoke Detector	1						
Rear Entry	Gallon Container Misc. Paint	1						
Dining	Television	1						

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 25 E. Lincoln St., Muskegon Heights, Michigan

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
LS-HM-01A	Asphalt Shingle	No	M	Category I	ND/80% CH	Exterior	1,664 sq. ft.
LS-HM-01B	Asphalt Shingle	No	M	Category I	ND/NA	Exterior	NA
LS-HM-02A	Beige Linoleum	No	M	Category I	ND/ND	Living	NA
LS-HM-02B	Beige Linoleum	No	M	Category I	ND/ND	Dining	NA
LS-HM-03A	White Linoleum	No	M	Category I	ND	Kitchen	NA
LS-HM-03B	White Linoleum	No	M	Category I	ND	Kitchen	NA
LS-HM-04A	Grey Linoleum	No	M	Category I	ND	Bath	NA
LS-HM-04B	Grey Linoleum	No	M	Category I	ND	Bath	NA
LS-HM-05A	Floral Linoleum	No	M	Category I	ND	NE Bedroom	NA
LS-HM-05B	Floral Linoleum	No	M	Category I	ND	NE Bedroom	NA
LS-HM-06A	Drywall	No	M	Category II	ND/ND	Rear Entry Ceiling	NA
LS-HM-06B	Drywall	No	M	Category II	ND	Kitchen Wall	NA
LS-HM-07A	Glazing	Yes	M	Category II	ND	Dining	NA
LS-HM-07B	Glazing	Yes	M	Category II	ND	Kitchen	NA
LS-HS-01A	Plaster	No	S	Category II	ND/ND/2.25%CH	Living Wall	3,080 sq. ft.
LS-HS-01B	Plaster	No	S	Category II	ND/1.75% CH	NE Bedroom Wall	NA
LS-HS-01C	Plaster	No	S	Category II	ND/2.0% CH	SE Bedroom Wall	NA
LS-HS-01D	Plaster	No	S	Category II	1.5% CH	Kitchen Ceiling	NA
LS-HS-01E	Plaster	No	S	Category II	ND/ND/1.5% CH	Living Ceiling	NA

Material Types

= Miscellaneous building material TSI = Thermal System Insulation

= Surfacing Material S

= Point Count Analysis PC

= Chrysotile Asbestos

Abbreviations

= Not quantified NQ = Not applicable NA

= Not detected. Laboratory result is less than 1 % asbestos ND 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, 25 E. Lincoln 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

S = Surfacing Material

Abbreviations

lin. ft. = linear feet

sq. ft. = square feet

Table 4 - Summary of All Asbestos Containing Materials, 25 E. Lincoln St., Muskegon Heights, Michigan

Exterior - Asbestos Containing Mater	ials			
Location	Material Description		Friable	Approx. Quantity
Building Roof	Asphalt Shingles		No	1,664 sq. ft.
		Total		1,664 sq. ft.
Interior - Asbestos Containing Materi	als			
Location	Material Description		Friable	Approx. Quantity
Building Interior	Wall Plaster		No	2,358 sq. ft.
Building Interior	Ceiling Plaster		No	722 sq. ft.
		Total		3,080 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 27, 2016

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 119 W. Barney Ave., Muskegon Heights, MI 49444

Parcel ID: 61-26-185-092-0023-10

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 119 W. 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 .14 acre residential parcel which contains an approximate 1,008 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 living room, dining room, kitchen, bedroom and rear entry on the first floor while the second floor contains three bedrooms.

VISUAL INSPECTION AND SAMPLING

Asbestos Containing Materials Inspection

Mr. Aaron Paquet of Red Cedar Consulting (Red Cedar), an accredited State Of Michigan/EPA Asbestos Building Inspector (Accreditation Number A30955) whom completed training per the Michigan Asbestos

Project No.: 16-1070 Muskegon County Land Bank Parcel ID: 61-26-185-092-0023-10

Workers Accreditation Act 440 completed an inspection of the Subject Property on May 15, 2016 for suspected asbestos containing building materials.

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

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

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

- Asphalt Shingle
- Linoleum
- 1'x1' Ceiling Tile
- Drywall
- Glazing
- Fiberboard
- 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: 61-26-185-092-0023-10

Hazardous Materials Inspection

On May 15, 2016 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: 61-26-185-092-0023-10

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, first and second floors:

- Living (1 register, 5 sq. ft.)
- Dining (1 register, 5 sq. ft.)
- Kitchen (1 register, 15 sq. ft.)
- S Bedroom (1 register, 15 sq. ft.)
- 2nd Fl. NW Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- 2nd Fl. SW Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- Basement (1 in. dia. HVAC Wrapped Water Pipe, 16 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 (1 register, 5 sq. ft.)
- Dining (1 register, 5 sq. ft.)
- Kitchen (1 register, 15 sq. ft.)
- S Bedroom (1 register, 15 sq. ft.)
- 2nd Fl. NW Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- 2nd Fl. SW Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- Basement (1 in. dia. HVAC Wrapped Water Pipe, 16 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:

Muskegon County Land Bank Parcel ID: 61-26-185-092-0023-10

- Smoke Detector (4)
- Thermostat (1)
- 5-Gallon Container Misc. Paint (6)
- Gallon Container Misc. Adhesive (1)
- Gallon Container Misc. Paint (6)

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: 61-26-185-092-0023-10

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 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: 119 W. Barney St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64876 Date Collected: 05/15/16

Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Fiberglass - 20%

Other - 80%

Lab ID #: 64876 - 01

Cust. #: BS-HM-01A

Material: Asphalt Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Fiberglass - 20%

Other - 80%

Cust. #: BS-HM-01B

Lab ID #: 64876 - 02

Material: Asphalt Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64876 - 03

Asbestos Present: NO

Cellulose - 20%

Cust. #: BS-HM-02A

Material: Green Linoleum Multilayer

No Asbestos Observed

Fiberglass - 10% Other - 70%

Location:

Appearance: green, fibrous, nonhomogenous

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: 119 W. Barney St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64876

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64876 - 03a

Cust. #: BS-HM-02A

Material: Floor Tile

Location:

Appearance: blue,nonfibrous,homogenous

Layer: 2 of 3

Asbestos Present: NO

No Asbestos Observed

Cellulose - 5% Other - 95%

Lab ID #: 64876 - 03b Cust. #: BS-HM-02A

Material: Mastic

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Location:

Appearance: black, fibrous, homogenous

Layer: 3 of 3

Asbestos Present: NO

Cellulose - 20%

Cust. #: BS-HM-02B

Lab ID #: 64876 - 04

Material: Green Linoleum Multilayer

No Asbestos Observed

Fiberglass - 10% Other - 70%

Location:

Appearance: green, fibrous, nonhomogenous

Layer: 1 of 3

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

Robert T. Letarte Jr., Laboratory Director

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QAJVN



Test Method, Polarized Light Microscopy (PLM)

Project: 119 W. Barney St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64876

Date Collected: 05/15/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64876 - 04a

Cust. #: BS-HM-02B

Material: Floor Tile

Location:

Appearance: blue,nonfibrous,homogenous

Layer: 2 of 3

No Asbestos Observed

Asbestos Present: **NO** Cellulose - 5%

Lab ID #: 64876 - 04b Cust. #: BS-HM-02B

Just. #: BS-HM-02B

Material: Mastic

Location:

Appearance: black, fibrous, homogenous

Layer: 3 of 3

Asbestos Present: NO

No Asbestos Observed

Cellulose - 20% Other - 80%

Other - 95%

Lab ID #: 64876 - 05 Cust. #: BS-HM-03A

Cust. #: BS-HM-03A Material: Drywall

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: 119 W. Barney St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64876

Date Collected: 05/15/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 20%

Other - 80%

Lab ID #: 64876 - 06

Cust. #: BS-HM-03B

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Other - 100%

Cust. #: BS-HM-03B

Lab ID #: 64876 - 06a

Material: Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Lab ID #: 64876 - 07

Cust. #: BS-HM-04A

Material: 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: 119 W. Barney St

Report To:

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

ARI Report # 16-64876

Date Collected: 05/15/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64876 - 08

Cust. #: BS-HM-04B

Material: Glazing

Location:

Appearance: beige, nonfibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

Cellulose - 65%

Other - 5%

Lab ID #: 64876 - 09 Cust. #: BS-HM-05A

No Asbestos Observed

Mineral Wool - 30%

Material: White 1'x1' Ceiling Tile

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

Cellulose - 65%

Lab ID #: 64876 - 10 Cust. #: BS-HM-05B

No Asbestos Observed

Mineral Wool - 30%

Other - 5%

Location:

Appearance: beige, fibrous, homogenous

Material: White 1'x1' Ceiling Tile

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: 119 W. Barney St

Report To:

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

ARI Report # 16-64876

Date Collected: 05/15/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 95%

Other - 5%

Lab ID #: 64876 - 11 Cust. #: BS-HM-06A

Material: Fiberboard

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 95%

Other - 5%

Cust. #: BS-HM-06B

Lab ID #: 64876 - 12

Material: Fiberboard

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO No Asbestos Observed

Other - 100%

Lab ID #: 64876 - 13 Cust. #: BS-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

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 119 W. Barney St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64876

Date Collected: 05/15/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64876 - 13a

Cust. #: BS-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 #: 64876 - 14

Cust. #: BS-HS-01B

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 64876 - 14a

Cust. #: BS-HS-01B

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Asbestos Present: **NO**No Asbestos Observed

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

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 119 W. Barney St

Report To:

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

ARI Report # 16-64876

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Other - 100%

Lab ID #: 64876 - 15

Cust. #: BS-HS-01C

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 64876 - 15a

Cust. #: BS-HS-01C

Material: Plaster Base Coat

Location:

Appearance: grey, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 64876 - 16

Cust. #: BS-HS-01D

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

Asbestos Present: NO

No Asbestos Observed

Cellulose - 2%

Other - 98%

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: 119 W. Barney St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64876

Date Collected: 05/15/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 2%

Other - 98%

Lab ID #: 64876 - 16a Cust. #: BS-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

Other - 100%

Lab ID #: 64876 - 17 Cust. #: BS-HS-01E

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 64876 - 17a

Cust. #: BS-HS-01E

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

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

Layer: 2 of 2

Robert T. Letarte Jr., Laboratory Director

Cellulose - 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.

64876

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

APEX ARESEARCH

Date: Rush Relinquished by: Other Phone: Address: No hour Turn Around Times: (Circle One) City, St., Zip: Client Name: Lab ID 5-27-16 (888)449-4566 24 hour 72 hour # (S Red Cedar Consulting Lansing, PO Box 13216 BS - HM-02B Green Linoleum Multilayer BS- HM-02A BS-tm-06A Hiberband BS- HM-05B BS-+M-05A 35-4m-04B BS- +MM-04A BS-4m-03B BS- 4m-03A BS- HM-013 BS-HM-OIA (TTP) All Samples Except Plaster Client ID# MI 48901 Date: Received by: Fax: Mhite Drywall TACE VAL White I'S Green Lippleum Slazing Asphalt Shingle Glazido Daynall Asphalt Shingle (888) 448-8739 Asbestos: Bulk Mold: Lead: TEM: Material/Location Bulk Bulk **AHERA 7400** apaquet@redcedarconsulting.net PLM EPA 600, PC all samples with a detection of <5% ACM. WING TIP × Molfilayer Relinquished by: Wipe Wipe Tape Contact Person: Date of Survey: 5.15.16 Project: 119 Project#:_ Bulk/NOB Air Point Count BioSIS Volume W. Barney Aaron Paquet EPA Level II Paint Other Received by: Date: PCM Area Soil Viable Results Lab Use Only Log-In ____ Report_

Work Forms: COC

そのメス市のアメカウエ

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:			7		(S	K	<u>~</u>	E	Lab ID#	Other :	72 hour			Turn Arou	hone: (888)449-4566	City, St., Zip:	Address: _	Client Name:
Received by:			BS-15-01E	35-HS-01D	BS- HS- OIC	BS- HS-01B	BS- 45-01A	BS- HM-06B	Client ID#	(TTP) All Samples Except Plaster TEM:)			Turn Around Times: (Circle One)	9-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
NAV TO ZOIS			Plaster	Plaster	Plaster	Plaster	Plaster	Fiberboard	Material/Location	cept Plaster TEM: AHERA 7400	Mold: Bulk	Lead: Bulk	Asbestos: Bulk X		(888) 448-8			ng
Relinquished by:									cation	.00Bulk/NOB	Tape	Wipe	Wipe	apaquet@redcedarconsulting.net PLM EPA 600, PC all samples with a detection of <5% ACM.	Contact Person:	Project #:	Project: 119 >	Date of Survey:
									Volume	EPA Level II	BioSIS	Air Paint	Point Count	apaque ples with a de	erson: Aaron		19 W.	kπ
Received by:									Area	el II	Other Viable	Soil	PCM	c@redcedarconsu tection of <5%	Paquet		Barney St.	715-16
									Results			i		ACM.	•		Report	Lab Use Only

Rev: 12/03 Work Forms: COC

Red Cedar Consulting

Tables

Table 1 - Summary of Hazardous 119 W Barney Ave., Muskegon Heights, Michigan

Наг	Hazardous Materials Description and Location							
Location	Material Description	Quantity						
Living Room	Thermostat	1						
Rear Entry	Gallon Container Misc. Adhesive	1						
2 nd Fl. NW Bedroom	Smoke Detector	1						
2 nd Fl. SW Bedroom	Smoke Detector	2						
Basement	Smoke Detector	1						
Basement	5 Gallon Container Misc. Paint	6						
Basement	Gallon Container Misc. Paint	6						

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 119 W Barney Ave., Muskegon Heights, Michigan

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
BS-HM-01A	Asphalt Shingle	No	M	Category I	ND	Exterior	NA
BS-HM-01B	Asphalt Shingle	No	M	Category I	ND	Exterior	NA
BS-HM-02A	Green Linoleum Multilayer	No	M	Category I	ND/ND/ND	Kitchen	NA
BS-HM-02B	Green Linoleum Multilayer	No	M	Category I	ND/ND/ND	Kitchen	NA
BS-HM-03A	Drywall	No	M	Category II	ND	Kitchen Ceiling	NA
BS-HM-03B	Drywall	No	M	Category II	ND/ND	Kitchen Wall	NA
BS-HM-04A	Glazing	Yes	M	Category II	ND	S Bedroom	NA
BS-HM-04B	Glazing	Yes	M	Category II	ND	Dining	NA
BS-HM-05A	White 1'x1' Ceiling Tile	Yes	M	Category II	ND	2 nd Fl. Bath	NA
BS-HM-05B	White 1'x1' Ceiling Tile	Yes	M	Category II	ND	2 nd Fl. Bath	NA
BS-HM-06A	Fiberboard	Yes	M	Category II	ND	Basement	NA
BS-HM-06B	Fiberboard	Yes	M	Category II	ND	Basement	NA
BS-HS-01A	Plaster	No	S	Category II	ND/ND	Living Wall	NA
BS-HS-01B	Plaster	No	S	Category II	ND/ND	Bedroom Wall	NA
BS-HS-01C	Plaster	No	S	Category II	ND/ND	2 nd Fl. Landing Wall	NA
BS-HS-01D	Plaster	No	S	Category II	ND/ND	2 nd Fl. NE Bedroom Ceiling	NA
BS-HS-01E	Plaster	No	S	Category II	ND/ND	2 nd Fl. NW Bedroom 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, 119 W Barney Ave., Muskegon Heights, Michigan

Asbestos Containing Material Description and Location									
Location	Material Description	Condition	Material Type	Approx. Quantity					
Living (1 register, 5 sq. ft.) Dining (1 register, 5 sq. ft.) Kitchen (1 register, 15 sq. ft.) S Bedroom (1 register, 15 sq. ft.) 2 nd Fl. NW Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) 2 nd Fl. SW Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	110 sq. ft.				
Basement (1 in. dia. HVAC Wrapped Water Pipe, 16 lin. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	16 lin. 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, 119 W Barney Ave., Muskegon Heights, Michigan

Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Living (1 register, 5 sq. ft.) Dining (1 register, 5 sq. ft.) Kitchen (1 register, 15 sq. ft.) S Bedroom (1 register, 15 sq. ft.) 2 nd Fl. NW Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) 2 nd Fl. SW Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)	HVAC Duct Wrap		Yes	110 sq. ft.
		Total		110 sq. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Basement (1 in. dia. HVAC Wrapped Water Pipe, 16 lin. ft.)	HVAC Duct Wrap		Yes	16 lin. ft.
		Total		16 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

June 1, 2016

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 160 E Sherman Blvd., Muskegon Heights, MI 49444 Parcel ID: 61-26-185-148-0013-10

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 160 E Sherman 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 .06 acre residential parcel which contains a 306 sq. ft. attached garage and approximate 897 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 aluminum lap 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, bathroom two bedrooms.

VISUAL INSPECTION AND SAMPLING

Asbestos Containing Materials Inspection

Mr. Aaron Paquet of Red Cedar Consulting (Red Cedar), an accredited State Of Michigan/EPA Asbestos Building Inspector (Accreditation Number A30955) whom completed training per the Michigan Asbestos

Project No.: 16-1070 Muskegon County Land Bank Parcel ID: 61-26-185-148-0013-10

Workers Accreditation Act 440 completed an inspection of the Subject Property on May 24 and May 31, 2016 for suspected asbestos containing building materials.

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

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

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

- Rolled Roofing
- Asphalt Shingle
- Linoleum
- 1'x1' Ceiling Tile
- 2'x2' Ceiling 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.

Muskegon County Land Bank Parcel ID: 61-26-185-148-0013-10

Hazardous Materials Inspection

On May 24, 2016 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 and Air-O-Cell Pipe 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: 61-26-185-148-0013-10

Friable ACM's

A window glazing sample collected from a window in the front entry was found to contain up to 1.25% asbestos following analysis. The assessment to quantify the extent of this material identified eight windows at the following locations that would fall into the same homogenous group. The locations of the windows are listed below:

- Front Entry (7 windows 24" wide x 54" tall)
- Garage (1 window 30"wide x 22" tall)

HVAC Duct Wrap and Air-O-Cell Pipe Wrap identified in the Building in conjunction with the hot water heating system are classified as friable ACM. The visual assessment to quantify the extent of this material identified Friable ACM at the following locations within the basement and first floor:

- Crawl Space (Air-O-Cell Debris, 30 sq. ft.)
- Living (1 register, 15 sq. ft.)

Category I ACM

One type of resilient floor covering (Brick Linoleum 2-Layer) located within the kitchen was found to contain up to 20% Chrysotile asbestos. The assessment to quantify the extent of this material identified approximately 138 sq. ft. of this material within the Building.

Category II ACM

Plaster samples, collected from the kitchen were found to contain up to 2.25% asbestos following analysis. The assessment to quantify the extent of this material identified approximately 3,838 sq. ft. of plaster within the Building.

RECOMMENDATIONS

Asbestos Containing Materials

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

- Crawl Space (Air-O-Cell Debris, 30 sq. ft.)
- Living (1 register, 15 sq. ft.)

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

- Front Entry (7 windows 24" wide x 54" tall)
- Garage (1 window 30"wide x 22" tall)

Muskegon County Land Bank Parcel ID: 61-26-185-148-0013-10

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.

The Category I resilient floor covering (Brick Linoleum 2-Layer) 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 (4)
- 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.

Muskegon County Land Bank Parcel ID: 61-26-185-148-0013-10

> 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: 160 E Sherman Blvd

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-65111

Date Collected: 05/24/16 Date Received: 05/26/16 Date Analyzed: 05/31/16

Date Reported: 05/31/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Fiberglass - 40%

Other - 60%

Lab ID #: 65111 - 01

Cust. #: BD-HM-01A

Material: Rolled Roofing

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 2

Lab ID #: 65111 - 01a

Cust. #: BD-HM-01A

Asbestos Present: NO

No Asbestos Observed

Fiberglass - 40%

Other - 60%

Material: Rolled Roofing

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 65111 - 02

Cust. #: BD-HM-01B

Material: Rolled Roofing

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 2

Asbestos Present: NO

No Asbestos Observed

Fiberglass - 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: 160 E Sherman Blvd

Report To:

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

ARI Report # 16-65111

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/31/16 Date Reported: 05/31/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Fiberglass - 40%

Other - 60%

Lab ID #: 65111 - 02a

Cust. #: BD-HM-01B

Material: Rolled Roofing

Location:

Appearance: black,fibrous,homogenous

Layer: 2 of 2

Lab ID #: 65111 - 03

Cust. #: BD-HM-02A

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 20%

Other - 80%

Material: Asphalt Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 2

Lab ID #: 65111 - 03a Cust. #: BD-HM-02A

Material: Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Cellulose - 20%

Other - 80%

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

Robert T. Letarte Jr., Laboratory Director

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



Test Method, Polarized Light Microscopy (PLM)

Project: 160 E Sherman Blvd

Report To:

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

ARI Report # 16-65111

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/31/16 Date Reported: 05/31/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 20%

Other - 80%

Lab ID #: 65111 - 04

Cust. #: BD-HM-02B

Material: Asphalt Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 2

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 20%

Other - 80%

Lab ID #: 65111 - 04a Cust. #: BD-HM-02B

Material: Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 65111 - 05

Asbestos Present: NO

Cellulose - 40%

Cust. #: BD-HM-03A

Material: Brick Linoleum 2 Layer

No Asbestos Observed

Other - 60%

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)

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

ARI Report # 16-65111

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/31/16

Date Reported: 05/31/16

Sample Information

Asbestos Type/Percent

Asbestos Present: YES

Chrysotile - 20%

Non-Asbestos

Other - 80%

Lab ID #: 65111 - 05a

Cust. #: BD-HM-03A

Material: Linoleum

Location:

Appearance: red,fibrous,nonhomogenous

Layer: 2 of 2

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 40%

Other - 60%

Lab ID #: 65111 - 06 Cust. #: BD-HM-03B

Material: Brick Linoleum 2 Layer

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 2

Lab ID #: 65111 - 06a

Cust. #: BD-HM-03B

Material: Linoleum

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: 160 E Sherman Blvd

Report To:

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

ARI Report # 16-65111

Date Collected: 05/24/16

Date Received: 05/26/16 Date Analyzed: 05/31/16

Date Reported: 05/31/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65111 - 07

Cust. #: BD-HM-04A

Material: White Linoleum Multilayer

Location:

Appearance: white, fibrous, homogenous

Layer: 1 of 9

Asbestos Present: NO No Asbestos Observed

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 15% Fiberglass - 2%

Other - 83%

Synthetic - 2%

Other - 98%

Lab ID #: 65111 - 07a

Cust. #: BD-HM-04A

Material: Floor Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 9

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Lab ID #: 65111 - 07b Cust. #: BD-HM-04A

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 3 of 9

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: 160 E Sherman Blvd

Report To:

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

ARI Report # 16-65111

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/31/16

Date Reported: 05/31/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 65111 - 07c

Cust. #: BD-HM-04A

Material: Floor Tile

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 4 of 9

Asbestos Present: **NO**

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Other - 100%

Lab ID #: 65111 - 07d Cust. #: BD-HM-04A

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 5 of 9

Lab ID #: 65111 - 07e

Cust. #: BD-HM-04A

Material: Floor Tile

Location:

Appearance: green, nonfibrous, homogenous

Layer: 6 of 9

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: 160 E Sherman Blvd

Report To:

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

ARI Report # Date Collected: 05/24/16

16-65111

Date Received: 05/26/16

Date Analyzed: 05/31/16

Date Reported: 05/31/16

Sample Information

Asbestos Type/Percent

No Asbestos Observed

Non-Asbestos

Lab ID #: 65111 - 07f

Cust. #: BD-HM-04A

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 7 of 9

Lab ID #: 65111 - 07g

Cust. #: BD-HM-04A

Material: Floor Tile

Location:

Appearance: beige, fibrous, homogenous

Layer: 8 of 9

Lab ID #: 65111 - 07h

Cust. #: BD-HM-04A

Material: Glue

Location:

Appearance: brown, fibrous, homogenous

Layer: 9 of 9

Asbestos Present: NO

Other - 100%

Asbestos Present: **NO** No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Cellulose - 5%

Cellulose - 2%

Other - 98%

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: 160 E Sherman Blvd

Report To:

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

ARI Report # 16-65111

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/31/16 Date Reported: 05/31/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65111 - 08

Cust. #: BD-HM-04B

Material: White Linoleum Multilayer

Location:

Appearance: white, fibrous, homogenous

Layer: 1 of 9

Asbestos Present: NO No Asbestos Observed

Asbestos Present: **NO**

No Asbestos Observed

No Asbestos Observed

Synthetic - 2%

Other - 98%

Other - 100%

Lab ID #: 65111 - 08a

Cust. #: BD-HM-04B

Material: Floor Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 9

Asbestos Present: NO Lab ID #: 65111 - 08b

Cust. #: BD-HM-04B

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 3 of 9

Cellulose - 15%

Fiberglass - 2%

Other - 83%

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: 160 E Sherman Blvd

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-65111

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/31/16 Date Reported: 05/31/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65111 - 08c

Cust. #: BD-HM-04B

Material: Floor Tile

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 4 of 9

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Lab ID #: 65111 - 08d

Cust. #: BD-HM-04B

Material: Glue

Location:

Location.

Appearance: clear,nonfibrous,homogenous

Layer: 5 of 9

Lab ID #: 65111 - 08e

Cust. #: BD-HM-04B

Material: Floor Tile

Location:

Appearance: green,nonfibrous,homogenous

Layer: 6 of 9

estos Type/Tereent Non-Asbes

NO Other 1000

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: 160 E Sherman Blvd

Report To:

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

ARI Report # 16-65111

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/31/16 Date Reported: 05/31/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65111 - 08f

Cust. #: BD-HM-04B

Material: Glue Location:

Appearance: clear,nonfibrous,homogenous

Layer: 7 of 9

Lab ID #: 65111 - 08g

Cust. #: BD-HM-04B

Material: Floor Tile

Location:

Appearance: beige, fibrous, homogenous

Layer: 8 of 9

Lab ID #: 65111 - 08h

Cust. #: BD-HM-04B

Material: Glue

Location:

Appearance: brown, fibrous, homogenous

Layer: 9 of 9

Asbestos Present: NO

Other - 100%

Cellulose - 5%

Cellulose - 2%

Other - 98%

Other - 95%

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: 160 E Sherman Blvd

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-65111

Date Collected: 05/24/16 Date Received: 05/26/16 Date Analyzed: 05/31/16

Date Reported: 05/31/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 80%

Other - 20%

Lab ID #: 65111 - 09

Cust. #: BD-HM-05A

Material: White 1x1 Smooth Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 65111 - 10

Asbestos Present: NO

No Asbestos Observed

Cellulose - 80%

Other - 20%

Cust. #: BD-HM-05B

Material: White 1x1 Smooth Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 65111 - 11

Cust. #: BD-HM-06A

Asbestos Present: NO

No Asbestos Observed

Cellulose - 30%

Fiberglass - 20%

Perlite - 20%

Other - 30%

Location:

Appearance: beige, fibrous, homogenous

Material: White 1x1 Swirl Ceiling Tile

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: 160 E Sherman Blvd

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-65111

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/31/16 Date Reported: 05/31/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65111 - 12

Cust. #: BD-HM-06B

Material: White 1x1 Swirl Ceiling Tile

Location:

Appearance: beige, fibrous, homogenous

Asbestos Present: NO

No Asbestos Observed

Cellulose - 30%

Fiberglass - 20% Perlite - 20%

Other - 30%

Layer: 1 of 1

Lab ID #: 65111 - 13

Cust. #: BD-HM-07A

Material: White 2x2 Ceiling Tile

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Cellulose - 30%

Fiberglass - 20%

Perlite - 30%

Other - 20%

Lab ID #: 65111 - 14

Cust. #: BD-HM-07B

Material: White 2x2 Ceiling Tile

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Cellulose - 30%

Fiberglass - 20%

Perlite - 30%

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: 160 E Sherman Blvd

Report To:

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

ARI Report # 16-65111

Date Collected: 05/24/16 Date Received: 05/26/16 Date Analyzed: 05/31/16

Date Reported: 05/31/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65111 - 15

Cust. #: BD-HM-08A

Material: Drywall

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 65111 - 16

Cust. #: BD-HM-08B

Material: Drywall

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 65111 - 17

Cust. #: BD-HM-09A

Material: Glazing

Location:

Appearance: white, fibrous, nonhomogenous Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Cellulose - 20%

Other - 80%

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 20%

Other - 80%

Asbestos Present: YES Other - 98.75%

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: 160 E Sherman Blvd

Report To:

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

ARI Report # Date Collected: 05/24/16 Date Received: 05/26/16

> Date Analyzed: 05/31/16 Date Reported: 05/31/16

16-65111

Lansing, MI 48901

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65111 - 18

Cust. #: BD-HM-09B Material: Glazing

Location:

NOT ANALYZED

Appearance: Layer: of

Lab ID #: 65111 - 19

Cust. #: BD-HS-01A

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 65111 - 19a

Cust. #: BD-HS-01A

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 2

Asbestos Present:

Asbestos Present: **NO**

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Cellulose - 1%

Other - 100%

Hair - 1%

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: 160 E Sherman Blvd

Report To:

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

ARI Report # 16-65111 Date Collected: 05/24/16

Date Received: 05/26/16 Date Analyzed: 05/31/16

Date Reported: 05/31/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 65111 - 20

Cust. #: BD-HS-01B

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 65111 - 20a

Cust. #: BD-HS-01B

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: **NO**

No Asbestos Observed

Hair - 1%

Other - 98%

Cellulose - 1%

Lab ID #: 65111 - 21

Cust. #: BD-HS-01C

Material: Plaster Texture

Location:

Appearance: white, fibrous, homogenous Layer: 1 of 4

Asbestos Present: YES

Chrysotile - 2.25%

Other - 97.75%

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: 160 E Sherman Blvd

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-65111

Date Collected: 05/24/16 Date Received: 05/26/16 Date Analyzed: 05/31/16

Date Reported: 05/31/16

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%

Hair - 1%

Hair - 2%

Other - 98%

Other - 99%

Lab ID #: 65111 - 21a

Cust. #: BD-HS-01C

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 4

Lab ID #: 65111 - 21b

Cust. #: BD-HS-01C

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

Layer: 3 of 4

Lab ID #: 65111 - 21c

Cust. #: BD-HS-01C

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, 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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65111

AFEX 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: 5-25-16	Relinquished by:)	N 70-13	70 70 Hm-057	9 BD-4m-0SA	& BO-HM-OUB	7 BO-WM-04A	850-m4-08	5 BO-4m-03A		30-mm-03A	30- Hm-013	BD-4m-01A	Lab ID # Clier				Rush 24 hour	Turn Around Times: (Circle One)	Phone: (888) 449-4566	City, St., Zip: Lansing,	Address: PO Box 13216	Client Name: Red Cedar
	Date: 5-75-16	Received by:		ן ע											Client ID#	*** WIT SUMDIES EXCEDE A				imes: (Circle	Fax: (8)	MI 48901	3216	Red Cedar Consulting
	516	S	Chief Et Jen (Chief)	1 1 5 (S) C /	white 1x1 Snooth Calling Tile	_	white Linoleum M	1			Apphalt Shingle	Asphalt Shingle	Rolled Rosting	Rolled Roofing	Material/Location	TEM: AHERA 7400	Mold: Bulk	Lead: Bulk	Asbestos: Bulk x	One) PLM EPA	(888) 448-8739			
	Date:	Relinquished by:	21110	1100 7:10	William Time	eiling Tile	Multi Layer	ulti Layer	2-layer	2-Layer					cation	00Bulk/NOB	Tape	Wipe	Wipe	\ 600, PC all samples	Contact Person	Project #:	Project: 160	Date of Survey:
															Volume	B EPA Level II	BioSIS	Air Paint	Point Count		n: Aaron		iμ	urvey: 5.24.16
PEX RESEARCH	Date:	2													Area	el II	Other Viable	Soil	PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	Paquet		Sherman Blud.	1.16
Ž	0.07	6 1672V													Results					Iting.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



Relinquished by:	9	B	51	18	41	16	5	23	13	2	Lab ID#				Rush 24 hour	Turn Arou	Phone: (888) 449-456	City, St., Zip:	Address:	Client Name:
Received by: Date:	30-HS-01C	BD-HS-013	30-HS-01A	30-4m-09B	BD-HM-09A	BD- HM-08B	3D-4M-08A	BD- HM-073	3D-14M-07A	BD- HM-OUB	Client ID#	TEM:	7770			Around Times: (Circle One)	49-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
y: Relinquished by:	Plaster	Plaster	Plaster	(nazing	Glazing	Daywall	Daywall	White and Gilling TIVE	BYT COILID EXE AINCH	white 1x1 Swid Gilling Tile	Material/Location	TEM: AHERA 7400	Mold: Bulk Tape	Lead: Bulk Wipe	Asbestos: Bulk X Wipe	PLM EPA	(888) 448-8739	P ₁	P	
shed by: Received by: Date :										<u>e</u>	Volume Area	Bulk/NOB EPA Level II	BioSIS Other	Air Paint	Point Count PCM	apaquet@redc 600, PC all samples with a detection	Contact Person: Aaron Paquet		Project: 160 E. Shorman Blud.	Date of Survey: ス. コルロ
u by: The Nay 2 6 2016											ea Results		Viable	Soil	A	apaquet@redcedarconsulting.net with a detection of <5% ACM.			Blvd. Report	Lab Use Only

Rev: 12/03 Work Forms: COC

SEASON CONTRACTOR



Test Method, Polarized Light Microscopy (PLM)

Project: 160 E Sherman Blvd

Report To:

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

ARI Report # 16-65171

Date Collected: 05/31/16

Date Received: 06/01/16 Date Analyzed: 06/01/16 Date Reported: 06/01/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 65171 - 01

Cust. #: BD-HS-01D

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 65171 - 01a

Cust. #: BD-HS-01D

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 2%

Other - 98%

Other - 100%

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Lab ID #: 65171 - 02

Cust. #: BD-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

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 160 E Sherman Blvd

Report To:

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

ARI Report # Date Collected: 05/31/16

16-65171

Date Received: 06/01/16

Date Analyzed: 06/01/16

Date Reported: 06/01/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 2%

Other - 98%

Lab ID #: 65171 - 02a

Cust. #: BD-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

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

65171

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: 531-6				7	ļ.,	Lab ID# C			48 hour 72 hour	Rush 24 hour	Turn Around	Phone: (888) 449-4566	City, St., Zip: Lansing,	Address: PO B	Client Name: Red of
Received by:				12-12-01F	Q10-88-01)	Client ID#	TEM:				Around Times: (Circle One)	66 Fax:	ing, MI 48901	PO Box 13216	Red Cedar Consulting
Received by: ReDate: S-31-4C Di				Plaster.	Floster	Material/Location	ept Flaster TEM: AHERA 7400	Bulk	Lead: Bulk	Asbestos: Bulk X	ATM EPA	(888) 448-8739			ĽQ
Relinquished by:						on Volume	Bulk/NOBEP/	Tape BioSIS	Wipe Air	Wipe Point Count	apaquet@redcedarconsulting.net 600, PC all samples with a detection of <5% ACM.	son:	Project #:	Project: 160 F	Date of Survey:
Received by:						Area	EPA Level II	Other Via	PaintSoil	PCM	aquet@redcedarcon a detection of <	Aaron Paquet	4 60 1 60 100	chorman River	ンパーパ
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Rev: 12/03 Work Forms: COC

APEX RESEARCH

Red Cedar Consulting

Tables

Table 1 - Summary of Hazardous Materials, 160 E Sherman Blvd., Muskegon Heights, Michigan

Hazardous Materials Description and Location									
Location	Material Description								
Garage	Television	2							
Kitchen	Smoke Detector	1							
NE Bedroom	Smoke Detector	1							
SE Bedroom	Smoke Detector	1							
Basement	Smoke Detector	1							

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 160 E Sherman Blvd., Muskegon Heights, Michigan

Sample Number	* Sample Heccription		Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
BD-HM-01A	Rolled Roofing	No	M	Category I	ND/ND	Exterior	NA
BD-HM-01B	Rolled Roofing	No	M	Category I	ND/ND	Exterior	NA
BD-HM-02A	Asphalt Shingle	No	M	Category I	ND/ND	Exterior	NA
BD-HM-02B	Asphalt Shingle	No	M	Category I	ND/ND	Exterior	NA
BD-HM-03A	Brick Linoleum 2-Layer	No	M	Category I	ND/20%CH	Kitchen	138 sq. ft.
BD-HM-03B	Brick Linoleum 2-Layer	No	M	Category I	ND/NA	Kitchen	NA
BD-HM-04A	White Linoleum Multilayer	No	M	Category I	ND/ND/ND/ND/ND /ND/ND/ND/ND	Bathroom	NA
BD-HM-04B	White Linoleum Multilayer	No	М	Category I	ND/ND/ND/ND/ND/ND/ND/ND/ND/ND/ND/ND/ND/N	Bathroom	NA
BD-HM-05A	White 1'x1' Smooth Ceiling Tile	Yes	M	Category II	ND	Living	NA
BD-HM-05B	White 1'x1' Smooth Ceiling Tile	Yes	M	Category II	ND	Living	NA
BD-HM-06A	White 1'x1' Swirl Ceiling Tile	Yes	M	Category II	ND	Living	NA
BD-HM-06B	White 1'x1' Swirl Ceiling Tile	Yes	M	Category II	ND	Living	NA
BD-HM-07A	White 2'x2' Ceiling Tile	Yes	M	Category II	ND	NE Bedroom	NA
BD-HM-07B	White 2'x2' Ceiling Tile	Yes	M	Category II	ND	NE Bedroom	NA
BD-HM-08A	Drywall	No	M	Category II	ND	NE Bedroom Wall	NA
BD-HM-08B	Drywall	NO	M	Category II	ND	NE Bedroom Wall	NA
BD-HM-09A	Glazing	Yes	M	Category II	1.25%CH	Front Entry	8 Windows
BD-HM-09B	Glazing	Yes	M	Category II	NA	Front Entry	NA
BD-HS-01A	Plaster	No	S	Category II	ND/ND	Kitchen Wall	NA
BD-HS-01B	Plaster	No	S	Category II	ND/ND	Hallway Wall	NA
BD-HS-01C	Plaster	No	S	Category II	2.25%CH/ND/ND/ ND	Kitchen Ceiling	3,838 sq. ft.
BD-HS-01D	Plaster	No	S	Category II	ND/ND	Kitchen Ceiling	NA
BD-HS-01E	Plaster	No	S	Category II	ND/ND	NE Bedroom Wall	NA

Notes:

Material Types

Abbreviations

M = Miscellaneous building material

NQ = Not quantified

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 160 E Sherman Blvd., 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, 160 E Sherman Blvd., Muskegon Heights, Michigan

Asbestos Containing Material Description and Location										
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity					
Crawl Space (Air-O-Cell Debris, 30 sq. ft.)	Air-O-Cell Debris	Yes	Fair	TSI	30 sq. ft.					
Living (1 register, 15 sq. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	15 sq. ft.					

Notes:

Material Types

M = Miscellaneous building material TSI = Thermal System Insulation

= Surfacing Material

Abbreviations

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

Table 4 - Summary of All Asbestos Containing Materials, 160 E Sherman Blvd., Muskegon Heights, Michigan

Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Kitchen	Brick Linoleum 2-Layer		No	138 sq. ft.
		Total		138 sq. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Crawl Space (Air-O-Cell Debris, 30 sq. ft.)	Air-O-Cell Debris		Yes	30 sq. ft.
		Total		30 sq. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Living (1 register, 15 sq. ft.)	HVAC Duct Wrap		Yes	15 sq. ft.
		Total		15 sq. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Front Entry (7 windows 24" wide x 54" tall)	Glazing		Yes	7 Windows
Garage (1 window 30"wide x 22" tall)	Glazing		Yes	1 Window
		Total		8 Windows
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
1st Floor	Wall Plaster		No	2,941 sq. ft.
1st Floor	Ceiling Plaster		No	897 sq. ft.
		Total		3,838 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, 160 E Sherman Blvd., 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 27, 2016

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 247 W Rotterdam Ave., Muskegon Heights, MI 49444

Parcel ID: 61-26-770-022-0001-10

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 247 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 .07 acre residential parcel which contains a 216 sq. ft. attached garage and approximate 804 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 front porch, living room, kitchen, bath, two bedrooms and rear entry.

VISUAL INSPECTION AND SAMPLING

Asbestos Containing Materials Inspection

Mr. Aaron Paquet of Red Cedar Consulting (Red Cedar), an accredited State Of Michigan/EPA Asbestos Building Inspector (Accreditation Number A30955) whom completed training per the Michigan Asbestos Workers Accreditation Act 440 completed an inspection of the Subject Property on May 8, 2016 for suspected asbestos containing building materials.

Project No.: 16-1070 Muskegon County Land Bank Parcel ID: 61-26-770-022-0001-10

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
- Linoleum
- 1'x1' Smooth Ceiling Tile
- 1'x1' Pitted Ceiling Tile
- 12"x12" Vinyl Tile
- 9"x9" Vinyl Tile
- 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.

Muskegon County Land Bank Parcel ID: 61-26-770-022-0001-10

Hazardous Materials Inspection

On May 8, 2016 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: 61-26-770-022-0001-10

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, first and second floors:

- Living (1 register, 15 sq. ft.)
- Kitchen (1 register, 15 sq. ft.)
- Bathroom (1 register, 15 sq. ft.)
- S Bedroom (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.

- Living (1 register, 15 sq. ft.)
- Kitchen (1 register, 15 sq. ft.)
- Bathroom (1 register, 15 sq. ft.)
- S Bedroom (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:

- Gallon Container Misc. Solvent (1)
- Automobile Tire (78)
- Smoke Detector (2)
- Gallon Container Misc. Paint (3)
- Television (1)

Muskegon County Land Bank Parcel ID: 61-26-770-022-0001-10

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: 61-26-770-022-0001-10

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

Caron Pogwet

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: 247 W Rotterdam St

Report To:

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

ARI Report #

16-64728 Date Collected: 05/08/16

Date Received: 05/11/16

Date Analyzed: 05/14/16 Date Reported: 05/17/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 20%

Other - 80%

Lab ID #: 64728 - 01

Cust. #: RT-HM-01A

Material: Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 20% Other - 80%

Other - 100%

Lab ID #: 64728 - 02 Cust. #: RT-HM-01B

Material: Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Lab ID #: 64728 - 03 Cust. #: RT-HM-02A

Material: Brown Linoleum

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: 247 W Rotterdam St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64728

Date Collected: 05/08/16 Date Received: 05/11/16

Date Analyzed: 05/14/16 Date Reported: 05/17/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 5%

Other - 95%

Lab ID #: 64728 - 03a

Cust. #: RT-HM-02A

Material: White 9x9 Vinyl Tile

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Other - 100%

Cust. #: RT-HM-02B

Lab ID #: 64728 - 04

Material: Brown Linoleum

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 64728 - 04a

Cust. #: RT-HM-02B

Material: White 9x9 Vinyl Tile

Location:

Appearance: white, nonfibrous, 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.



Test Method, Polarized Light Microscopy (PLM)

Project: 247 W Rotterdam St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64728

Date Collected: 05/08/16 Date Received: 05/11/16

Date Analyzed: 05/14/16 Date Reported: 05/17/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64728 - 05

Cust. #: RT-HM-03A

Material: Beige 12x12 Vinyl Tile

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Lab ID #: 64728 - 06 Cust. #: RT-HM-03B

Material: Beige 12x12 Vinyl Tile

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 1 of 1

Lab ID #: 64728 - 07

Cust. #: RT-HM-04A

Material: Red Linoleum

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

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

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 247 W Rotterdam St

Report To:

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

ARI Report # 16-64728

Date Collected: 05/08/16 Date Received: 05/11/16

Date Analyzed: 05/14/16 Date Reported: 05/17/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 30%

Other - 70%

Lab ID #: 64728 - 08

Cust. #: RT-HM-04B

Material: Red Linoleum

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64728 - 09

Cust. #: RT-HM-05A

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 60%

Other - 40%

Material: White Smooth 1x1 Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64728 - 10

Cust. #: RT-HM-05B

Material: White Smooth 1x1 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.



Test Method, Polarized Light Microscopy (PLM)

Project: 247 W Rotterdam St

Report To:

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

ARI Report # 16-64728

Date Collected: 05/08/16 Date Received: 05/11/16 Date Analyzed: 05/14/16

Date Reported: 05/17/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64728 - 11

Cust. #: RT-HM-06A

Material: White Pitted 1x1 Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64728 - 12

Cust. #: RT-HM-06B

Material: White Pitted 1x1 Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64728 - 13

Cust. #: RT-HM-07A

Material: Glazing

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Cellulose - 80%

Other - 20%

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 80%

Other - 20%

Other - 100%

POINT COUNT RESULT

Asbestos Present: NO

Chrysotile - Trace

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: 247 W Rotterdam St

Report To:

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

ARI Report # 16-64728

Date Collected: 05/08/16 Date Received: 05/11/16

Date Analyzed: 05/14/16 Date Reported: 05/17/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Other - 99.50%

Other - 100%

Other - 100%

Lab ID #: 64728 - 14

Cust. #: RT-HM-07B

Material: Glazing

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: **NO**

POINT COUNT RESULT

Lab ID #: 64728 - 15

Cust. #: RT-HM-08A

Material: Glazing

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 1 of 1

Lab ID #: 64728 - 16

Cust. #: RT-HM-08B

Material: Glazing

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 1

Chrysotile - 0.50%

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: 247 W Rotterdam St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64728

Date Collected: 05/08/16 Date Received: 05/11/16

Date Analyzed: 05/14/16 Date Reported: 05/17/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64728 - 17

Cust. #: RT-HM-09A

Material: White 12x12 Vinyl Tile

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Other - 100%

Lab ID #: 64728 - 17a Cust. #: RT-HM-09A

Cust. #: KI-HM-05

Material: Mastic

Location:

Appearance: black,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 64728 - 18

Cust. #: RT-HM-09B

Material: White 12x12 Vinyl Tile

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: 247 W Rotterdam St

Report To:

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

ARI Report #

16-64728

Date Collected: 05/08/16

Date Received: 05/11/16

Date Analyzed: 05/14/16

Date Reported: 05/17/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64728 - 18a

Cust. #: RT-HM-09B

Material: Mastic

Location:

Appearance: black,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 64728 - 19

Cust. #: RT-HS-01A

Material: Plaster

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 64728 - 19a

Cust. #: RT-HS-01A

Material: Mortar

Location:

Appearance: grey,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

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 247 W Rotterdam St

Report To:

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

ARI Report # 16-64728

Date Collected: 05/08/16 Date Received: 05/11/16

Date Analyzed: 05/14/16 Date Reported: 05/17/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64728 - 20

Cust. #: RT-HS-01B

Material: Plaster

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

No Asbestos Observed

Asbestos Present: **NO**

Cellulose - 2%

Other - 98%

Lab ID #: 64728 - 20a Cust. #: RT-HS-01B

Material: Mortar

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Lab ID #: 64728 - 21 Cust. #: RT-HS-01C

Material: Plaster

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: 247 W Rotterdam St

Report To:

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

ARI Report #

16-64728 Date Collected: 05/08/16

Date Received: 05/11/16 Date Analyzed: 05/14/16

Date Reported: 05/17/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64728 - 21a

Cust. #: RT-HS-01C Material: Mortar

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Asbestos Present: NO No Asbestos Observed

Cellulose - 2%

Other - 98%

Lab ID #: 64728 - 22

Cust. #: RT-HS-01D

Material: Plaster

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 64728 - 22a Cust. #: RT-HS-01D

Material: Mortar

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Asbestos Present: **NO** No Asbestos Observed

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: 247 W Rotterdam St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64728

Date Collected: 05/08/16 Date Received: 05/11/16

Date Analyzed: 05/14/16 Date Reported: 05/17/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Other - 100%

Other - 100%

Lab ID #: 64728 - 23

Cust. #: RT-HS-01E

Material: Plaster

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

No Asbestos Observed

Asbestos Present: **NO**

No Asbestos Observed

Asbestos Present: NO

Lab ID #: 64728 - 23a

Cust. #: RT-HS-01E

Material: Mortar

Location:

Appearance: grey,nonfibrous,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

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research 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 : 5-10-6 Date :	Relinquished by: Received by:	11 RT-4m-06A	10 RI-HM-05B	9 PT-Hm-05A	Pro-WA-12 Q	7 RI-HM-OHA	6 RT-HM-03B	5 RT-HM-03A	4 27-HM-02B	3 RI-HM-024	BI-HM-OIR	PI-4M-01A	Lab ID # Client ID #	Other: 4 A (TTP) All Samples Except	48 hour 72 hour	Rush 24 hour	Lurn Around 1 imes: (Circle One)		449-4566	City, St., Zip: Lansing, MI 48	Address: PO Box 13216	Client Name: Red Cedar Consulting
APEX RESEARCH Date : Date :	1016	white Bres Ir	white smooth (x)	white smooth fal Ceiling Tile	8 Red Linsleam	4 Red Lina leur		Beige 12x12 ving/Tile			Shingle	Shingle	† Material/Location Volume Area Results	Mold: Bulk Tape BioSISOther Viable		os. Dur wipe roun count rcw	PLM EPA 600, PC all samples with a determine of the point County o		Fax: (888) 448-8739 (Ontact Person: Aaron Paquet		Project: 247 W. Rotterdam St. Re	Date of Survey: 5-8-16
and the second	l												ults				·	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

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			viny / Tile	white 12x12	17 RT-HM-09A	
				←	16 RT-HM-0818	
					B RT-4m -084	
				_ (14 PT-14m 078	
				Chazin	13 RT-HM-07A	
A Marie Ballon			ar Ceiling Tile	White Pither 10-1 Ceiling	2 RT-HM-08B	
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	vel II	DB EPA Level II	AHERA 7400 Bulk/NOB	TEM:		
	Other Viable	BioSIS	Tape	Mold: Bulk	(TTP) All Samples Except	Other: How
	nt Soil	Air Paint	Wipe	Lead: Bulk	lour	48 hour 72 hour
	PCM	Point Count	Wipe	Asbestos: Bulk	our	Rush 24 hour
ting.net (CM.	apaquet@redcedarconsulting.net with a detection of <5% ACM.		EPA 600, PC	(Circle One) PLM	Around Times: (Circle One)	
	Aaron Paquet	유		(888) 448-8739	(888) 449-4566 Fax:	Phone: (88)
repoir	5		Project #:		D: Lansing, MI 48901	City, St., Zip:
	Rollerdam St	ر ک	Project: 247		PO Box 13216	Address:
Lab Use Only	9-8-18		Date of Survey :	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



Relinquished by: Come control R						23 RT-45-01D	Lab ID# Client ID#		Other: HDw/ (TIP) all s	48 hour 72 hour	Rush 24 hour	Turn Around Times: (Circle One)	Phone: (888) 449-4566	City, St., Zip: Lansing, MI	Address: PO Box 13216	ame: Red
Received by: Relinqu Date: NAY 1 2016 Date:	36000 (IIII)					10 Plaster	D# Material/Location	TEM: AHERA 7400	Mold: Bulk Tape	Lead: Bulk Wipe	Asbestos: Bulk Wipe	PLM EPA	48-8739	48901		Cedar Consulting
Relinquished by: Receive							Volume /	Bulk/NOB EPA Level II	BioSIS Other	Air Paint	Point Count	apaquet@redcedarconsulting.net 600, PC all samples with a detection of <5% ACM.	Contact Person: Aaron Paquet		E	Date of Survey: 5-8-16
Received by:							Area Results		erViable	Soil	PCM	edcedarconsulting.net stion of <5% ACM.	uet	- 1	Jan St	

Rev: 12/03 Work Forms: COC

PORK RECEIVED

Red Cedar Consulting

Tables

Table 1 - Summary of Hazardous Materials, 247 W Rotterdam Ave., Muskegon Heights, Michigan

На	azardous Materials Description and Location	
Location	Material Description	Quantity
Garage	Gallon Container Misc. Solvent	1
Exterior	Automobile Tire	3
Garage	Automobile Tire	75
Living	Smoke Detector	1
S Bedroom	Smoke Detector	1
S Bedroom	Gallon Container Misc. Paint	1
Basement	Gallon Container Misc. Paint	2
Basement	Television	1

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 247 W Rotterdam Ave., Muskegon Heights, Michigan

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
RT-HM-01A	Asphalt Shingle	No	M	Category I	ND	Exterior	NA
RT-HM-01B	Asphalt Shingle	No	M	Category I	ND	Exterior	NA
RT-HM-02A	Brown Linoleum/White 9x9 Vinyl Tile	No	M	Category I	ND/ND	Kitchen	NA
RT-HM-02B	Brown Linoleum/White 9x9 Vinyl Tile	No	M	Category I	ND/ND	Kitchen	NA
RT-HM-03A	Beige 12x12 Vinyl Tile	No	M	Category I	ND/ND	Bathroom	NA
RT-HM-03B	Beige 12x12 Vinyl Tile	No	M	Category I	ND/ND	Bathroom	NA
RT-HM-04A	Red Linoleum	No	M	Category I	ND	Rear Entry	NA
RT-HM-04B	Red Linoleum	No	M	Category I	ND	Rear Entry	NA
RT-HM-05A	White Smooth 1'x1' Ceiling Tile	Yes	M	Category II	ND	Kitchen	NA
RT-HM-05B	White Smooth 1'x1' Ceiling Tile	Yes	M	Category II	ND	Kitchen	NA
RT-HM-06A	White Pitted 1'x1' Ceiling Tile	Yes	M	Category II	ND	Living	NA
RT-HM-06B	White Pitted 1'x1' Ceiling Tile	Yes	M	Category II	ND	Living	NA
RT-HM-07A	Glazing	Yes	M	Category II	Trace CH	Front Porch	NA
RT-HM-07B	Glazing	Yes	M	Category II	0.5% CH	Front Porch	NA
RT-HM-08A	Glazing	Yes	M	Category II	ND	Living	NA
RT-HM-08B	Glazing	Yes	M	Category II	ND	N Bedroom	NA
RT-HM-09A	White 12x12 Vinyl Tile	No	M	Category I	ND/ND	Basement	NA
RT-HM-09B	White 12x12 Vinyl Tile	No	M	Category I	ND/ND	Basement	NA
RT-HS-01A	Plaster	No	S	Category II	ND/ND	Living Room Wall	NA
RT-HS-01B	Plaster	No	S	Category II	ND/ND	Hall Wall	NA
RT-HS-01C	Plaster	No	S	Category II	ND/ND	N Bedroom Wall	NA
RT-HS-01D	Plaster	No	S	Category II	ND/ND	S Bedroom Ceiling	NA
RT-HS-01E	Plaster	No	S	Category II	ND/ND	N Bedroom Ceiling	NA

Notes:

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

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 247 W Rotterdam Ave., Muskegon Heights, Michigan

 $\begin{array}{lll} M &= \mbox{Miscellaneous building material} & \mbox{NQ} &= \mbox{Not quantified} \\ TSI &= \mbox{Thermal System Insulation} & \mbox{NA} &= \mbox{Not applicable} \\ \end{array}$

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, 247 W Rotterdam Ave., Muskegon Heights, Michigan

	Asbestos Containing Material Description and Location											
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity							
Living (1 register, 15 sq. ft.) Kitchen (1 register, 15 sq. ft.) Bathroom (1 register, 15 sq. ft.) S Bedroom (1 register, 15 sq. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	60 sq. ft.							

Notes:

Material Types

M = Miscellaneous building material

TSI = Thermal System Insulation

S = Surfacing Material

Abbreviations

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

Table 4 - Summary of All Asbestos Containing Materials, 247 W Rotterdam Ave., Muskegon Heights, Michigan

Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Living (1 register, 15 sq. ft.) Kitchen (1 register, 15 sq. ft.) Bathroom (1 register, 15 sq. ft.) S Bedroom (1 register, 15 sq. ft.)	HVAC Duct Wrap		Yes	60 sq. ft.
		Total		60 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 27, 2016

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 W Rotterdam Ave., Muskegon Heights, MI 49444 Parcel ID: 61-26-770-021-0019-10

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 252 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 .05 acre residential parcel which contains an approximate 876 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 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 on the first floor while the second floor contains a living room/dining room, kitchen, bathroom and two bedrooms.

VISUAL INSPECTION AND SAMPLING

Asbestos Containing Materials Inspection

Mr. Aaron Paquet of Red Cedar Consulting (Red Cedar), an accredited State Of Michigan/EPA Asbestos Building Inspector (Accreditation Number A30955) whom completed training per the Michigan Asbestos

Project No.: 16-1070 Muskegon County Land Bank Parcel ID: 61-26-770-021-0019-10

Workers Accreditation Act 440 completed an inspection of the Subject Property on May 8, 2016 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
- 1'x1' Ceiling Tile
- 9"x9" Vinyl Tile
- Drywall
- Glazing
- Plaster

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

Hazardous Materials Inspection

On May 8, 2016 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

Muskegon County Land Bank Parcel ID: 61-26-770-021-0019-10

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.

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: 61-26-770-021-0019-10

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, first and second floors:

- Living/Dining (1 register, 15 sq. ft.)
- Bathroom (1 register, 20 sq. ft.)
- N Bedroom (1 register, 15 sq. ft.)
- S Bedroom (1 register, 15 sq. ft.)
- 2nd Fl. Living/Dining (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- 2nd Fl. Kitchen (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- 2nd Fl. Bathroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- Basement (misc. HVAC wrap on framing and floor, 20 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/Dining (1 register, 15 sq. ft.)
- Bathroom (1 register, 20 sq. ft.)
- N Bedroom (1 register, 15 sq. ft.)
- S Bedroom (1 register, 15 sq. ft.)
- 2nd Fl. Living/Dining (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- 2nd Fl. Kitchen (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- 2nd Fl. Bathroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- Basement (misc. HVAC wrap on framing and floor, 20 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: 61-26-770-021-0019-10

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 (3)
- Automobile Tire (12)
- 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: 61-26-770-021-0019-10

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

Caron Pogwet

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 Rotterdam St.

Report To:

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

ARI Report # 16-64721

Date Collected: 05/08/16 Date Received: 05/11/16

Date Analyzed: 05/16/16 Date Reported: 05/16/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 40%

Cellulose - 40%

Cellulose - 40%

Other - 60%

Other - 60%

Other - 60%

Lab ID #: 64721 - 01

Cust. #: RD-HM-01A

Material: Brown Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 3

Lab ID #: 64721 - 01a Asbestos Present: **NO**

Cust. #: RD-HM-01A Material: Brown Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 3

Lab ID #: 64721 - 01b

Cust. #: RD-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: 252 Rotterdam St.

Report To:

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

ARI Report # 16-64721

Date Collected: 05/08/16 Date Received: 05/11/16

Date Analyzed: 05/16/16 Date Reported: 05/16/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 40%

Other - 60%

Lab ID #: 64721 - 02

Cust. #: RD-HM-01B

Material: Brown Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 3

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 40%

Other - 60%

Cust. #: RD-HM-01B Material: Brown Shingle

Lab ID #: 64721 - 02a

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 3

Lab ID #: 64721 - 02b

Cust. #: RD-HM-01B

Material: Black Shingle

Location:

Appearance: black,fibrous,homogenous

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: 252 Rotterdam St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16

16-64721

Date Collected: 05/08/16 Date Received: 05/11/16

Date Analyzed: 05/16/16

Date Reported: 05/16/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64721 - 03

Cust. #: RD-HM-02A

Just. #: KD-HM-U2A

Material: 9x9 Green Vinyl Tile/ Leveling Compound

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 1 of 2

Lab ID #: 64721 - 03a

Cust. #: RD-HM-02A

Material: Mastic

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Lab ID #: 64721 - 04

Asbestos Present: **NO**No Asbestos Observed

Other - 100%

Cust. #: RD-HM-02B

Material: 9x9 Green Vinyl Tile/ Leveling Compound

Location:

Appearance: grey,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: 252 Rotterdam St.

Report To:

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

ARI Report # Date Collected: 05/08/16

16-64721

Date Received: 05/11/16

Date Analyzed: 05/16/16

Date Reported: 05/16/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64721 - 04a

Cust. #: RD-HM-02B

Material: Mastic

Location:

Appearance: black,nonfibrous,homogenous

Layer: 2 of 2

Asbestos Present: NO No Asbestos Observed

Other - 100%

Lab ID #: 64721 - 05

Cust. #: RD-HM-03A

Material: 1x1 White Pitted Ceiling Tile

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 40%

Mineral Wool - 30%

Other - 30%

Lab ID #: 64721 - 06

Cust. #: RD-HM-03B

Material: 1x1 White Pitted Ceiling Tile

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

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Test Method, Polarized Light Microscopy (PLM)

Project: 252 Rotterdam St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64721

Date Collected: 05/08/16 Date Received: 05/11/16 Date Analyzed: 05/16/16

Date Reported: 05/16/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64721 - 07

Cust. #: RD-HM-04A 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% Fiberglass - 5%

Other - 75%

Other - 100%

Lab ID #: 64721 - 07a

Cust. #: RD-HM-04A

Material: Joint Compound

Location:

Appearance: white, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 64721 - 08 Cust. #: RD-HM-04B Asbestos Present: NO

No Asbestos Observed

Cellulose - 20%

Fiberglass - 5%

Other - 75%

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: 252 Rotterdam St.

Report To:

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

ARI Report # 16-64721

Date Collected: 05/08/16 Date Received: 05/11/16

Date Analyzed: 05/16/16 Date Reported: 05/16/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64721 - 08a

Cust. #: RD-HM-04B

Material: Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Lab ID #: 64721 - 09

Cust. #: RD-HM-05A

Material: Glazing

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64721 - 10

Cust. #: RD-HM-05B

Material: Glazing

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Asbestos Present: **NO**

No Asbestos Observed

Wollastonite - 1%

Other - 99%

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: 252 Rotterdam St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64721 Date Collected: 05/08/16

Date Received: 05/11/16 Date Analyzed: 05/16/16

Date Reported: 05/16/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Other - 100%

Hair - 2%

Other - 98%

Other - 100%

Lab ID #: 64721 - 11

Cust. #: RS-HS-01A

Asbestos Present: **NO**No Asbestos Observed

Material: Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 64721 - 11a

Cust. #: RS-HS-01A

Material: Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 64721 - 12

Cust. #: RS-HS-01B

Material: 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

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

Report To:

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

ARI Report # 16-64721

Date Collected: 05/08/16 Date Received: 05/11/16

Date Analyzed: 05/16/16 Date Reported: 05/16/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64721 - 12a Cust. #: RS-HS-01B

Material: Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

No Asbestos Observed

Asbestos Present: **NO**

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

Other - 98%

Lab ID #: 64721 - 13

Cust. #: RS-HS-01C

Material: Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 64721 - 13a

Cust. #: RS-HS-01C

Material: Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

Hair - 2%

Other - 100%

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: 252 Rotterdam St.

Report To:

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

ARI Report #

16-64721

Date Collected: 05/08/16

Date Received: 05/11/16

Date Analyzed: 05/16/16

Date Reported: 05/16/16

Sample Information

Asbestos Type/Percent

No Asbestos Observed

Non-Asbestos

Lab ID #: 64721 - 14

Cust. #: RS-HS-01D

Material: Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 64721 - 14a

Cust. #: RS-HS-01D Material: Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 64721 - 15

Cust. #: RS-HS-01E

Material: 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: 252 Rotterdam St.

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

ARI Report #

16-64721

Date Collected: 05/08/16 Date Received: 05/11/16

Date Analyzed: 05/16/16

Date Reported: 05/16/16

Sample Information

Asbestos Type/Percent

No Asbestos Observed

Non-Asbestos

Lab ID #: 64721 - 15a Cust. #: RS-HS-01E

Material: 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

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.

APEX Res

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

Rev: 12/03	Date: 5/10-16	Relinquished by:		6	مـ	S		6	S	4	W	2		Lab ID#		Other:	48 hour 72 hour	Rush 24 hour		Turn Arol	Phone: (888) 4	City, St., Zip:	Address:	Client Name:
	Date:	Carned Received by:	10/53-01A	RD-HM-05B	PD-KM-05A	RD-HM-CHB	RD-#M-04A	120-mm-028	RD-HM-03A	12) -HM-025	Roman asi	RD-HM-OUB	Mymon A	Client ID#		(TTP) All samples Except				Around Times: (Circle One)	(888) 449-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
APEX RESEARCH	MALL Free Date:	W: Relinquished by:	Plaster	claring	Clazing	Drival	Diywall	white fal Filled Ceiling Tile	white we Pitted Coiling Tile	Green axa virily Tile	Great gog Vingl Tile	Shingle	Shingle	Material/Location		xcept Plaster		D::II.	Asbestos: Bulk Wipe	PLM EPA 600, PC all	(888) 448-8739	Project #:	Project : 252	Date of Survey
														Volume	OB EPA Level II	BioSIS	rain		Point Count	apaque samples with a de	rson: Aaron)	Survey: 58-
	Date:	Received by:												Area	el II	Other Viable_			PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	Paquet		Poderdan St.	<u>v</u>
														Results						ting.net			Report	Lab Use Only

Rev: 12/03 Work Forms: COC

12h3

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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

A D III X

Date: 5-16-16.	Relinquished by:				51	41	13	12	Lab ID#		Other:	48 hour 72 hour	Rush 24 hour	Turn Arou	Phone: (888)449-4566	City, St., Zip:	Address:	Client Name:
Date :_	Received by:				R)-83-01F	なっましむ	RJ-45-0C	20-55-013	Client ID#	- All Samples Except	TTP 317 2-12			Around Times: (Circle One)	19-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
APEX HESENTICE Date:	Relinquished by:				*			Plaster	Material/Location	TEM: AHERA 7400 Bulk/NOB	Mold: Bulk Tape	Lead: Bulk Wipe	Asbestos: Bulk X Wipe	PLM EPA 600, PC all	:48-8739	Project # :	Project	
	R								Volume	OB EPA Level II	BioSIS O	_ Air Paint _	Point Count	apaquet@ samples with a det	n: Aaron		10	Date of Survey: 5-8-16
Date:	Received by:								Area	II	Other Viable	Soil	PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	Paquet		am St	1
								And the second sections of the second	Results			•		lting.net		Veboir	Den of the	Lab Use Only

Rev: 12/03 Work Forms: COC

Red Cedar Consulting

Tables

Table 1 - Summary of Hazardous Materials, 252 W Rotterdam Ave., Muskegon Heights, Michigan

Hazardous Materials Description and Location										
Location	Material Description									
Exterior	Television	3								
Exterior	Automobile Tire	12								
Kitchen	Smoke Detector	2								

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 252 W Rotterdam Ave., Muskegon Heights, Michigan

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
RD-HM-01A	Asphalt Shingle	No	M	Category I	ND/ND/ND	Exterior	NA
RD-HM-01B	Asphalt Shingle	No	M	Category I	ND/ND/ND	Exterior	NA
RD-HM-02A	Green 9"x9" Vinyl Tile	No	M	Category I	ND/ND	Rear Entry	NA
RD-HM-02B	Green 9"x9" Vinyl Tile	No	M	Category I	ND/ND	Rear Entry	NA
RD-HM-03A	White 1x1 Pitted Ceiling Tile	Yes	M	Category II	ND	Dining	NA
RD-HM-03B	White 1x1 Pitted Ceiling Tile	Yes	M	Category II	ND	Dining	NA
RD-HM-04A	Drywall	No	M	Category II	ND/ND	Bathroom	NA
RD-HM-04B	Drywall	No	M	Category II	ND/ND	2 nd Fl. Bedroom	NA
RD-HM-05A	Glazing	Yes	M	Category II	ND	Rear Entry	NA
RD-HM-05B	Glazing	Yes	M	Category II	ND	Rear Entry	NA
RD-HS-01A	Plaster	No	S	Category II	ND/ND	Living	NA
RD-HS-01B	Plaster	No	S	Category II	ND/ND	Kitchen	NA
RD-HS-01C	Plaster	No	S	Category II	ND/ND	N Bedroom	NA
RD-HS-01D	Plaster	No	S	Category II	ND/ND	2 nd Fl. Living	NA
RD-HS-01E	Plaster	No	S	Category II	ND/ND	2 nd Fl. Living	NA

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, 252 W Rotterdam Ave., Muskegon Heights, Michigan

	Asbestos Containing Material Description a	nd Location			
Location	Material Description	Condition	Material Type	Approx. Quantity	
Living/Dining (1 register, 15 sq. ft.) Bathroom (1 register, 20 sq. ft.) N Bedroom (1 register, 15 sq. ft.) S Bedroom (1 register, 15 sq. ft.) 2 nd Fl. Living/Dining (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) 2 nd Fl. Kitchen (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) 2 nd Fl. Bathroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) 2 nd Fl. Bathroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) Basement (misc. HVAC wrap on framing and floor, 20 sq. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	170 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, 252 W Rotterdam Ave., Muskegon Heights, Michigan

Interior - Asbestos Containing Materials			
Location	Material Description	Friable	Approx. Quantity
Living/Dining (1 register, 15 sq. ft.) Bathroom (1 register, 20 sq. ft.) N Bedroom (1 register, 15 sq. ft.) S Bedroom (1 register, 15 sq. ft.) 2nd Fl. Living/Dining (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) 2nd Fl. Kitchen (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) 2nd Fl. Bathroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) 2nd Fl. Bathroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) Basement (misc. HVAC wrap on framing and floor, 20 sq. ft.)	HVAC Duct Wrap	Yes	170 sq. ft.
	Total		170 sq. ft.

<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

June 1, 2016

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 263 E Summit Ave., Muskegon Heights, MI 49444 Parcel ID: 61-26-635-263-0002-00

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 263 E Summit 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 .10 acre residential parcel which contains a 240 sq. ft. detached garage and approximate 708 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 and shingle lap siding while the roof was sealed with asphalt shingles. The Building can be further divided into a living room, dining room, kitchen, bathroom, two bedrooms and a rear entry.

VISUAL INSPECTION AND SAMPLING

Asbestos Containing Materials Inspection

Mr. Aaron Paquet of Red Cedar Consulting (Red Cedar), an accredited State Of Michigan/EPA Asbestos Building Inspector (Accreditation Number A30955) whom completed training per the Michigan Asbestos

Project No.: 16-1070 Muskegon County Land Bank Parcel ID: 61-26-635-263-0002-00

Workers Accreditation Act 440 completed an inspection of the Subject Property on May 24, 2016 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
- Shingle Lap Siding
- Linoleum
- 1'x1' Ceiling Tile
- 2'x4' Ceiling 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: 61-26-635-263-0002-00

Hazardous Materials Inspection

On May 24, 2016 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: 61-26-635-263-0002-00

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.)
- SW Bedroom (1 register, 10 sq. ft.)
- NW Bedroom (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.)
- SW Bedroom (1 register, 10 sq. ft.)
- NW Bedroom (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: 61-26-635-263-0002-00

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:

- 5 Gallon Container Misc. Paint (4)
- Gallon Container Misc. Paint (6)
- Automobile Tires (14)
- Smoke Detector (3)
- Television (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: 61-26-635-263-0002-00

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

(Laron Pogwet

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: 263 E Summit Ave

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-

16-65106

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/27/16

Date Reported: 05/27/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Fiberglass - 15%

Other - 85%

Lab ID #: 65106 - 01

Cust. #: SA-HM-01A

Material: Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: **NO**No Asbestos Observed

Fiberglass - 15%

Other - 85%

Lab ID #: 65106 - 02 Cust. #: SA-HM-01B

Material: Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 65106 - 03

Asbestos Present: **NO**No Asbestos Observed

Cellulose - 20%

Other - 80%

Cust. #: SA-HM-02A

Material: Shingle Lap Siding

Location:

Appearance: black,fibrous,homogenous

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: 263 E Summit Ave

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 1

16-65106

Date Collected: 05/24/16
Date Received: 05/26/16

Date Received: 05/26/16 Date Analyzed: 05/27/16

Date Reported: 05/27/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 20%

Cellulose - 10%

Fiberglass - 5%

Other - 85%

Other - 80%

Lab ID #: 65106 - 04

Cust. #: SA-HM-02B

Material: Shingle Lap Siding

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 65106 - 05

Cust. #: SA-HM-03A

Material: Stone Linoleum

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 65106 - 06 Cust. #: SA-HM-03B

Material: Stone Linoleum

Asbestos Present: NO

Asbestos Present: **NO**

No Asbestos Observed

No Asbestos Observed

Cellulose - 10%

Fiberglass - 5%

Other - 85%

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

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 263 E Summit Ave

Report To:

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

ARI Report # 16-65106

Date Collected: 05/24/16 Date Received: 05/26/16 Date Analyzed: 05/27/16

Date Reported: 05/27/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 80%

Other - 20%

Lab ID #: 65106 - 07

Cust. #: SA-HM-04A

Material: White 1x1 Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 80%

Other - 20%

Lab ID #: 65106 - 08

Cust. #: SA-HM-04B

Material: White 1x1 Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 65106 - 09

Cust. #: SA-HM-05A

Material: White 2x4 Ceiling Tile

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Cellulose - 40% Fiberglass - 20%

Perlite - 30%

Other - 10%

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: 263 E Summit Ave

Report To:

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

ARI Report #

16-65106 Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/27/16

Date Reported: 05/27/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65106 - 10

Cust. #: SA-HM-05B

Material: White 2x4 Ceiling Tile

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

No Asbestos Observed

Cellulose - 40%

Fiberglass - 20%

Other - 10%

Lab ID #: 65106 - 11

Cust. #: SA-HM-06A

Material: Drywall

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 65106 - 12

Cust. #: SA-HM-06B

Material: Drywall

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: NO

Perlite - 30%

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: 263 E Summit Ave

Report To:

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

ARI Report # 16-65106

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/27/16 Date Reported: 05/27/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 65106 - 13

Cust. #: SA-HM-07A

Material: 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%

Cust. #: SA-HM-07B

Material: Glazing

Lab ID #: 65106 - 14

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 1

Lab ID #: 65106 - 15

Cust. #: SA-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

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 263 E Summit Ave

Report To:

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

ARI Report #

16-65106

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/27/16

Date Reported: 05/27/16

Sample Information

Asbestos Type/Percent

No Asbestos Observed

Non-Asbestos

Lab ID #: 65106 - 15a

Cust. #: SA-HS-01A

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 65106 - 16

Cust. #: SA-HS-01B

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 65106 - 16a

Cust. #: SA-HS-01B

Location:

Appearance: beige, fibrous, homogenous

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

Layer: 2 of 2

Asbestos Present: NO

Hair - 2%

Other - 98%

Asbestos Present: **NO**

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Hair - 2%

Other - 98%

Material: Plaster Base Coat

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 263 E Summit Ave

Report To:

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

ARI Report # Date Collected: 05/24/16

16-65106

Date Received: 05/26/16

Date Analyzed: 05/27/16

Date Reported: 05/27/16

Sample Information

No Asbestos Observed

Non-Asbestos

Lab ID #: 65106 - 17

Cust. #: SA-HS-01C

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 65106 - 17a

Cust. #: SA-HS-01C

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 65106 - 18

Cust. #: SA-HS-01D

Material: Plaster Texture

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 3

Asbestos Type/Percent

Asbestos Present: NO

Other - 100%

Asbestos Present: **NO**

Hair - 2%

No Asbestos Observed

Other - 98%

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.



Test Method, Polarized Light Microscopy (PLM)

Project: 263 E Summit Ave

Report To:

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

ARI Report # 16-65106

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/27/16 Date Reported: 05/27/16

Sample Information

Asbestos Type/Percent

No Asbestos Observed

Non-Asbestos

Lab ID #: 65106 - 18a

Cust. #: SA-HS-01D

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 3

Lab ID #: 65106 - 18c

Cust. #: SA-HS-01D

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

Layer: 3 of 3

Lab ID #: 65106 - 19

Cust. #: SA-HS-01E

Material: Plaster Texture

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 3

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

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 263 E Summit Ave

Report To:

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

ARI Report #

16-65106 Date Collected: 05/24/16

Date Received: 05/26/16 Date Analyzed: 05/27/16

Date Reported: 05/27/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 65106 - 19a

Cust. #: SA-HS-01E

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 3

Asbestos Present: **NO** No Asbestos Observed

Hair - 2%

Other - 98%

Lab ID #: 65106 - 19b Cust. #: SA-HS-01E

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

Layer: 3 of 3

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.

65106

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 of Survey: 5-24-6 Project: 263 E. Surmit Ac. Project #: Contact Person: Aaron Paquet Contact Person: Aaron Paquet Oo, PC all samples with a detection of <58 ACM. Wipe Air Paint Soil Tape BioSIS Other Viable Bulk/NOB EPA Level II Bulk/NOB EPA Level II	Date: 5-25-6 Date: 5-18-16	Relinquished by: Received by: Relinquished by:	11 SA-HM-RA Dynwall	10 SA HM 053 white 2x4 Ceclin	9 SA-HMOSA White DAY Colling To	8 SA-HW-OUB white lat Coiling To	7 SAJANOTA White WI CeilingTik	6 SA-Hrross Stone Einsleum	Stone	4 SA-HM-0215 Shorple less Sider	3 SA Amosa Shingled as Siding	SAMMOUR	SA-HM-01A Shingle	Lab ID # Client ID # Material/Location	TEM: AHERA 7400		48 hour 72 hour Wipe	Rush 24 hour Asbestos: Bulk — Wipe	Turn Around Times: (Circle One) PIM EPA 600, PC	Phone: (888) 449-4566 Fax: (888) 448-8739 Co	City, St., Zip: Lansing, MI 48901 P.	Address: PO Box 13216 P	Client Name: Red Cedar Consulting
	Date			rile	ic	le								And the first firs		BioSIS		Point Count		Aaron		263 E. S	

Py 2 of 2

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

APEX

Fax: 734-449-9991

Date: 5-25-6 Date: 8	Relinquished by: Received by		19 SA-48-01F	18 SA-45-01D	17 SANTS-OIC	\$10-St-VS 91	15 SA-45-01A	Sto-wh-15 Al	13 SA-WM-BIA	12 SA-Arabis	Lab ID # Client ID #	All Samples Except		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 : 528-16 Date :	Received by: Relinquished by:		+				Plaster	Clacin	Clarin	Dry wal	Material/Location	TEM: AHERA 7400 Bulk/NOB	Mold: Bulk Tape	Lead: Bulk Wipe	Asbestos: Bulk X Wipe	$(Circle\ One)$	48-8739		Project:	
Date: MAY 2	Received by:										Volume Area	IOB 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		17, S	Date of Survey: メンリーに
2 \$ 2016											Results		ole			sulting.net 5% ACM.			Report	Lab Use Only

Rev: 12/03 Work Forms: COC

STIX DINNER DIN

Red Cedar Consulting

Tables

Table 1 - Summary of Hazardous Materials, 263 E Summit Ave., Muskegon Heights, Michigan

Hazardous Materials Description and Location									
Location	Material Description	Quantity							
Exterior	5 Gallon Container Misc. Paint	4							
Exterior	Gallon Container Misc. Paint	6							
Exterior	Automobile Tires	8							
SW Bedroom	Smoke Detector	1							
NW Bedroom	Smoke Detector	1							
Basement	Smoke Detector	1							
Basement	Television	4							
Basement	Automobile Tire	6							

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 263 E Summit Ave. Muskegon Heights, Michigan

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
SA-HM-01A	Asphalt Shingle	No	M	Category I	ND	Exterior	NA
SA-HM-01B	Asphalt Shingle	No	M	Category I	ND	Exterior	NA
SA-HM-02A	Shingle Lap Siding	No	M	Category I	ND	Exterior	NA
SA-HM-02B	Shingle Lap Siding	No	M	Category I	ND	Exterior	NA
SA-HM-03A	Stone Linoleum	No	M	Category I	ND	Kitchen	NA
SA-HM-03B	Stone Linoleum	No	M	Category I	ND	Bathroom	NA
SA-HM-04A	White 1'x1' Ceiling Tile	Yes	M	Category II	ND	Rear Entry	NA
SA-HM-04B	White 1'x1' Ceiling Tile	Yes	M	Category II	ND	Rear Entry	NA
SA-HM-05A	White 2'x4' Ceiling Tile	Yes	M	Category II	ND	Dining	NA
SA-HM-05B	White 2'x4' Ceiling Tile	Yes	M	Category II	ND	Dining	NA
SA-HM-06A	Drywall	No	M	Category II	ND	Living	NA
SA-HM-06B	Drywall	No	M	Category II	ND	Dining	NA
SA-HM-07A	Glazing	Yes	M	Category II	ND	Dining	NA
SA-HM-07B	Glazing	Yes	M	Category II	ND	SW Bedroom	NA
SA-HS-01A	Plaster	No	S	Category II	ND/ND	Bathroom Wall	NA
SA-HS-01B	Plaster	No	S	Category II	ND/ND	SW Bedroom Wall	NA
SA-HS-01C	Plaster	No	S	Category II	ND/ND	NW Bedroom Wall	NA
SA-HS-01D	Plaster	No	S	Category II	ND/ND/ND	Dining Ceiling	NA
SA-HS-01E	Plaster	No	S	Category II	ND/ND/ND	Living Ceiling	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, 263 E Summit 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.) SW Bedroom (1 register, 10 sq. ft.) NW Bedroom (1 register, 10 sq. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	60 sq. ft.

Material Types

M = Miscellaneous building material TSI = Thermal System Insulation

= Surfacing Material

Abbreviations

lin. ft. = linear feet

sq. ft. = square feet

Table 4 - Summary of All Asbestos Containing Materials, 263 E Summit Ave., Muskegon Heights, Michigan

Interior - Asbestos Containing Materials			
Location	Material Description	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.) SW Bedroom (1 register, 10 sq. ft.) NW Bedroom (1 register, 10 sq. ft.)	HVAC Duct Wrap	Yes	60 sq. ft.
	1	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 27, 2016

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 324 E Delano Ave., Muskegon Heights, MI 49444 Parcel ID: 61-26-185-031-0012-50

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 324 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 .06 acre residential parcel which contains an approximate 816 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 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, bathroom and three bedrooms.

VISUAL INSPECTION AND SAMPLING

Asbestos Containing Materials Inspection

Mr. Aaron Paquet of Red Cedar Consulting (Red Cedar), an accredited State Of Michigan/EPA Asbestos Building Inspector (Accreditation Number A30955) whom completed training per the Michigan Asbestos Workers Accreditation Act 440 completed an inspection of the Subject Property on May 24, 2016 for suspected asbestos containing building materials.

Project No.: 16-1070 Muskegon County Land Bank Parcel ID: 61-26-185-031-0012-50

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
- Fiber Lap Siding
- 12"x12" Vinyl Tile
- 1'x1' Ceiling Tile
- Drywall
- 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: 61-26-185-031-0012-50

Hazardous Materials Inspection

On May 24, 2016 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: 61-26-185-031-0012-50

Friable ACM's

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

Category I ACM

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

Category II ACM

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

RECOMMENDATIONS

Asbestos Containing Materials

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

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

Hazardous Materials

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

• Thermostat (1)

REGULATORY REQUIREMENTS

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

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

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

Friable asbestos material.

Project No.: 16-1070 Muskegon County Land Bank Parcel ID: 61-26-185-031-0012-50

- 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

MIOSHA-CSHD-Asbestos Program
State of Michigan

Department of Environmental Quality
Phone: 517-284-6777
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: 324 E Delano Ave

Report To:

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

ARI Report # 16-65107

Date Collected: 05/24/16 Date Received: 05/26/16 Date Analyzed: 05/27/16

Date Reported: 05/27/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Fiberglass - 20%

Other - 80%

Lab ID #: 65107 - 01

Cust. #: DA-HM-01A

Material: Asphalt Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 1

Lab ID #: 65107 - 02

Cust. #: DA-HM-01B

Asbestos Present: **NO**

No Asbestos Observed

Fiberglass - 30%

Other - 70%

Material: Asphalt Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 65107 - 03

Cust. #: DA-HM-02A

Material: Fiberlap Siding

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

Cellulose - 65%

No Asbestos Observed

Other - 35%

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: 324 E Delano Ave

Report To:

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

ARI Report # 16-65107

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/27/16 Date Reported: 05/27/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 60%

Other - 40%

Lab ID #: 65107 - 04

Cust. #: DA-HM-02B

Material: Fiberlap Siding

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO** No Asbestos Observed

Other - 100%

Other - 100%

Lab ID #: 65107 - 05 Cust. #: DA-HM-03A

Material: Brown 12x12 Vinyl Tile

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 1 of 1

Lab ID #: 65107 - 06

Cust. #: DA-HM-03B

Material: Brown 12x12 Vinyl Tile

Location:

Appearance: grey,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

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 324 E Delano Ave

Report To:

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

ARI Report # 16-65107

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/27/16 Date Reported: 05/27/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65107 - 07

Cust. #: DA-HM-04A

Material: White 1x1 Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

No Asbestos Observed

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 80%

Lab ID #: 65107 - 08

Cust. #: DA-HM-04B

Material: White 1x1 Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 65107 - 09

Cust. #: DA-HM-05A

Material: Drywall

Location:

Appearance: grey,fibrous,homogenous

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

Layer: 1 of 1

Asbestos Present: **NO**

Other - 20%

Cellulose - 80%

Other - 20%

Asbestos Present: NO Cellulose - 20% No Asbestos Observed Other - 80%

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 324 E Delano Ave

Report To:

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

ARI Report #

16-65107

Date Collected: 05/24/16

Date Received: 05/26/16

Date Analyzed: 05/27/16 Date Reported: 05/27/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65107 - 10

Cust. #: DA-HM-05B

Material: Drywall

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 2

Lab ID #: 65107 - 10a

Cust. #: DA-HM-05B

Material: Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Lab ID #: 65107 - 11

Cust. #: DA-HM-06A

Material: Glazing

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Cellulose - 30%

Other - 70%

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: 324 E Delano Ave

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-65107

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/27/16 Date Reported: 05/27/16

Date Reports

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Other - 100%

Lab ID #: 65107 - 12

Cust. #: DA-HM-06B

Material: Glazing

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Lab ID #: 65107 - 13 Cust. #: DA-HS-01A

Material: Plaster

Location:

A

Appearance: white,nonfibrous,homogenous

Layer: 1 of 2

Lab ID #: 65107 - 13a

Cust. #: DA-HS-01A

Material: Mortar

Location:

Appearance: grey,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

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 324 E Delano Ave

Report To:

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

ARI Report # 16-65107

Date Collected: 05/24/16

Date Received: 05/26/16 Date Analyzed: 05/27/16

Date Reported: 05/27/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 65107 - 14

Cust. #: DA-HS-01B

Material: Plaster

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: **NO**

Cellulose - 2%

No Asbestos Observed

Other - 98%

Material: Mortar

Lab ID #: 65107 - 14a

Cust. #: DA-HS-01B

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Lab ID #: 65107 - 15 Cust. #: DA-HS-01C

Material: Plaster

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: 324 E Delano Ave

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-65107

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/27/16 Date Reported: 05/27/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 2%

Other - 98%

Lab ID #: 65107 - 15a

Cust. #: DA-HS-01C

Material: Mortar

Location:

Appearance: grey, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Cellulose - 2%

Other - 98%

Lab ID #: 65107 - 16 Cust. #: DA-HS-01D

Material: Plaster

Location:

Location

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 65107 - 16a

Cust. #: DA-HS-01D

Material: Mortar

Location:

Appearance: grey,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.



Test Method, Polarized Light Microscopy (PLM)

Project: 324 E Delano Ave

Report To:

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

ARI Report # 16-65107

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/27/16 Date Reported: 05/27/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 65107 - 17

Cust. #: DA-HS-01E

Material: Plaster

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 2% Other - 98%

Cust. #: DA-HS-01E

Material: Mortar

Lab ID #: 65107 - 17a

Location:

Appearance: grey,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

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

65107

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

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Address: Client Name: Red Cedar Consulting PO Box 13216 Date of Survey: 5.24.16 Project: 334 E. Delane Ave.

E-mail: apexresearch@chartermi.net

Fax: 734-449-9991

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	Report	Lab Use Only Log-In

Phone: (888) 449-4566 Fax: (888) 448-8739 Contact Person: Aaron Paquet

Project #:

City, St., Zip: Lansing, MI 48901

Furn Around Times: (Circle One) PLM EPA 600, PC all samples with a detection of <5% ACM.

24 hour 72 hour (TTP) All Samples Except Plaste TEM: Mold: Asbestos: Bulk Lead: Bulk **AHERA 7400** × Wipe Wipe Tape Bulk/NOB Air Point Count BioSIS EPA Level II Other PCM

Rush

Other:

48 hour

Volume

Rev: 12/03

Date:

Date: 57476

Received by: ___

Relinquished by:

Work Forms: COC

Relinquished by:

Received by:

APEX BESEARCH

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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2016	Date: WAY 2 6		Date :	5-24-16		Date: 524-16
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				Plaster	DA-HS-010	16
				Plaster	DA-HS-OIC	5
				Plaster	DA-HS-018	١٩
			The state of the s	Daster	DA-HS-OIA	ひ
				Glazing	DA-HM-06B	12
Results	Area	Volume	Material/Location	Mate	Client ID#	Lab ID#
	evel II	OBEPA Level II	AHERA 7400 Bulk/NOB	TEM:	All Samples Except	Oner.
	Other Viable	_ BioSIS	Bulk Tape	Mold:		
	nt Soil	Air Paint	Bulk Wipe	Lead: E		Ĭ
	PCM	Point Count	3ulk X Wipe	Asbestos: Bulk		Rijsh 24 hour
lting.net ACM.	apaquet@redcedarconsulting.net with a detection of <5% ACM.	apaqu all samples with a c	PLM EPA 600, PC all s	(Circle One)	Turn Around Times: (Circle One)	Turn Arou
	Paquet	Person: Aaron		X: (888) 448-8739	19-4566 Fax:	Phone: (888) 449-4566
			Project #:		Lansing, MI 48901	City, St., Zip:
Report	E. Delano Ave.	:324 E. Del	Project: 324		PO Box 13216	Address:
Lab Use Only Log-In)4. G	Date of Survey: ち・みれいし	Date of	ing	Red Cedar Consulting	Client Name:

Rev: 12/03 Work Forms: COC

APEX RESEARCH

Red Cedar Consulting

Tables

Table 1 - Summary of Hazardous Materials, 324 E Delano Ave., 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, 324 E Delano Ave., Muskegon Heights, Michigan

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
DA-HM-01A	Asphalt Shingle	No	M	Category I	ND	Exterior	NA
DA-HM-01B	Asphalt Shingle	No	M	Category I	ND	Exterior	NA
DA-HM-02A	Fiber Lap Siding	Yes	M	Category II	ND	Exterior	NA
DA-HM-02B	Fiber Lap Siding	Yes	M	Category II	ND	Exterior	NA
DA-HM-03A	Brown 12"x12" Vinyl Tile	No	M	Category I	ND	Kitchen/Dining	NA
DA-HM-03B	Brown 12"x12" Vinyl Tile	No	M	Category I	ND	Bathroom	NA
DA-HM-04A	White 1'x1' Ceiling Tile	Yes	M	Category II	ND	Living	NA
DA-HM-04B	White 1'x1' Ceiling Tile	Yes	M	Category II	ND	Living	NA
DA-HM-05A	Drywall	No	M	Category II	ND	Living Wall	NA
DA-HM-05B	Drywall	No	M	Category II	ND/ND	S Bedroom Wall	NA
DA-HM-06A	Glazing	Yes	M	Category II	ND	Living	NA
DA-HM-06B	Glazing	Yes	M	Category II	ND	Living	NA
DA-HS-01A	Plaster	No	S	Category II	ND/ND	Kitchen Wall	NA
DA-HS-01B	Plaster	No	S	Category II	ND/ND	Living Wall	NA
DA-HS-01C	Plaster	No	S	Category II	ND/ND	N Bedroom Wall	NA
DA-HS-01D	Plaster	No	S	Category II	ND/ND	Living Ceiling	NA
DA-HS-01E	Plaster	No	S	Category II	ND/ND	Kitchen Ceiling	NA

Notes:

Material Types

M = Miscellaneous building material

TSI = Thermal System Insulation

S = Surfacing Material

PC = Point Count Analysis

CH = Chrysotile Asbestos

Abbreviations

NQ = Not quantified

NA = Not applicable

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

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

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

Table 3 - Summary of Presumed Asbestos Containing Materials, 324 E Delano Ave., Muskegon Heights, Michigan

A	Asbestos 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, 324 E Delano Ave., 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 27, 2016

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

1998 Park St., Muskegon Heights, MI 49444

Parcel ID: 61-26-280-001-0009-00

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 1998 Park 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 1,140 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 aluminum lap over wood lap over vapor barrier while the roof was sealed with asphalt shingles. The Building can be further divided into a side entry, front porch, living room, dining room, kitchen, bath and bedroom on the first floor while the second floor contains two bedrooms.

VISUAL INSPECTION AND SAMPLING

Asbestos Containing Materials Inspection

Mr. Aaron Paquet of Red Cedar Consulting (Red Cedar), an accredited State Of Michigan/EPA Asbestos Building Inspector (Accreditation Number A30955) whom completed training per the Michigan Asbestos

Muskegon County Land Bank Parcel ID: 61-26-280-001-0009-00

Workers Accreditation Act 440 completed an inspection of the Subject Property on May 15, 2016 for suspected asbestos containing building materials.

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

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

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

- Asphalt Shingle
- Vapor Barrier
- Linoleum
- 1'x1' Ceiling Tile
- 12"x12" Vinyl Tile
- 9"x9" Vinyl Tile
- Drywall
- Glazing
- Fiberboard
- 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: 61-26-280-001-0009-00

Hazardous Materials Inspection

On May 15, 2016 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.

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: 61-26-280-001-0009-00

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 seventeen windows at the following locations that would fall into the same homogenous group. The locations of the windows are listed below:

- Garage (1 windows 26" wide x 24" tall)
- Living (3 windows 28" wide x 64" tall)
- Dining (2 windows 28" wide x 64" tall)
- Closet (1 window 28" wide x 64" tall)
- N Bedroom (1 window 28" wide x 64" tall)
- Bath (1 window 24" wide x 46" tall)
- Landing (1 window 22" wide x 36" tall)
- Rear Entry (1 window 24" wide x 44" tall)
- Kitchen (1 window 28" wide x 34" tall)
- 2nd Fl. S Bedroom (2 windows 24" wide x 48" tall)
- Landing (1 window 28" wide x 48" tall)
- W Bedroom (1 window 24" wide x 48" tall)
- Basement (1 window 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.)
- Kitchen (1 register, 15 sq. ft.)
- Bathroom (1 register, 15 sq. ft.)
- Living (1 register, 15 sq. ft.)
- Kitchen (1 register, 15 sq. ft.)
- Bathroom (1 register, 15 sq. ft.)
- Basement (Misc. HVAC wrap, 100 sq. ft. on Basement Floor)
- Kitchen (Misc. HVAC wrap, 25 sq. ft. on Kitchen Floor)
- Basement (1 in. dia. HVAC Wrapped Pipe, 4 lin. ft.)

Category I ACM

Three types of resilient floor covering (12"x12" Green Vinyl Tile, 12"x12" Stone Vinyl Tile and 9"x9" Pink Vinyl Floor Tile) located within the Bath, Closet and Front Porch, respectively, were found to contain up to 10% Chrysotile asbestos. The assessment to quantify the extent of this material identified approximately 234 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: 61-26-280-001-0009-00

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.)
- Kitchen (1 register, 15 sq. ft.)
- Bathroom (1 register, 15 sq. ft.)
- Living (1 register, 15 sq. ft.)
- Kitchen (1 register, 15 sq. ft.)
- Bathroom (1 register, 15 sq. ft.)
- Basement (Misc. HVAC wrap, 100 sq. ft. on Basement Floor)
- Kitchen (Misc. HVAC wrap, 25 sq. ft. on Kitchen Floor)
- Basement (1 in. dia. HVAC Wrapped Pipe, 4 lin. 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:

- Garage (1 windows 26" wide x 24" tall)
- Living (3 windows 28" wide x 64" tall)
- Dining (2 windows 28" wide x 64" tall)
- Closet (1 window 28" wide x 64" tall)
- N Bedroom (1 window 28" wide x 64" tall)
- Bath (1 window 24" wide x 46" tall)
- Landing (1 window 22" wide x 36" tall)
- Rear Entry (1 window 24" wide x 44" tall)
- Kitchen (1 window 28" wide x 34" tall)
- 2nd Fl. S Bedroom (2 windows 24" wide x 48" tall)
- Landing (1 window 28" wide x 48" tall)
- W Bedroom (1 window 24" wide x 48" tall)
- Basement (1 window 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 (12"x12" Green Vinyl Tile, 12"x12" Stone Vinyl Tile and 9"x9" Pink 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: 61-26-280-001-0009-00

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 (4)
- 5 Gallon Container Misc. Paint (1)
- Quart Container Oil (1)
- Automobile Tire (1)
- Gallon Container Misc. Paint (3)
- Gallon Container Antifreeze (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: 61-26-280-001-0009-00

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: 1998 Park St.

Report To:

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

ARI Report #

16-64877 Date Collected: 05/15/16

Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 40%

Other - 60%

Lab ID #: 64877 - 01

Cust. #: PS-HM-01A

Material: Asphalt Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 3

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 40%

Other - 60%

Material: White Shingle

Lab ID #: 64877 - 01a

Cust. #: PS-HM-01A

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 3

Lab ID #: 64877 - 01b

Cust. #: PS-HM-01A

Material: Tar Paper

Location:

Appearance: black,fibrous,homogenous

Layer: 3 of 3

Asbestos Present: NO No Asbestos Observed

Other - 50%

Cellulose - 50%

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

Robert T. Letarte Jr., Laboratory Director

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Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 40%

Other - 60%

Lab ID #: 64877 - 02

Cust. #: PS-HM-01B

Material: Asphalt Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 3

Asbestos Present: NO No Asbestos Observed

Cellulose - 40%

Other - 60%

Cust. #: PS-HM-01B

Lab ID #: 64877 - 02a

Material: White Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 3

Asbestos Present: NO

No Asbestos Observed

Cellulose - 50%

Other - 50%

Lab ID #: 64877 - 02b Cust. #: PS-HM-01B

Material: Tar Paper

Location:

Appearance: black, fibrous, homogenous

Layer: 3 of 3

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Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 40%

Other - 60%

Lab ID #: 64877 - 03

Cust. #: PS-HM-02A

Material: Asphalt Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 3

Lab ID #: 64877 - 03a

Cust. #: PS-HM-02A

Asbestos Present: NO

No Asbestos Observed

Cellulose - 40%

Other - 60%

Material: Brown Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 3

Lab ID #: 64877 - 03b

Asbestos Present: NO No Asbestos Observed

Fiberglass - 30%

Other - 70%

Cust. #: PS-HM-02A

Material: White Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 3 of 3

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Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 40%

Other - 60%

Lab ID #: 64877 - 04

Cust. #: PS-HM-02B

Material: Asphalt Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 3

Lab ID #: 64877 - 04a

Cust. #: PS-HM-02B

Asbestos Present: NO

No Asbestos Observed

Cellulose - 40%

Other - 60%

Other - 70%

Material: Brown Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 3

Asbestos Present: NO No Asbestos Observed

Fiberglass - 30%

Lab ID #: 64877 - 04b Cust. #: PS-HM-02B

Material: White Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 3 of 3

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NVLAP Lab Code 102118-0

APEX Research Inc., 11054 Hi Tech Drive, Whitmore Lake, MI 48189 (734) 449-9990, Fax (734) 449-9991



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Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 70%

Other - 30%

Lab ID #: 64877 - 05

Cust. #: PS-HM-03A

Material: Vapor Barrier

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Cellulose - 70%

Other - 30%

Other - 100%

Lab ID #: 64877 - 06 Cust. #: PS-HM-03B

Material: Vapor Barrier

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Lab ID #: 64877 - 07 Cust. #: PS-HM-04A

Material: Beige 12"x12" Vinyl Tile

Location:

Appearance: beige, nonfibrous, homogenous

Layer: 1 of 2

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Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64877 - 07a

Cust. #: PS-HM-04A

Material: Glue Location:

Appearance: yellow,nonfibrous,homogenous

Layer: 1 of 2

Asbestos Present: **NO**No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Other - 100%

Lab ID #: 64877 - 08

Cust. #: PS-HM-04B

Material: Beige 12"x12" Vinyl Tile

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 2

Asbestos Present: **NO**No Asbestos Observed

Other - 100%

Lab ID #: 64877 - 08a

Cust. #: PS-HM-04B

Material: Glue

Location:

Appearance: yellow,nonfibrous,homogenous

Layer: 1 of 2

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Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 50%

Other - 50%

Lab ID #: 64877 - 09

Cust. #: PS-HM-05A

Material: Brown Linoleum

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 50% Other - 50%

Lab ID #: 64877 - 10 Cust. #: PS-HM-05B

Material: Brown Linoleum

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 64877 - 11

Asbestos Present: NO No Asbestos Observed

Cust. #: PS-HM-06A

Material: Green 12"x12" Vinyl Tile, 2 Layer

Location:

Appearance: green, nonfibrous, homogenous

Layer: 1 of 4

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

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Other - 100%

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Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64877 - 11a

Cust. #: PS-HM-06A

Material: Glue Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 4

Asbestos Present: **NO**No Asbestos Observed

Asbestos Present: YES

No Asbestos Observed

Chrysotile - 5%

Other - 100%

Other - 95%

Other - 100%

Lab ID #: 64877 - 11b Cust. #: PS-HM-06A

Material: Beige Floor Tile

Location:

Appearance: beige, fibrous, homogenous

Layer: 3 of 4

- 11c Asbestos Present: **NO**

Lab ID #: 64877 - 11c Cust. #: PS-HM-06A

Material: Glue

Location:

Appearance: yellow,nonfibrous,homogenous

Layer: 4 of 4

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Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64877 - 12

Cust. #: PS-HM-06B

Material: Green 12"x12" Vinyl Tile, 2 Layer

Location:

Appearance: green,nonfibrous,homogenous

Layer: 1 of 4

Asbestos Present: **NO**

Other - 100%

Lab ID #: 64877 - 12a

Cust. #: PS-HM-06B

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 4

Lab ID #: 64877 - 12b

Cust. #: PS-HM-06B

Material: Beige Floor Tile

Location:

Appearance:

Layer: 3 of 4

No Asbestos Observed

No Asbestos Observed

Asbestos Present: **NO**

Other - 100%

Asbestos Present:

NOT ANALYZED

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Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64877 - 12c

Cust. #: PS-HM-06B

Material: Glue Location:

Appearance: yellow,nonfibrous,homogenous

Layer: 4 of 4

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Lab ID #: 64877 - 13

Cust. #: PS-HM-07A

Material: Pink 9"x9" Vinyl Tile

Location:

Appearance: pink,fibrous,homogenous

Layer: 1 of 2

Asbestos Present: YES

Chrysotile - 10%

Other - 90%

Other - 100%

·

Lab ID #: 64877 - 13a

Cust. #: PS-HM-07A

Material: Mastic

Location:

Appearance: black,nonfibrous,homogenous

Layer: 2 of 2

Asbestos Present: **NO**No Asbestos Observed

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

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Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64877 - 14

Cust. #: PS-HM-07B

Material: Pink 9"x9" Vinyl Tile

Location:

Appearance: Layer: 1 of 2

Lab ID #: 64877 - 14a

Cust. #: PS-HM-07B

Material: Mastic

Location:

Appearance: black,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 64877 - 15

Cust. #: PS-HM-08A

Material: Stone 12"x12" Vinyl Tile

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 2

Asbestos Present:

NOT ANALYZED

Asbestos Present: **NO**

Asbestos Present: YES

POINT COUNT RESULT

Chrysotile - 1.25%

No Asbestos Observed

Other - 98.75%

Other - 100%

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Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Other - 100%

Lab ID #: 64877 - 15a

Cust. #: PS-HM-08A

Material: Glue Location:

Appearance: brown,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 64877 - 16

Cust. #: PS-HM-08B

Material: Stone 12"x12" Vinyl Tile

Location:

Appearance:

Layer: of

Lab ID #: 64877 - 17

Cust. #: PS-HM-09A

Material: White 1'x1' Ceiling Tile

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 1

Non-Asbestos

Asbestos Present: **NO**

No Asbestos Observed

Asbestos Present:

NOT ANALYZED

Asbestos Present: NO

No Asbestos Observed

Cellulose - 80%

Other - 20%

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Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64877 - 18

Cust. #: PS-HM-09B

Material: White 1'x1' Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: YES

Chrysotile - 5%

Asbestos Present:

Other - 20%

Other - 95%

Lab ID #: 64877 - 19

Cust. #: PS-HM-10A

Material: Glazing

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64877 - 20

Cust. #: PS-HM-10B

Material: Glazing

Location:

Appearance: Layer:

of

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 80%

NOT ANALYZED

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Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 20%

Other - 80%

Lab ID #: 64877 - 21 Cust. #: PS-HM-11A

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: **NO**No Asbestos Observed

Cellulose - 20%

Other - 80%

Lab ID #: 64877 - 22 Cust. #: PS-HM-11B

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: NO

Cellulose - 80%

Lab ID #: 64877 - 23 Cust. #: PS-HM-12A

Cust. #: PS-HM-12A Material: Fiberboard No Asbestos Observed

Other - 20%

Location:

on:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 1

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Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 80%

Other - 20%

Lab ID #: 64877 - 24

Cust. #: PS-HM-12B

Material: Fiberboard

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: **NO**

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Cellulose - 2%

Other - 98%

Lab ID #: 64877 - 25 Cust. #: PS-HS-01A

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 64877 - 25a

Cust. #: PS-HS-01A

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

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Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 2%

Other - 98%

Lab ID #: 64877 - 26

Cust. #: PS-HS-01B

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64877 - 27

Asbestos Present: **NO**

Cellulose - 2%

Cust. #: PS-HS-01C No Asbestos Observed Other - 98%

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64877 - 28

Cust. #: PS-HS-01D

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

No Asbestos Observed

Asbestos Present: NO

Cellulose - 2% Other - 98%

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

Robert T. Letarte Jr., Laboratory Director

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



Test Method, Polarized Light Microscopy (PLM)

Project: 1998 Park St.

Report To:

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

ARI Report # 16-64877

Date Collected: 05/15/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64877 - 29

Cust. #: PS-HS-01E

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 2%

Other - 98%

Lab ID #: 64877 - 29a Cust. #: PS-HS-01E

Material: Plaster Base Coat

Location:

Appearance: brown, 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

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

64877

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

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APEX	. 1053

Fax: 734-449-9991

Date: 51776	Relinquished by:	î	70	2	8	7	6	S	8	7 X	A	-	Lab ID #	Other:	48 nour (/ ≠ nour	•		Turn Arol	Phone: (888) 4	City, St., Zip:	Address:	Client Name:
Date :	Received by:	PS- HM-06A	PS- 4M-05B	75- MM-05A	R- 47-04B	PS-4M-04A	PS- HM-03B	75-4m-03A	PS- HM-02B	PS- HM-02A	13- HM-01B	75-HM-01A	Client ID#	(TTP) All Samples Except				Around Times: (Circle One)	(888) 449-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
APEXALSEATCH	× 10 2016	1		Brown Linoleum		Beige 12"x12" Viny	1. 1	Vapor Barrier	Asprolt Shingle	Appalt Shingle	Asphalt Shingle	Asphalt Shingle	Material/Location	cept Plaster TEM: AHERA 7400	Mold: Bulk	Lead: Bulk	Asbestos: Bulkx	Circle One) PLM EPA	(888) 448-8739			ng
Date:	Relinquished by:	Tile 2-layer	22	3	Vinul Tile	ing Tile		*	6			e	cation Vo	00Bulk/NOB	Tape BioSi	Wipe Air .	Wipe Point	.600, PC all samples	Contact Perso	Project #:	Project: 199	Date of Survey:
Date :	Received by:						A CONTRACTOR OF THE CONTRACTOR						olume Area	EPA Level II	SISOther	Paint Soil	t Count PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	-		18 fork St.	ey: <u>5-15-16</u>
													Results		_ Viable	ii 		erconsulting.net			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: 5-17-76	Relinquished by:		3	2	£.	19	7/	A	16	15	71	[2]	0	Lab ID#	CHIVI	Other:	48 hour /12 hour	Rush 24 hour		Turn Arol	Phone: (888) 449-456	City, St., Zip:	Address:	Client Name: _
Date:	Received by:	\	PS-4M-11B	PS-HM-11A	PS- HM-10B	PS-HM-10A	PS-HM-09B	P5- HM-09A	480-MH-28	75- HM-08A	75- HM-07B	PS-HM-07A	P5-HM-06B	Client ID#	Tari Samples Except	TTP III Camping To				Around Times: (Circle One)	49-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
Date:			Drywal	Dawar	Glazina	Glazina	white I'xI' Ceiling Tile	white I'xI' Ceiling Tile	Stone 10" X10" Ving Tive	Store 10'x10" Ving Tile	PIOK 9'x9' Viny Tile	PIOK 9"x9" Vinul Tile	Green 12"x 12" Viny Tile 2-L	Material/Location	TEM: AHERA 7400		Duk		Asbestos: Bulk X Wipe	PLM EPA 600, PC	(888) 448-8739	Proj	Proj	
Date:	d by: Received by:								6				layer	Volume Area	Bulk/NOB EPA Level II	BioSIS Other	raint	1	Point Count PCM	all samples with a detection of $<5\%$ ACM.	Contact Person: Aaron Paquet	Project #:	Project: 1998 Park St.	Date of Survey: 5-15-16
														Results	I	Viable		¥		rconsulting.net of <5% ACM.			Report	Lab Use Only

Rev: 12/03 Work Forms: COC

PEXPESSARON

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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		75- 15-01E	3- E- 01D	85 - HS- DIC	PS-45-01B	73-15-01A	75- HM-12B	19A	Client ID#		TTP) All Samples Except			imes:	Fax:	, MI 48901	13216	Red Cedar Consulting
		Plaster	Plaster	Plaster	Plaster	Plaster	Fiberboard	fiberboard	Material/Location		Mold: Bulk		Asbestos: Bulk	PLM EPA	(888) 448-8739			ng
										Bulk/NOB_	_ Tape B	_ Wipe Air		C all	Contact Person:	Project #:	Project: 1998	Date of Survey:
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									Area	vel II	Other Via	t Soil	PCM	apaquet@redcedarconsulting.net th a detection of <5% ACM.	Paquet		POCK St.	5-10-15
									Results		Viable		•	nsulting.net 5% ACM.			Report	Lab Use Only Log-In

Rev: 12/03 Work Forms: COC

Red Cedar Consulting

Tables

Table 1 - Summary of Hazardous Materials, 1998 Park St., Muskegon Heights, Michigan

Hazardous Materials Description and Location							
Location	Material Description	Quantity					
Garage	5 Gallon Container Misc. Paint	1					
Garage	Quart Container Oil	1					
Garage	Automobile Tire	1					
Dining	Smoke Detector	1					
Basement	Smoke Detector	1					
2 nd Fl. W Bedroom	Smoke Detector	1					
2 nd Fl. Landing	Smoke Detector	1					
Basement	Gallon Container Misc. Paint	3					
Basement	Gallon Container Antifreeze	1					

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 1998 Park 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 Shingle	No	M	Category I	ND/ND/ND	Exterior	NA
PS-HM-01B	Asphalt Shingle	No	M	Category I	ND/ND/ND	Exterior	NA
PS-HM-02A	Asphalt Shingle	No	M	Category I	ND/ND/ND	Exterior	NA
PS-HM-02B	Asphalt Shingle	No	M	Category I	ND/ND/ND	Exterior	NA
PS-HM-03A	Vapor Barrier	Yes	M	Category II	ND	Exterior	NA
PS-HM-03B	Vapor Barrier	Yes	M	Category II	ND	Exterior	NA
PS-HM-04A	Beige 12x12 Vinyl Tile	No	M	Category I	ND/ND	Side Entry	NA
PS-HM-04B	Beige 12x12 Vinyl Tile	No	M	Category I	ND/ND	Side Entry	NA
PS-HM-05A	Brown Linoleum	No	M	Category I	ND	Dining	NA
PS-HM-05B	Brown Linoleum	No	M	Category I	ND	Dining	NA
PS-HM-06A	Green 12x12 Vinyl Tile 2-Layer	No	M	Category I	ND/ND/ 5% CH/ND	Bath	60 sq. ft.
PS-HM-06B	Green 12x12 Vinyl Tile 2-Layer	No	M	Category I	ND/ND/NA/ND	Bath	NA
PS-HM-07A	Pink 9"x9" Vinyl Tile	No	M	Category I	10% CH/ND	Front Porch	119 sq. ft.
PS-HM-07B	Pink 9"x9" Vinyl Tile	No	M	Category I	NA	Front Porch	NA
PS-HM-08A	Stone 12x12 Vinyl Tile	No	M	Category I	1.25% CH/ND	Closet	55 sq. ft.
PS-HM-08B	Stone 12x12 Vinyl Tile	No	M	Category I	NA	Closet	NA
PS-HM-09A	White 1'x1' Ceiling Tile	Yes	M	Category II	ND	Living	NA
PS-HM-09B	White 1'x1' Ceiling Tile	Yes	M	Category II	ND	Living	NA
PS-HM-10A	Glazing	Yes	M	Category II	5% CH	Living	17 Windows
PS-HM-10B	Glazing	Yes	M	Category II	NA	Living	NA
PS-HM-11A	Drywall	No	M	Category II	ND	Kitchen Ceiling	NA
PS-HM-11B	Drywall	No	M	Category II	ND	Dining Wall	NA
PS-HM-12A	Fiberboard	Yes	M	Category II	ND	2 nd Fl. Landing	NA
PS-HM-12B	Fiberboard	Yes	M	Category II	ND	2 nd Fl. S Bedroom	NA
PS-HS-01A	Plaster	No	S	Category II	ND/ND	Kitchen Wall	NA
PS-HS-01B	Plaster	No	S	Category II	ND	Living Wall	NA
PS-HS-01C	Plaster	No	S	Category II	ND	Closet Wall	NA

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 1998 Park St., Muskegon Heights, Michigan

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
PS-HS-01D	Plaster	No	S	Category II	ND	Dining Ceiling	NA
PS-HS-01E	Plaster	No	S	Category II	ND/ND	Landing Ceiling	NA

Notes:

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, 1998 Park 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.) Kitchen (1 register, 15 sq. ft.) Bathroom (1 register, 15 sq. ft.) Basement (Misc. HVAC wrap, 100 sq. ft. on Basement Floor) Kitchen (Misc. HVAC wrap, 25 sq. ft. on Kitchen Floor)	HVAC Duct Wrap	Yes	Fair	TSI	170 sq. ft.				
Basement (1 in. dia. HVAC Wrapped Pipe, 4 lin. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	4 lin. ft.				

Notes:

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

M = Miscellaneous building materialTSI = Thermal System Insulation

S = Surfacing Material

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

Table 4 - Summary of All Asbestos Containing Materials, 1998 Park St., Muskegon Heights, Michigan

Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Bathroom	Green 12"x12" Vinyl Tile 2-Layer		No	60 sq. ft.
Closet	Stone 12"x12" Vinyl Tile		No	55 sq. ft.
Front Porch	Pink 9"x9" Vinyl Tile		No	119 sq. ft.
		Total		234 sq. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Living (1 register, 15 sq. ft.) Kitchen (1 register, 15 sq. ft.) Bathroom (1 register, 15 sq. ft.) Basement (Misc. HVAC wrap, 100 sq. ft. on Basement	HVAC Duct Wrap		Yes	170 sq. ft.
Floor) Kitchen (Misc. HVAC wrap, 25 sq. ft. on Kitchen Floor)	<u>.</u>			
		Total		170 sq. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Basement (1 in. dia. HVAC Wrapped Pipe, 4 lin. ft.)	HVAC Duct Wrap		Yes	4 lin. ft.
		Total		4 lin. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Garage (1 windows 26" wide x 24" tall)	Glazing		Yes	1 Window
Living (3 windows 28" wide x 64" tall)	Glazing		Yes	3 Windows
Dining (2 windows 28" wide x 64" tall)	Glazing		Yes	2 Windows
Closet (1 window 28" wide x 64" tall)	Glazing		Yes	1 Window
N Bedroom (1 window 28" wide x 64" tall)	Glazing		Yes	1 Windows
Bath (1 window 24" wide x 46" tall)	Glazing		Yes	1 Window
Landing (1 window 22" wide x 36" tall)	Glazing		Yes	1 Window
Rear Entry (1 window 24" wide x 44" tall)	Glazing		Yes	1 Window
Kitchen (1 window 28" wide x 34" tall)	Glazing		Yes	1 Window

Table 4 - Summary of All Asbestos Containing Materials, 1998 Park St., Muskegon Heights, Michigan

2 nd Fl. S Bedroom (2 windows 24" wide x 48" tall)	Glazing		Yes	2 Windows
Landing (1 window 28" wide x 48" tall)	Glazing		Yes	1 Window
W Bedroom (1 window 24" wide x 48" tall)	Glazing		Yes	1 Window
Basement (1 window 30" wide x 20" tall)	Glazing		Yes	1 Window
		Total		17 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 27, 2016

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 2008 7th St... Muskegon Heights, MI 49444

Parcel ID: 61-26-230-016-0019-00

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 2008 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 632 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 shingle lap siding over wood lap over 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, two bedrooms and a rear entry.

VISUAL INSPECTION AND SAMPLING

Asbestos Containing Materials Inspection

Mr. Aaron Paquet of Red Cedar Consulting (Red Cedar), an accredited State Of Michigan/EPA Asbestos Building Inspector (Accreditation Number A30955) whom completed training per the Michigan Asbestos

Project No.: 16-1070 Muskegon County Land Bank Parcel ID: 61-26-230-016-0019-00

Workers Accreditation Act 440 completed an inspection of the Subject Property on May 15, 2016 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
- Shingle Lap Siding
- 1'x1' Ceiling Tile
- 12"x12" Vinyl Tile
- Drywall
- Glazing
- Plaster

Red Cedar staff collected twenty one 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 one samples is included as Attachment A.

Muskegon County Land Bank Parcel ID: 61-26-230-016-0019-00

Hazardous Materials Inspection

On May 15, 2016 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 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: 61-26-230-016-0019-00

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 eight windows at the following locations that would fall into the same homogenous group. The locations of the windows are listed below:

- NE Bedroom (1 window 30" wide x 56" tall)
- Bathroom (1 windows 30" wide x 56" tall)
- Kitchen (1 window 30" wide x 56" tall)
- Living (2 windows 30" wide x 56" tall)
- NW Bedroom (1 window 30" wide x 56" tall)
- Rear Entry (1 window 29" wide x 21" tall)
- Basement (1 windows 30" wide x 20" tall)

Category I ACM

One type of resilient floor covering (12"x12" Beige Vinyl Tile) located within the kitchen was found to contain up to 30% Chrysotile asbestos. The assessment to quantify the extent of this material identified approximately 100 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 eight windows throughout the Building. The locations of these windows that should be abated prior to demolition/renovation activities are listed below:

- NE Bedroom (1 window 30" wide x 56" tall)
- Bathroom (1 windows 30" wide x 56" tall)
- Kitchen (1 window 30" wide x 56" tall)
- Living (2 windows 30" wide x 56" tall)
- NW Bedroom (1 window 30" wide x 56" tall)
- Rear Entry (1 window 29" wide x 21" tall)
- Basement (1 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.

Muskegon County Land Bank Parcel ID: 61-26-230-016-0019-00

The Category I resilient floor covering (12"x12" Beige Vinyl Tile) 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)

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: 61-26-230-016-0019-00

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: 2008 Seventh St

Report To:

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

ARI Report # 16-64869

Date Collected: 05/15/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 40%

Other - 60%

Lab ID #: 64869 - 01

Cust. #: TH-HM-01A

Material: Asphalt Shingle

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64869 - 02

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 40%

Other - 60%

Cust. #: TH-HM-01B

Material: Asphalt Shingle

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

Cellulose - 70%

Cust. #: TH-HM-02A

Lab ID #: 64869 - 03

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

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 2008 Seventh St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64869

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 70%

Other - 30%

Lab ID #: 64869 - 04

Cust. #: TH-HM-02B

Material: Vapor Barrier

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64869 - 05

Cust. #: TH-HM-03A

Asbestos Present: NO

No Asbestos Observed

Cellulose - 40%

Other - 60%

Material: Shingle Lap Siding

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64869 - 06

Cust. #: TH-HM-03B

Material: Shingle Lap Siding

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

No Asbestos Observed

Asbestos Present: NO

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)

Project: 2008 Seventh St

Report To:

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

ARI Report #

16-64869

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64869 - 07

Cust. #: TH-HM-04A

Material: Red 12"x12" Vinyl Tile

Location:

Appearance: red,nonfibrous,homogenous

Layer: 1 of 2

Lab ID #: 64869 - 07a

Cust. #: TH-HM-04A

Material: Glue

Location:

Appearance: yellow,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 64869 - 08

Cust. #: TH-HM-04B

Material: Red 12"x12" Vinyl Tile

Location:

Appearance: red,nonfibrous,homogenous

Layer: 1 of 2

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: 2008 Seventh St

Report To:

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

ARI Report # 16-64869

Date Collected: 05/15/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64869 - 08a

Cust. #: TH-HM-04B

Material: Glue

Location:

Appearance: yellow,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 64869 - 09

Cust. #: TH-HM-05A

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Other - 100%

Material: Beige 12"x12" Vinyl Tile

Location:

Appearance: beige, nonfibrous, homogenous

Layer: 1 of 4

Lab ID #: 64869 - 09a

Cust. #: TH-HM-05A

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

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Test Method, Polarized Light Microscopy (PLM)

Project: 2008 Seventh St

Report To:

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

ARI Report # 16-64869

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Fiberglass - 10%

Other - 90%

Lab ID #: 64869 - 09b

Cust. #: TH-HM-05A

Material: Flooring

Location:

Appearance: white, fibrous, homogenous

Layer: 3 of 4

Asbestos Present: YES Chrysotile - 30%

No Asbestos Observed

Other - 70%

Lab ID #: 64869 - 09c Cust. #: TH-HM-05A

Material: Linoleum

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 4 of 4

Lab ID #: 64869 - 10

Asbestos Present: NO

Other - 100%

Cust. #: TH-HM-05B

Material: Beige 12"x12" Vinyl Tile

Location:

Appearance: beige, nonfibrous, homogenous

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

Layer: 1 of 4

Robert T. Letarte Jr., Laboratory Director

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Test Method, Polarized Light Microscopy (PLM)

Project: 2008 Seventh St

Report To:

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

ARI Report # 16-64869 Date Collected: 05/15/16

Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64869 - 10a

Cust. #: TH-HM-05B

Material: Glue Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 4

Asbestos Present: **NO**

No Asbestos Observed

Lab ID #: 64869 - 10b Cust. #: TH-HM-05B

Material: Flooring

Location:

Appearance: beige, fibrous, homogenous

Layer: 3 of 4

Lab ID #: 64869 - 10c

Cust. #: TH-HM-05B Material: Linoleum

Location:

Appearance:

Layer: 4 of 4

Other - 100%

Asbestos Present: **NO** No Asbestos Observed

Fiberglass - 10%

Other - 90%

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: 2008 Seventh St

Report To:

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

ARI Report #

16-64869

Date Collected: 05/15/16

Date Received: 05/17/16

Date Reported: 05/20/16

Date Analyzed: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64869 - 11

Cust. #: TH-HM-06A

Material: White 1'x1' Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64869 - 12

Cust. #: TH-HM-06B

Material: White 1'x1' Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64869 - 13

Cust. #: TH-HM-07A

Material: Drywall

Location:

Appearance: white, 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 - 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: 2008 Seventh St

Report To:

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

Lansing, MI 48901

ARI Report # 16-64869

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64869 - 14

Cust. #: TH-HM-07B

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 64869 - 15

Cust. #: TH-HM-08A

Material: Glazing

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64869 - 16

Cust. #: TH-HM-08B

Material: Glazing

Location:

Appearance:

Layer:

of

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 20%

Other - 80%

Asbestos Present: YES Other - 90% Chrysotile - 10%

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: 2008 Seventh St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64869

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64869 - 17

Cust. #: TH-HS-01A

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 2%

Other - 98%

Lab ID #: 64869 - 17a Cust. #: TH-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 #: 64869 - 18 Cust. #: TH-HS-01B

ust. #: 1H-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: 2008 Seventh St

Report To:

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

ARI Report # 16-64869

Date Collected: 05/15/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64869 - 18a Cust. #: TH-HS-01B

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 2%

Other - 98%

Lab ID #: 64869 - 19

Cust. #: TH-HS-01C

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 64869 - 19a

Cust. #: TH-HS-01C

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: **NO**

Other - 100%

Asbestos Present: NO No Asbestos Observed

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: 2008 Seventh St

Report To:

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

ARI Report #

16-64869 Date Collected: 05/15/16

Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64869 - 20

Cust. #: TH-HS-01D

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 5%

Lab ID #: 64869 - 20a Cust. #: TH-HS-01D

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO No Asbestos Observed

Other - 100%

Other - 95%

Lab ID #: 64869 - 21 Cust. #: TH-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: 2008 Seventh St

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Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64869

Date Collected: 05/15/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64869 - 21a Cust. #: TH-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:

Asbestos Present: NO

No Asbestos Observed

Cellulose - 5%

Other - 95%

Asbestos Present:

Asbestos Present:

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

of

Robert T. Letarte Jr., Laboratory Director

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64869

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:	Relir													Other:	Wo nour		ליינו		Pho	Cit	Ad	Cli
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Date:	Receiv	TH-4m-00A	TH-HM-053	TH-HM-05A	TH-4M-04B	TH-HM-04A	TH-HM-03B	TH-4m-03A	TH- HM- 02B	ABO -WH-HT	TH-HM-01B	TH- HM- 01A	Client ID#	(TIP) All Samples Except)			Around Times: (Circle One)		Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
100 1 7 700	Received by A 1523	Mhite	1	Beige	1	A Red 10"x10" Vinul Tile		-	0		<u> </u>	Asphalt Shingle		Plaster TEM:	Mold: Bulk	Lead: Bulk	Asbestos: Bulk		Fax: (888) 448-873	01		lting
Date:	Relinquished by:	Ceiling Tile	D' Vinyl The	" Vinul Tile	" Vinyl Tite	o" Vinultile	o Siding	e Siding	TIES .	Cien	ningle	ningle	Material/Location	AHERA 7400 Bul	lk Tape	lk Wipe	lk Wipe	PLM EPA 600, PC al	9	Proje	Proje	Date
	by:												Volume	Bulk/NOBEPA	BioSIS	Air F	Point Count	apaquet@redcedarconsulting.net 600, PC all samples with a detection of <5% ACM.	Contact Person: Aaron			Date of Survey: _5
Date:	Received by:												Area	EPA Level II	Other Via	PaintSoil	PCM	quet@redcedarcor	on Paquet		Seventh St.	5-15-16
													Results		Viable			sulting.net 5% ACM.			Report	Lab Use Only Log-In

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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APEX	20+2

Relinquished by:	2	16	7	14	الا كز	Lab ID #	Client Name: Red Ce Address: PO Box City, St., Zip: Lansir Phone: (888) 449-4566 Turn Around Rush 24 how 48 how 72 how Other: TP
Received by: Date:	TH-HS-01E	TH-HS-01B	TH - HM - 08B	TH-HM-07B	TH-HM-QOB	Client ID#	Around Times: (Circle One) 24 hour 72 hour TTP All Samples Except Plaster TEM:
MAY LOIG	Plaster	Plaster	Glazing Plaster	Daywall Slazing	White I'xI' Galling Tile	Material/Location	9LM EPA os: Bulk x Bulk AHERA 740
Relinquished by:					ile	on Volume	Project : 2008 Project #: Ontact Person PC all samples Point C Bulk/NOB Bulk/NOB
Received by: Date:						Area	Lab Use Seventh St. Report apaquet@redcedarconsulting.net with a detection of <5% ACM. ount PCM Paint Soil EPA Level II Lab Use Log-In Report Name
						Results	Lab Use Only Log-In Report RCM.

Rev: 12/03 Work Forms: COC

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Red Cedar Consulting

Tables

Table 1 - Summary of Hazardous Materials, 2008 7th St.., Muskegon Heights, Michigan

Hazardous Materials Description and Location									
Location	Material Description	Quantity							
Basement	Smoke Detector	1							

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2008 7th St., Muskegon Heights, Michigan

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
WM-HM-01A	Asphalt Shingle	No	M	Category I	ND	Exterior	NA
WM-HM-01B	Asphalt Shingle	No	M	Category I	ND	Exterior	NA
WM-HM-02A	Vapor Barrier	Yes	M	Category II	ND	Exterior	NA
WM-HM-02B	Vapor Barrier	Yes	M	Category II	ND	Exterior	NA
WM-HM-03A	Shingle Lap Siding	No	M	Category I	ND	Exterior	NA
WM-HM-03B	Shingle Lap Siding	No	M	Category I	ND	Exterior	NA
WM-HM-04A	Red 12x12 Vinyl Tile	No	M	Category I	ND/ND	Kitchen	NA
WM-HM-04B	Red 12x12 Vinyl Tile	No	M	Category I	ND/ND	Front Entry	NA
WM-HM-05A	Beige 12x12 Vinyl Tile	No	M	Category I	ND/ND/ND/ 30 % CH	Bath	100 sq. ft.
WM-HM-05B	Beige 12x12 Vinyl Tile	No	M	Category I	ND/ND/ND/NA	Bath	NA
WM-HM-06A	White 1'x1' Ceiling Tile	Yes	M	Category II	ND	Kitchen	NA
WM-HM-06B	White 1'x1' Ceiling Tile	Yes	M	Category II	ND	Kitchen	NA
WM-HM-07A	Drywall	Yes	M	Category II	ND	Living Ceiling	NA
WM-HM-07B	Drywall	Yes	M	Category II	ND	Living Wall	NA
WM-HM-08A	Glazing	Yes	M	Category II	10% CH	Living	8 Windows
WM-HM-08B	Glazing	Yes	M	Category II	NA	Bath	NA
WM-HS-01A	Plaster	No	S	Category II	ND/ND	Bath Wall	NA
WM-HS-01B	Plaster	No	S	Category II	ND/ND	NE Bedroom Wall	NA
WM-HS-01C	Plaster	No	S	Category II	ND/ND	Living Wall	NA
WM-HS-01D	Plaster	No	S	Category II	ND/ND	Living Ceiling	NA
WM-HS-01E	Plaster	No	S	Category II	ND/ND	NW Bedroom Ceiling	NA

Notes:

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2008 7th St., Muskegon Heights, Michigan

Mater	ial Types	<u>Abbrev</u>	<u>riations</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
СН	= 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, 2008 7th St., Muskegon Heights, Michigan

A	Asbestos 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, 2008 7th St., Muskegon Heights, Michigan

Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Bathroom	Beige 12"x12" Vinyl Tile		No	100 sq. ft.
		Total		100 sq. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
NE Bedroom (1 window 30" wide x 56" tall)	Glazing		Yes	1 Window
Bathroom (1 windows 30" wide x 56" tall)	Glazing		Yes	1 Window
Kitchen (1 window 30" wide x 56" tall)	Glazing		Yes	1 Window
Living (2 windows 30" wide x 56" tall)	Glazing		Yes	2 Windows
NW Bedroom (1 window 30" wide x 56" tall)	Glazing		Yes	1 Window
Rear Entry (1 window 29" wide x 21" tall)	Glazing		Yes	1 Window
Basement (1 windows 30" wide x 20" tall)	Glazing		Yes	1 Window
		Total		8 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 27, 2016

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 2016 Park St., Muskegon Heights, MI 49444

Parcel ID: 61-26-170-000-0005-00

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 2016 Park 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 .15 acre residential parcel which contains an approximate 1,736 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 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, three bedrooms, laundry and rear entry on the first floor while the second floor contains a living room, dining room, kitchen, bath, three bedrooms and a rear entry.

VISUAL INSPECTION AND SAMPLING

Asbestos Containing Materials Inspection

Mr. Aaron Paquet of Red Cedar Consulting (Red Cedar), an accredited State Of Michigan/EPA Asbestos Building Inspector (Accreditation Number A30955) whom completed training per the Michigan Asbestos

Project No.: 16-1070 Muskegon County Land Bank Parcel ID: 61-26-170-000-0005-00

Workers Accreditation Act 440 completed an inspection of the Subject Property on May 15, 2016 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
- Fiber Lap Siding
- Linoleum
- 1'x1' Ceiling Tile
- 2'x4' 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: 61-26-170-000-0005-00

Hazardous Materials Inspection

On May 15, 2016 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: 61-26-170-000-0005-00

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 twenty windows at the following locations that would fall into the same homogenous group. The locations of the windows are listed below:

- Living (2 windows 44" wide x 58" tall)
- NW Bedroom (1 window 44" wide x 58" tall)
- NE Bedroom (1 window 28" wide x 58" tall)
- Bathroom (1 window 40" wide x 24" tall)
- Laundry (1 window 22" wide x 40" tall)
- S Bedroom (1 window 24" wide x 54" tall)
- 2nd Fl. W Bedroom (2 windows 28" wide x 44" tall)
- 2nd Fl. N Bedroom (2 windows 28" wide x 44" tall)
- 2nd Fl. Living Bedroom (2 windows 28" wide x 44" tall)
- 2nd Fl. Kitchen (1 window 28" wide x 56" tall)
- 2nd Fl. Bathroom (1 window 28" wide x 24" tall)
- Basement (5 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:

- 2nd Fl. Bath (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- 2nd Fl. W Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- Basement (misc. HVAC Tape on Basement Framing, 2.5 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.

- 2nd Fl. Bath (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- 2nd Fl. W Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- Basement (misc. HVAC Tape on Basement Framing, 2.5 sq. ft.)

Muskegon County Land Bank Parcel ID: 61-26-170-000-0005-00

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

- Living (2 windows 44" wide x 58" tall)
- NW Bedroom (1 window 44" wide x 58" tall)
- NE Bedroom (1 window 28" wide x 58" tall)
- Bathroom (1 window 40" wide x 24" tall)
- Laundry (1 window 22" wide x 40" tall)
- S Bedroom (1 window 24" wide x 54" tall)
- 2nd Fl. W Bedroom (2 windows 28" wide x 44" tall)
- 2nd Fl. N Bedroom (2 windows 28" wide x 44" tall)
- 2nd Fl. Living Bedroom (2 windows 28" wide x 44" tall)
- 2nd Fl. Kitchen (1 window 28" wide x 56" tall)
- 2nd Fl. Bathroom (1 window 28" wide x 24" tall)
- Basement (5 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.

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)
- Thermostat (1)
- Automobile Tire (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.

Muskegon County Land Bank Parcel ID: 61-26-170-000-0005-00

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: 2016 Park St

Report To:

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

ARI Report # 16-64878

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 25%

Other - 75%

Other - 75%

Lab ID #: 64878 - 01

Cust. #: PA-HM-01A

Material: Asphalt Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 3

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 25%

Lab ID #: 64878 - 01a Cust. #: PA-HM-01A

Material: Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 3

Asbestos Present: NO No Asbestos Observed

Cellulose - 25%

Other - 75%

Lab ID #: 64878 - 01b Cust. #: PA-HM-01A

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

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 2016 Park St

Report To:

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

ARI Report # 16-64878

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 25%

Other - 75%

Lab ID #: 64878 - 02

Cust. #: PA-HM-01B

Material: Asphalt Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 3

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 25%

Other - 75%

Material: Shingle

Lab ID #: 64878 - 02a

Cust. #: PA-HM-01B

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 3

Asbestos Present: NO

Cellulose - 25%

No Asbestos Observed

Other - 75%

Material: Shingle

Lab ID #: 64878 - 02b Cust. #: PA-HM-01B

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: 2016 Park St

Report To:

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

ARI Report # 16-64878

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 65%

Other - 35%

Lab ID #: 64878 - 03

Cust. #: PA-HM-02A

Material: Fiber Lap Siding

Location:

Appearance: black,fibrous,nonhomogenous

Layer: 1 of 1

Lab ID #: 64878 - 04

Cust. #: PA-HM-02B

Asbestos Present: NO

No Asbestos Observed

Cellulose - 65%

Other - 35%

Material: Fiber Lap Siding

Location:

Appearance: black, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 64878 - 05

Cust. #: PA-HM-03A

Material: White Linoleum

Location:

Appearance: beige, fibrous, homogenous

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: 2016 Park St

Report To:

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

ARI Report #

16-64878

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64878 - 06

Cust. #: PA-HM-03B

Material: White Linoleum

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

No Asbestos Observed

Asbestos Present: **NO**

Cellulose - 20% Fiberglass - 5%

Other - 75%

Lab ID #: 64878 - 07

Cust. #: PA-HM-04A

Material: White 12"x12" Vinyl Tile

Location:

Appearance: beige, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Other - 100%

Lab ID #: 64878 - 07a

Cust. #: PA-HM-04A

Material: Mastic

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

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 2016 Park St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64878

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64878 - 08

Cust. #: PA-HM-04B

Material: White 12"x12" Vinyl Tile

Location:

Appearance: beige, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: **NO**No Asbestos Observed

Other - 100%

Lab ID #: 64878 - 08a

Cust. #: PA-HM-04B

Material: Mastic

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Lab ID #: 64878 - 09

Cust. #: PA-HM-05A

Material: Red Linoleum

Location:

Appearance: red,fibrous,nonhomogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Cellulose - 35%

Fiberglass - 5%

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: 2016 Park St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64878

Date Collected: 05/15/16

Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 35%

Fiberglass - 5%

Other - 60%

Lab ID #: 64878 - 10 Cust. #: PA-HM-05B

Material: Red Linoleum

Location:

Appearance: red,fibrous,nonhomogenous

Layer: 1 of 1

Lab ID #: 64878 - 11

No Asbestos Observed

Asbestos Present: **NO**

Cellulose - 95%

Other - 5%

Cust. #: PA-HM-06A

Material: White 1'x1' Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64878 - 12

Cust. #: PA-HM-06B

Material: White 1'x1' 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: 2016 Park St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64878

Date Collected: 05/15/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64878 - 13

Cust. #: PA-HM-07A

Material: White 2'x4' Ceiling Tile

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 45%

Mineral Wool - 2%

Fiberglass - 25%

Other - 28%

Lab ID #: 64878 - 14

Cust. #: PA-HM-07B

Material: White 2'x4' Ceiling Tile

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Cellulose - 45%

Mineral Wool - 2%

Fiberglass - 25%

Other - 28%

Lab ID #: 64878 - 15

Cust. #: PA-HM-08A

Material: Drywall

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Cellulose - 20%

Fiberglass - 2%

Other - 78%

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

Robert T. Letarte Jr., Laboratory Director

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

NVLAP Lab Code 102118-0

APEX Research Inc., 11054 Hi Tech Drive, Whitmore Lake, MI 48189 (734) 449-9990, Fax (734) 449-9991



Test Method, Polarized Light Microscopy (PLM)

Project: 2016 Park St

Report To:

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

Lansing, MI 48901

ARI Report # 16-64878 Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

Asbestos Present: YES

Chrysotile - 5%

No Asbestos Observed

Non-Asbestos

Cellulose - 20%

Other - 80%

Other - 95%

Lab ID #: 64878 - 16

Cust. #: PA-HM-08B

Material: Drywall

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 64878 - 17

Cust. #: PA-HM-09A

Material: Glazing

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64878 - 18

Cust. #: PA-HM-09B

Material: Glazing

Location:

NOT ANALYZED

Asbestos Present:

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.



Test Method, Polarized Light Microscopy (PLM)

Project: 2016 Park St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64878

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64878 - 19

Cust. #: PA-HM-10A

Material: Green Linoleum Multilayer

Location:

Appearance: green, fibrous, homogenous

Layer: 1 of 3

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 35% Fiberglass - 5%

Other - 60%

Layer. 1 of 2

Lab ID #: 64878 - 19a

Cust. #: PA-HM-10A

Material: Linoleum

Location:

Appearance: yellow,fibrous,homogenous

Layer: 2 of 3

Asbestos Present: NO

No Asbestos Observed

Cellulose - 30%

Fiberglass - 5%

Other - 65%

_

Lab ID #: 64878 - 19b Cust. #: PA-HM-10A

Material: Linoleum

Location:

Appearance: yellow,fibrous,homogenous

Layer: 3 of 3

Asbestos Present: NO

No Asbestos Observed

Cellulose - 35%

Fiberglass - 5%

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: 2016 Park St

Report To:

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

ARI Report # 16-64878

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64878 - 20

Cust. #: PA-HM-10B

Material: Green Linoleum Multilayer

Location:

Appearance: green, fibrous, homogenous

Layer: 1 of 3

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 35% Fiberglass - 5%

Other - 60%

Lab ID #: 64878 - 20a

Cust. #: PA-HM-10B

Material: Linoleum

Location:

Appearance: yellow,fibrous,homogenous

Layer: 2 of 3

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 30%

Fiberglass - 5%

Other - 65%

Lab ID #: 64878 - 20b Cust. #: PA-HM-10B

Material: Linoleum

Location:

Appearance: yellow,fibrous,homogenous

Layer: 3 of 3

Asbestos Present: NO

No Asbestos Observed

Cellulose - 35%

Fiberglass - 5%

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: 2016 Park St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64878

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 95%

Other - 5%

Lab ID #: 64878 - 21

Cust. #: PA-HM-11A

Material: White Pitted 1'x1' Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

Cellulose - 95%

Lab ID #: 64878 - 22 Cust. #: PA-HM-11B

Material: White Pitted 1'x1' Ceiling Tile

No Asbestos Observed

Other - 5%

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64878 - 23

Asbestos Present: **NO**No Asbestos Observed

Other - 100%

Cust. #: PA-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: 2016 Park St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64878

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Hair - 2%

Other - 98%

Lab ID #: 64878 - 23a

Cust. #: PA-HS-01A

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 #: 64878 - 24 Cust. #: PA-HS-01B

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 64878 - 24a

Cust. #: PA-HS-01B

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: 2016 Park St

Report To:

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

ARI Report # 16-64878

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64878 - 25

Cust. #: PA-HS-01C

Material: Texture

Location:

Appearance: white, fibrous, homogenous

Layer: 1 of 3

Asbestos Present: **NO**

Cellulose - 5%

Lab ID #: 64878 - 25a

Cust. #: PA-HS-01C

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 3

Lab ID #: 64878 - 25b

Cust. #: PA-HS-01C

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

Layer: 3 of 3

No Asbestos Observed

Wollastonite - 2%

Other - 93%

Other - 100%

Hair - 2%

Other - 98%

No Asbestos Observed

Asbestos Present: NO

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: 2016 Park St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64878

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64878 - 26

Cust. #: PA-HS-01D

Material: Texture

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 1 of 3

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Hair - 2%

Other - 98%

Lab ID #: 64878 - 26a Cust. #: PA-HS-01D

Material: Plaster Finish Coat

Location:

A

Appearance: white, nonfibrous, homogenous

Layer: 2 of 3

Lab ID #: 64878 - 26b

Cust. #: PA-HS-01D

Material: Plaster Base Coat

Location:

Appearance: beige, 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: 2016 Park St

Report To:

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

ARI Report # 16-64878

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/20/16

Date Reported: 05/20/16

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 #: 64878 - 27

Cust. #: PA-HS-01E

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 64878 - 27a

Cust. #: PA-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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NVLAP Lab Code 102118-0

APEX Research Inc., 11054 Hi Tech Drive, Whitmore Lake, MI 48189 (734) 449-9990, Fax (734) 449-9991

64878

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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1	PCM	Point Count	ulk Wipe	Asbestos: Bulk		Rush 24 hour
nsulting.n <5% ACM.	apaquet@redcedarconsulting.net with a detection of <5% ACM.	apaqu samples with a o	M EPA 600, PC all	. –	Around Times: (Circle One)	Turn Arou
ı	Paquet	Person: Aaron	Contact Person:	(888) 448-873	49-4566 Fax:	Phone: (888) 449-456
			Project # :		Lansing, MI 48901	City, St., Zip:
Report	K St.	: 2016 fork St	Project: 2011		PO Box 13216	Address:
Lab Use Only	5-15-16	 I	Date of Survey	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



Date: 5-17-16	Relinquished by:)	Š	21	ಶ	Ž,	15	17	3)	15	14	5	Z C	Lab ID #		Other:	48 hour 12 hour)		Turn Around	Phone: (888) 449-456	City, St., Zip:	Address: _	Client Name: _
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APEX RESEARCH	105		_	`	ľ	New	Glazina	Glazina	Driwall	Daywall		White D'x4' Gilling T	PA-HM-06B White 1'x1' Ceiling	Material/Location		Plaster	Wold. Rulk	Lead: Bulk	Asbestos: Bulk X	PLM EPA	(888) 448-8739			1g
Date:	Relinquished by:		Cilm Tile	Gilina Tile	Multilayer	Multibyer				C	Gilling Tike	ing Tile	a Tile	ation Vol) Bulk/NOB		Tane Riccio	WipeAir_	_ Wipe Point	600, PC all samples	Contact Person:	Project #:	Project: 201	Date of Survey
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														Results						cing.net			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

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Date: 577 16	Relinquished by:				27	<u> </u>	25	2th	E	Lab ID #		Other:	48 hour 12 hour	Rush 24 hour		Phone: (888)	City, St., Zip:	Address:	Client Name:
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	W. PECHICAD				Plaster	Plaster	Plaster	Plaster	Plaster	Material/Location	TEM: AHERA 7400		Lead: Bulk	.50	Ydz WId	Fax: (888) 448-8739			ing
Date:	Relinquished by:									tion Volume	Bulk/NOB EP	Tape BioSIS	Wipe Air	Wipe Point Count	C all samples	rson:	Project #:	ه د ۱ د	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		QK Ot.	ひ・ふ・こ
										Results		le	1		sulting.net acm.			Report	Lab Use Only

Rev: 12/03 Work Forms: COC

AFFX PROFARCE

Red Cedar Consulting

Tables

Table 1 - Summary of Hazardous Materials, 2016 Park St., Muskegon Heights, Michigan

	Hazardous Materials Description and Location	
Location	Material Description	Quantity
Exterior	Automobile Tire	3
2 nd Fl. Living	Thermostat	1
Basement	Smoke Detector	1

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2016 Park St., Muskegon Heights, Michigan

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
PA-HM-01A	Asphalt Shingle	No	M	Category I	ND/ND/ND	Exterior	NA
PA-HM-01B	Asphalt Shingle	No	M	Category I	ND/ND/ND	Exterior	NA
PA-HM-02A	Fiber Lap Siding	Yes	M	Category II	ND	Exterior	NA
PA-HM-02B	Fiber Lap Siding	Yes	M	Category II	ND	Exterior	NA
PA-HM-03A	White Linoleum	No	M	Category I	ND	Kitchen/Dining	NA
PA-HM-03B	White Linoleum	No	M	Category I	ND	Laundry	NA
PA-HM-04A	White 12x12 Vinyl Tile	No	M	Category I	ND/ND	Bath	NA
PA-HM-04B	White 12x12 Vinyl Tile	No	M	Category I	ND/ND	Bath	NA
PA-HM-05A	Red Linoleum	No	M	Category I	ND	NW Bedroom	NA
PA-HM-05B	Red Linoleum	No	M	Category I	ND	NW Bedroom	NA
PA-HM-06A	White 1'x1' Ceiling Tile	Yes	M	Category II	ND	Living	NA
PA-HM-06B	White 1'x1' Ceiling Tile	Yes	M	Category II	ND	Living	NA
PA-HM-07A	White 2'x4' Ceiling Tile	Yes	M	Category II	ND	Living	NA
PA-HM-07B	White 2'x4' Ceiling Tile	Yes	M	Category II	ND	Living	NA
PA-HM-08A	Drywall	Yes	M	Category II	ND	Kitchen Ceiling	NA
PA-HM-08B	Drywall	Yes	M	Category II	ND	NW Bedroom Wall	NA
PA-HM-09A	Glazing	Yes	M	Category II	5%CH	Living	20 Windows
PA-HM-09B	Glazing	Yes	M	Category II	NA	2 nd Fl. Living/Dining	NA
PA-HM-10A	Green Linoleum Multilayer	No	M	Category I	ND/ND/ND	2 nd Fl. Kitchen	NA
PA-HM-10B	Green Linoleum Multilayer	No	M	Category I	ND/ND/ND	2 nd Fl. Kitchen	NA
PA-HM-11A	White Pitted 1'x1' Ceiling Tile	Yes	M	Category II	ND	2 nd Fl. Living/Dining	NA
PA-HM-11B	White Pitted 1'x1' Ceiling Tile	Yes	M	Category II	ND	2 nd Fl. Living/Dining	NA
PA-HS-01A	Plaster	No	S	Category II	ND/ND	Living Wall	NA
PA-HS-01B	Plaster	No	S	Category II	ND/ND	NE Bedroom Wall	NA
PA-HS-01C	Plaster	No	S	Category II	ND/ND/ND	Living Ceiling	NA
PA-HS-01D	Plaster	No	S	Category II	ND/ND/ND	2 nd Fl. Hall/Landing	NA
PA-HS-01E	Plaster	No	S	Category II	ND/ND	2 nd Fl. W Bedroom Ceiling	NA

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2016 Park St., Muskegon Heights, Michigan

Notes:

Mate	erial Types	Abbrev	<u>viations</u>
S PC	 = Miscellaneous building material = Thermal System Insulation = Surfacing Material = Point Count Analysis = Chrysotile Asbestos 	NQ NA NAD lin. ft. sq. ft.	 Not quantified Not applicable Not detected. Laboratory result is less than 1 % asbestos linear feet 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, 2016 Park St., Muskegon Heights, Michigan

Asbestos Containing Material Description and Location							
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity		
2 nd Fl. Bath (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) 2 nd Fl. W Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) Basement (misc. HVAC Tape on Basement Framing, 2.5 sq. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	72.5 sq. ft.		

Notes:

Material Types

M = Miscellaneous building material TSI = Thermal System Insulation

= Surfacing Material

Abbreviations

lin. ft. = linear feet

sq. ft. = square feet

Table 4 - Summary of All Asbestos Containing Materials, 2016 Park St Muskegon Heights, Michigan

Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
2 nd Fl. Bath (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) 2 nd Fl. W Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) Basement (misc. HVAC Tape on Basement Framing, 2.5 sq. ft.)	HVAC Duct Wrap		Yes	72.5 sq. ft.
Sq. 10.)		Total		72.5 sq. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Living (2 windows 44" wide x 58" tall)	Glazing		Yes	2 Windows
NW Bedroom (1 window 44" wide x 58" tall)	Glazing		Yes	1 Window
NE Bedroom (1 window 28" wide x 58" tall)	Glazing		Yes	1 Window
Bathroom (1 window 40" wide x 24" tall)	Glazing		Yes	1 Window
Laundry (1 window 22" wide x 40" tall)	Glazing		Yes	1 Window
S Bedroom (1 window 24" wide x 54" tall)	Glazing		Yes	1 Window
2 nd Fl. W Bedroom (2 windows 28" wide x 44" tall)	Glazing		Yes	2 Windows
2 nd Fl. N Bedroom (2 windows 28" wide x 44" tall)	Glazing		Yes	2 Windows
2 nd Fl. Living Bedroom (2 windows 28" wide x 44" tall)	Glazing		Yes	2 Windows
2 nd Fl. Kitchen (1 window 28" wide x 56" tall)	Glazing		Yes	1 Window
2 nd Fl. Bathroom (1 window 28" wide x 24" tall)	Glazing		Yes	1 Window
Basement (5 windows 30" wide x 20" tall)	Glazing		Yes	5 Windows
		Total		20 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, 2016 Park 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 27, 2016

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 2023 7th St., Muskegon Heights, MI 49444
Parcel ID: 61-26-280-011-0008-00

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 2023 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 .14 acre residential parcel which contains a 756 sq. ft. detached garage and approximate 896 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 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

Mr. Aaron Paquet of Red Cedar Consulting (Red Cedar), an accredited State Of Michigan/EPA Asbestos Building Inspector (Accreditation Number A30955) whom completed training per the Michigan Asbestos Workers Accreditation Act 440 completed an inspection of the Subject Property on May 15, 2016 for suspected asbestos containing building materials.

Muskegon County Land Bank Parcel ID: 61-26-280-011-0008-00

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:

- Asphalt Shingle
- Linoleum
- Drywall
- Glazing

Red Cedar staff collected ten 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 ten samples is included as Attachment A.

Hazardous Materials Inspection

On May 15, 2016 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: 61-26-280-011-0008-00

INSPECTION RESULTS AND RECOMMENDATIONS

During the completion of the asbestos inspection, ten 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 Air-O-Cell Pipe Wrap located in the Building was classified as PACM due to the age of the structure and samples were not collected.

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

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

Friable ACM's

A window glazing sample collected from a window in the Bathroom 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:

- SE Bedroom (1 window 28" wide x 62" tall)
- Kitchen (2 windows 28" wide x 52" tall)
- Rear Entry (1 window 20" wide x 20" tall)
- Bathroom (1 window 28" wide x 62" tall)

Muskegon County Land Bank Parcel ID: 61-26-280-011-0008-00

• Basement Stairwell (1 window 20" wide x 20" tall)

HVAC Air-O-Cell Pipe Wrap identified in the Building in conjunction with the hot water heating system are classified as friable ACM. The visual assessment to quantify the extent of this material identified Friable ACM at the following locations within the basement, first and second floors:

- Basement Boiler Pipe (Air-O-Cell 3" to 4") (60 lin. ft.)
- Crawlspace Floor Debris (Air-O-Cell 3" to 4") (5 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 Boiler Pipe (Air-O-Cell 3" to 4") (60 lin. ft.)
- Crawlspace Floor Debris (Air-O-Cell 3" to 4") (5 lin. ft.)

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

- SE Bedroom (1 window 28" wide x 62" tall)
- Kitchen (2 windows 28" wide x 52" tall)
- Rear Entry (1 window 20" wide x 20" tall)
- Bathroom (1 window 28" wide x 62" tall)
- Basement Stairwell (1 window 20" 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.

Muskegon County Land Bank Parcel ID: 61-26-280-011-0008-00

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)
- Automobile Tire (12)

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: 61-26-280-011-0008-00

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

(Laron Pogwet

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: 2023 Seventh St

Report To:

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

ARI Report # 16-64875

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 40%

Other - 60%

Lab ID #: 64875 - 01

Cust. #: ST-HM-01A

Material: Asphalt Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 4

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 40% Other - 60%

Lab ID #: 64875 - 01a Cust. #: ST-HM-01A

Material: Black Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 4

Asbestos Present: NO

Cellulose - 40%

Lab ID #: 64875 - 01b Cust. #: ST-HM-01A

Material: Brown 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

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 2023 Seventh St

Report To:

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

ARI Report # 16-64875

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 50%

Other - 50%

Lab ID #: 64875 - 01c

Cust. #: ST-HM-01A

Material: Tar Paper

Location:

Appearance: black,fibrous,homogenous

Layer: 4 of 4

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 40%

Other - 60%

Cust. #: ST-HM-01B

Lab ID #: 64875 - 02

Material: Asphalt Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 4

Asbestos Present: NO No Asbestos Observed

Cellulose - 40%

Other - 60%

Lab ID #: 64875 - 02a Cust. #: ST-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: 2023 Seventh St

Report To:

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

ARI Report # 16-64875

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 40%

Other - 60%

Lab ID #: 64875 - 02b

Cust. #: ST-HM-01B

Material: Brown Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 3 of 4

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 50%

Other - 50%

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

Lab ID #: 64875 - 02c

Location:

Appearance: black, fibrous, homogenous

Layer: 4 of 4

Lab ID #: 64875 - 03

Cust. #: ST-HM-02A

Material: White Linoleum, 2 Layer

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

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: 2023 Seventh St

Report To:

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

ARI Report # 16-64875

Date Collected: 05/15/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64875 - 03a

Cust. #: ST-HM-02A

Material: Beige Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 2 of 2

Asbestos Present: NO

Asbestos Present: **NO**

No Asbestos Observed

No Asbestos Observed

Cellulose - 10%

Fiberglass - 10% Other - 80%

Cellulose - 10%

Fiberglass - 10%

Other - 80%

Lab ID #: 64875 - 04 Cust. #: ST-HM-02B

Material: White Linoleum, 2 Layer

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

Lab ID #: 64875 - 04a

Cust. #: ST-HM-02B

Material: Beige Linoleum

Asbestos Present: NO

No Asbestos Observed

Cellulose - 10%

Fiberglass - 10%

Other - 80%

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: 2023 Seventh St

Report To:

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

ARI Report #

16-64875

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64875 - 05

Cust. #: ST-HM-03A

Material: Tan Linoleum

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 64875 - 06

Cust. #: ST-HM-03B

Material: Tan Linoleum

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 64875 - 07

Cust. #: ST-HM-04A

Material: Drywall

Location:

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

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Cellulose - 10%

Fiberglass - 10%

Other - 80%

Asbestos Present: **NO** No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Cellulose - 10%

Fiberglass - 10%

Cellulose - 20%

Other - 80%

Other - 80%

Appearance: white, fibrous, nonhomogenous

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 2023 Seventh St

Report To:

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

ARI Report #

16-64875 Date Collected: 05/15/16

Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 20%

Other - 80%

Lab ID #: 64875 - 08

Cust. #: ST-HM-04B

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

Asbestos Present: **NO**

No Asbestos Observed

Other - 100%

Other - 100%

Lab ID #: 64875 - 08a Cust. #: ST-HM-04B

Material: Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Lab ID #: 64875 - 09

Cust. #: ST-HM-05A

Material: Glazing

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

No Asbestos Observed

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: 2023 Seventh St

Report To:

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

Lansing, MI 48901

ARI Report # Date Collected: 05/15/16

16-64875

Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: YES

Chrysotile - 5%

Asbestos Present:

Non-Asbestos

Other - 95%

Lab ID #: 64875 - 10

Cust. #: ST-HM-05B

Material: Glazing

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Lab ID #:

Cust. #: Material: Location:

Appearance: Layer:

of

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.

64875



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

)		10 ST-H	9 Sr-Hm	8 SI-H	7 ST-HM- OHA	6 ST-H	9 ST-HM-03A		3 ST-HM- 02A	\$1-HM-018	ST-HM-01A	Lab ID# Clien		Other: (TIP) AT	48 hour 72 hour	′	Rush 24 hour	Turn Around Times: (Circle One)	Phone: (888) 449-4566	City, St., Zip: Lansing,	Address: PO Box 13216	Client Name: Red Cedar
	N R	ST-HM-05B	Sr-HM-05A	ST-HM-04B	- 04A	ST-4M-03B	_	ST- HM-03B	ļ	7-018	7-01A	Client ID#		TIP All Samples Except				imes: (c	Fax:	MI 48901	3216	Cedar Consulting
County County		Glazina	Glazina	Dajwall	Drywall	Ten Linoleum	Ten Linoleum	White Linoleum 3-layer	White Linoleum 3-layer	Asphalt Shingle	Asphalt Shingle	Material/Location	TEM: AHERA 7400 Bulk/NOB	ent Plaster	D 11.	Lead: Bulk Wipe	Asbestos: Bulk Wipe	PLM EPA 600, PC all	(888) 448-8739	Project # :	Project	
												Volume	NOB EPA Level II	טוטטוט	D: oro	Air Paint	Point Count	samples	Contact Person: Aaron	t#:	Project: 2023 Sev	Date of Survey: 5.16
												Area	vel II	Onici viable		soil	PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	Paquet		Seventh St.	5.15-16
												Results		1016	r i			sulting.net 5% ACM.	•		Report	Lab Use Only

Date:

517-16

Date:

Date:

Relinquished by:

Received by:

Date:

Received by:

200 1823

Relinquished by:

Rev: 12/03 Work Forms: COC

Red Cedar Consulting

Tables

 $Table\ 1\ -\ Summary\ of\ Hazardous\ Materials,\ 2023\ 7^{th}\ St.,\ Muskegon\ Heights,\ Michigan$

Hazardous Materials Description and Location								
Location	Material Description	Quantity						
Exterior	Automobile Tire	3						
NE Bedroom	Smoke Detector	1						
Living	Automobile Tire	3						
Kitchen	Automobile Tire	2						
Bath	Automobile Tire	4						
Basement	Smoke Detector	1						

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2023 7th St., Muskegon Heights, Michigan

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
ST-HM-01A	Asphalt Shingle	No	M	Category I	ND/ND/ND/ND	Exterior	NA
ST-HM-01B	Asphalt Shingle	No	M	Category I	ND/ND/ND/ND	Exterior	NA
ST-HM-02A	White Linoleum 2-Layer	No	M	Category I	ND/ND	Kitchen/Dining	NA
ST-HM-02B	White Linoleum 2-Layer	No	M	Category I	ND/ND	Kitchen/Dining	NA
ST-HM-03A	Tan Linoleum	No	M	Category I	ND	Bath	NA
ST-HM-03B	Tan Linoleum	No	M	Category I	ND	Bath	NA
ST-HM-04A	Drywall	Yes	M	Category II	ND	Living Ceiling	NA
ST-HM-04B	Drywall	Yes	M	Category II	ND/ND	Living Wall	NA
ST-HM-05A	Glazing	Yes	M	Category II	ND	Bath	NA
ST-HM-05B	Glazing	Yes	M	Category II	5%CH	Bath	6 Windows

Notes:

<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 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, 2023 7th St., Muskegon Heights, Michigan

Asbestos Containing Material Description and Location									
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity				
Basement Boiler Pipe	Air-O-Cell 3" to 4"	Yes	Fair	TSI	60 lin. ft.				
Crawlspace Floor Debris	Air-O-Cell 3" to 4"	Yes	Fair	TSI	5 lin. ft.				

Notes:

Material Types

M = Miscellaneous building material TSI = Thermal System Insulation

= Surfacing Material

Abbreviations

lin. ft. = linear feet

= square feet sq. ft.

Table 4 - Summary of All Asbestos Containing Materials, 2023 7th St., Muskegon Heights, Michigan

Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Basement Boiler Pipe	Air-O-Cell 3" to 4"		Yes	65 lin. ft.
Crawlspace Floor Debris	Air-O-Cell 3" to 4"		Yes	5 lin. ft.
		Total		65 lin. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
SE Bedroom (1 window 28" wide x 62" tall)	Glazing		Yes	1 Window
Kitchen (2 windows 28" wide x 52" tall)	Glazing		Yes	2 Windows
Rear Entry (1 window 20" wide x 20" tall)	Glazing		Yes	1 Window
Bathroom (1 window 28" wide x 62" tall)	Glazing		Yes	1 Window
Basement Stairwell (1 window 20" wide x 20" tall)	Glazing		Yes	1 Window
		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 27, 2016

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

2040 Wood St., Muskegon Heights, MI 49444

Parcel ID: 61-26-650-004-0027-00

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 2040 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 .45 acre residential parcel which contains an approximate 672 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 asphalt lap 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, bedroom, laundry and rear entry.

VISUAL INSPECTION AND SAMPLING

Asbestos Containing Materials Inspection

Mr. Aaron Paquet of Red Cedar Consulting (Red Cedar), an accredited State Of Michigan/EPA Asbestos Building Inspector (Accreditation Number A30955) whom completed training per the Michigan Asbestos Workers Accreditation Act 440 completed an inspection of the Subject Property on May 14, 2016 for suspected asbestos containing building materials.

Muskegon County Land Bank Parcel ID: 61-26-650-004-0027-00

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:

- Asphalt Shingle
- Asphalt Lap Siding
- Linoleum
- 1'x1' Ceiling Tile
- 12"x12" Vinyl Tile
- Drywall
- Glazing
- Fiberboard

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

Hazardous Materials Inspection

On May 14, 2016 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

Muskegon County Land Bank Parcel ID: 61-26-650-004-0027-00

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.

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 Dining Room was found to contain up to 5% 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 window is listed below:

Muskegon County Land Bank Parcel ID: 61-26-650-004-0027-00

- Front Entry (2 windows 28" wide x 52" tall)
- Living (2 windows 28" wide x 52" tall)
- Living (1 window 34" wide x 20" tall)
- N Bedroom (1 window 28" wide x 52" tall)
- Laundry (1 window 22" wide x 30" tall)
- Bathroom (1 window 24" wide x 22" tall)
- Dining (1 window 28" wide x 52" tall)
- Kitchen (1 window 28" wide x 52" tall)

Category I ACM

One type of resilient floor covering (Tan Linoleum) located within the Laundry and Bathroom were found to contain up to 10% Chrysotile asbestos. The assessment to quantify the extent of this material identified approximately 60 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:

- Front Entry (2 windows 28" wide x 52" tall)
- Living (2 windows 28" wide x 52" tall)
- Living (1 window 34" wide x 20" tall)
- N Bedroom (1 window 28" wide x 52" tall)
- Laundry (1 window 22" wide x 30" tall)
- Bathroom (1 window 24" wide x 22" tall)
- Dining (1 window 28" wide x 52" tall)
- Kitchen (1 window 28" wide x 52" 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 (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.

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: 61-26-650-004-0027-00

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 (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.

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: 61-26-650-004-0027-00

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

(Laron Pogwet

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: 2040 Wood St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64883

Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 40%

Other - 60%

Lab ID #: 64889 - 01

Cust. #: WT-HM-01A

Material: Brown Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 3

Asbestos Present: NO

No Asbestos Observed

Cellulose - 40%

Other - 60%

Material: Brown Shingle

Lab ID #: 64889 - 01a

Cust. #: WT-HM-01A

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 3

Asbestos Present: **NO**No Asbestos Observed

Cellulose - 50% Other - 50%

Lab ID #: 64889 - 01b Cust. #: WT-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: 2040 Wood St

Report To:

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

ARI Report #

16-64883

Date Collected: 05/14/16

Date Received: 05/17/16

Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

No Asbestos Observed

Non-Asbestos

Lab ID #: 64889 - 02

Cust. #: WT-HM-01B

Material: Brown Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 3

Lab ID #: 64889 - 02a Cust. #: WT-HM-01B

Material: Brown Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 3

Lab ID #: 64889 - 02b

Cust. #: WT-HM-01B

Material: Tar Paper

Location:

Appearance: black, fibrous, homogenous

Layer: 3 of 3

Asbestos Present: **NO**

Cellulose - 40%

Other - 60%

Asbestos Present: **NO** No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Cellulose - 40%

Cellulose - 50%

Other - 50%

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: 2040 Wood St

Report To:

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

ARI Report #

16-64883

Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64889 - 03

Cust. #: WT-HM-02A

Material: Asphalt Lap Siding

Location:

Appearance: black,fibrous,nonhomogenous

Layer: 1 of 2

Lab ID #: 64889 - 03a

Cust. #: WT-HM-02A

Material: Tar Paper

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 64889 - 04

Cust. #: WT-HM-02B

Material: Asphalt Lap Siding

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 2

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 40%

Cellulose - 60%

Other - 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

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Test Method, Polarized Light Microscopy (PLM)

Project: 2040 Wood St

Report To:

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

ARI Report #

16-64883

Date Collected: 05/14/16

Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64889 - 04a

Cust. #: WT-HM-02B

Material: Tar Paper

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 64889 - 05

Cust. #: WT-HM-03A

Material: White 12x12 Vinyl Tile

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 3

Lab ID #: 64889 - 05a

Cust. #: WT-HM-03A

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 3

Asbestos Present: NO

No Asbestos Observed

Cellulose - 60%

Other - 40%

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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Project: 2040 Wood St

Report To:

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

ARI Report # 16-64883

Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64889 - 05b

Cust. #: WT-HM-03A

Material: Sheet Flooring

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 3 of 3

Lab ID #: 64889 - 06

Cust. #: WT-HM-03B

Material: White 12x12 Vinyl Tile

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 3

Lab ID #: 64889 - 06a

Cust. #: WT-HM-03B

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 3

Asbestos Present: NO

No Asbestos Observed

Cellulose - 50%

Other - 50%

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

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 2040 Wood St

Report To:

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

ARI Report #

16-64883

Date Collected: 05/14/16

Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64889 - 06b

Cust. #: WT-HM-03B

Material: Sheet Flooring

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 3 of 3

Lab ID #: 64889 - 07

Cust. #: WT-HM-04A

Material: Beige 12x12 Vinyl Tile

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 1 of 6

Lab ID #: 64889 - 07a

Cust. #: WT-HM-04A

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

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

Asbestos Present: NO

No Asbestos Observed

Cellulose - 50%

Other - 50%

Asbestos Present: **NO**

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Other - 100%

Layer: 2 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: 2040 Wood St

Report To:

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

ARI Report #

16-64883

Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64889 - 07b

Cust. #: WT-HM-04A

Material: White Floor Tile

Location:

Appearance: white, nonfibrous, homogenous

Layer: 3 of 6

Lab ID #: 64889 - 07c

Cust. #: WT-HM-04A

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 4 of 6

Lab ID #: 64889 - 07d

Cust. #: WT-HM-04A

Material: Orange Sheet Flooring

Location:

Appearance: orange, fibrous, nonhomogenous

Layer: 5 of 6

Asbestos Present: NO

Other - 100%

Other - 100%

Cellulose - 50% Other - 50%

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: 2040 Wood St

Report To:

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

ARI Report #

16-64883

Date Collected: 05/14/16

Date Received: 05/17/16

Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

No Asbestos Observed

Non-Asbestos

Lab ID #: 64889 - 07e

Cust. #: WT-HM-04A

Material: Tar Paper

Location:

Appearance: black, fibrous, homogenous

Layer: 6 of 6

Lab ID #: 64889 - 08

Cust. #: WT-HM-04B

Material: Beige 12x12 Vinyl Tile

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 1 of 6

Lab ID #: 64889 - 08a

Cust. #: WT-HM-04B

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

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

Layer: 2 of 6

Asbestos Present: NO

Cellulose - 60%

Other - 100%

Other - 100%

Other - 40%

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: 2040 Wood St

Report To:

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

ARI Report # Date Collected: 05/14/16

16-64883

Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64889 - 08b

Cust. #: WT-HM-04B

Material: White Floor Tile

Location:

Appearance: white, nonfibrous, homogenous

Layer: 3 of 6

Asbestos Present: **NO**

Other - 100%

Lab ID #: 64889 - 08c Cust. #: WT-HM-04B

Material: Glue Location:

Appearance: clear,nonfibrous,homogenous

Layer: 4 of 6

Lab ID #: 64889 - 08d

Cust. #: WT-HM-04B

Material: Orange Sheet Flooring

Location:

Appearance: orange, fibrous, nonhomogenous

Layer: 5 of 6

Asbestos Present: NO No Asbestos Observed

Other - 50%

Cellulose - 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: 2040 Wood St

Report To:

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

ARI Report # 16-64883

Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 60%

Other - 40%

Lab ID #: 64889 - 08e

Cust. #: WT-HM-04B

Material: Tar Paper

Location:

Appearance: black,fibrous,homogenous

Layer: 6 of 6

Lab ID #: 64889 - 09

Cust. #: WT-HM-05A

Material: White Linoleum

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 10%

Fiberglass - 10%

Other - 80%

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

Lab ID #: 64889 - 09a

Cust. #: WT-HM-05A

Material: Flooring

Location:

Appearance: white, fibrous, homogenous

Layer: 2 of 2

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: 2040 Wood St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64883

Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64889 - 10

Cust. #: WT-HM-05B

Material: White Linoleum

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

Asbestos Present: **NO**No Asbestos Observed

Cellulose - 10% Fiberglass - 10%

Other - 80%

Lab ID #: 64889 - 10a Cust. #: WT-HM-05B

Material: Flooring

Location:

Appearance: white, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: **NO**

No Asbestos Observed

Fiberglass - 10%

Other - 90%

Other - 100%

Lab ID #: 64889 - 11

Cust. #: WT-HM-06A

Material: Tan 12x12 Vinyl Tile

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: 2040 Wood St

Report To:

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

ARI Report #

16-64883

Date Collected: 05/14/16

Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64889 - 11a

Cust. #: WT-HM-06A

Material: Glue Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

Asbestos Present: **NO**

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

Other - 100%

Other - 100%

Other - 100%

Lab ID #: 64889 - 12

Cust. #: WT-HM-06B

Material: Tan 12x12 Vinyl Tile

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 64889 - 12a

Cust. #: WT-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: 2040 Wood St

Report To:

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

ARI Report #

16-64883

Date Collected: 05/14/16

Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

No Asbestos Observed

Non-Asbestos

Lab ID #: 64889 - 13

Cust. #: WT-HM-07A

Material: Tan Linoleum

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 6

Lab ID #: 64889 - 13a

Cust. #: WT-HM-07A

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 6

Lab ID #: 64889 - 13b

Material: Brown Linoleum

Location:

Layer: 3 of 6

Asbestos Present: NO

Other - 100%

Other - 100%

Asbestos Present: **NO** No Asbestos Observed

Cust. #: WT-HM-07A

Appearance: brown, fibrous, nonhomogenous

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: 2040 Wood St

Report To:

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

ARI Report #

16-64883

Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64889 - 13c

Cust. #: WT-HM-07A

Material: Yellow Linoleum

Location:

Layer: 4 of 6

Appearance: yellow,fibrous,nonhomogenous

Lab ID #: 64889 - 13d

Cust. #: WT-HM-07A

Material: Brown Floor Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 5 of 6

Lab ID #: 64889 - 13e

Material: Mastic

Location:

Appearance: black,fibrous,homogenous

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

Layer: 6 of 6

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: YES

Asbestos Present: YES

Chrysotile - 10%

Chrysotile - 10%

Cellulose - 10% Fiberglass - 10%

Other - 80%

Other - 90%

Other - 90%

Cust. #: WT-HM-07A

Robert T. Letarte Jr., Laboratory Director

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Test Method, Polarized Light Microscopy (PLM)

Project: 2040 Wood St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64883
Date Collected: 05/14/16

Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64889 - 14

Cust. #: WT-HM-07B

Material: Tan Linoleum

Location:

Appearance: beige, nonfibrous, homogenous

Layer: 1 of 6

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Lab ID #: 64889 - 14a Cust. #: WT-HM-07B

Material: Glue

Material: Glue Location:

Location.

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 6

Lab ID #: 64889 - 14b

Cust. #: WT-HM-07B

Material: Brown Linoleum

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 3 of 6

Asbestos Present: NO

No Asbestos Observed

Cellulose - 10% Fiberglass - 10%

0.4 0.00/

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: 2040 Wood St

Report To:

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

ARI Report #

16-64883

Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64889 - 14c

Cust. #: WT-HM-07B

Material: Yellow Linoleum

Location:

Appearance: yellow,fibrous,nonhomogenous

Layer: 4 of 6

Lab ID #: 64889 - 14d

Cust. #: WT-HM-07B

Material: Brown Floor Tile

Location: Appearance:

Layer: 5 of 6

Lab ID #: 64889 - 14e

Cust. #: WT-HM-07B

Material: Mastic

Location:

Appearance:

Asbestos Present: NO

No Asbestos Observed

Cellulose - 10%

Fiberglass - 10%

Other - 80%

Asbestos Present:

NOT ANALYZED

Layer: 6 of 6

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: 2040 Wood St

Report To:

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

ARI Report # 16-64883

Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 10%

Fiberglass - 10% Other - 80%

Lab ID #: 64889 - 15

Cust. #: WT-HM-08A

Material: Green Linoleum

Location:

Appearance: green, fibrous, nonhomogenous

Layer: 1 of 2

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 50%

Other - 50%

Lab ID #: 64889 - 15a Cust. #: WT-HM-08A

Material: Green Sheet Flooring

Location:

Appearance: green, fibrous, nonhomogenous

Layer: 2 of 2

Lab ID #: 64889 - 16

Cust. #: WT-HM-08B

Material: Green Linoleum

Location:

Appearance: green, fibrous, nonhomogenous

Layer: 1 of 2

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: 2040 Wood St

Report To:

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

ARI Report # 16-64883

Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 50%

Other - 50%

Lab ID #: 64889 - 16a

Cust. #: WT-HM-08B

Material: Green Sheet Flooring

Location:

Appearance: green, fibrous, nonhomogenous

Layer: 2 of 2

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 80%

Other - 20%

Lab ID #: 64889 - 17 Cust. #: WT-HM-09A

Material: White 1x1 Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64889 - 18

Cust. #: WT-HM-09B

Material: White 1x1 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.



Test Method, Polarized Light Microscopy (PLM)

Project: 2040 Wood St

Report To:

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

ARI Report # 16-64883 Date Collected: 05/14/16

Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 20%

Fiberglass - 5%

Other - 75%

Lab ID #: 64889 - 19

Cust. #: WT-HM-10A

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 1

No Asbestos Observed

Asbestos Present: **NO**

Cellulose - 20% Fiberglass - 5%

Other - 75%

Cust. #: WT-HM-10B

Material: Drywall

Lab ID #: 64889 - 20

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: NO No Asbestos Observed

Cellulose - 70%

Other - 30%

Lab ID #: 64889 - 21 Cust. #: WT-HM-11A

Material: Fiberboard

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)

Project: 2040 Wood St

Report To:

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

ARI Report # 16-64883

Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64889 - 22

Cust. #: WT-HM-11B

Material: Fiberboard

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64889 - 24

Cust. #: WT-HM-12A

Material: Glazing

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64889 - 25

Cust. #: WT-HM-12B

Material: Glazing

Location:

Appearance: white, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

Cellulose - 70%

No Asbestos Observed

Other - 30%

Asbestos Present: **NO**

Cellulose - 2%

No Asbestos Observed

Other - 98%

Other - 95%

Chrysotile - 5%

Asbestos Present: YES

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

Robert T. Letarte Jr., Laboratory Director

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64883

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

T	200
APEX	1053

Fax: 734-449-9991

Other: Rush 48 hour Relinquished by: / Phone: Date:_ Turn Around Times: (Circle One) City, St., Zip: Address: Client Name: Lab ID# グインへを (888) 449-4566 72 hour 24 hour 0 رک 0 W Red Cedar Consulting Lansing, MI 48901 PO Box 13216 WT-4m-06A WT-14M-05B UT-HM-05A WI-HM-04A WI-HM-OZA としてまるしる WT-HM-OIA WITHMISHIS WT-14-033 WT-HM-03A WF-4m-025 (TTP) All Samples Except Plaster Client ID# Date: Received by: 1 Fax: トなると whose I maleum white Buile Shingle Beige came vinglike Asphalt Lap Siding Shize white 12×12 Dings Tile Asphalt Lap Sidir white 12 AZ ving Tile (888) 448-8739 Mold: Asbestos: Bulk TEM: Lead: Material/Location 12x12 Simitile 12×12 Viny17,110 Lindeur (523 Bulk Bulk **AHERA 7400** PLM EPA 600, PC all samples with a detection of <5% ACM. × Date: Relinquished by: Wipe Wipe Tape Contact Person: Date of Survey: 5-14-16 Project #: Project: 2040 wow St Bulk/NOB Air BioSIS Point Count Volume Aaron Paquet EPA Level II Paint Other Received by: Date: Area PCM Soil Results Lab Use Only Log-In _____ Report _

Work Forms: COC

APEX PESEAROH

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: WAY 1 7 2016 Date:	Relinquished by: Received by: Received by: Received by:	23 WT-1+M-NB Fibertrans.	a) vritarily fiberboard	80 VIT-Han-10B Drywell	10 wind pormal	rel style Sporman 12m	wI-Hunoat white lo	i	15 wT-Hm-08A Green Linaleur	14 WT-HM-OTB Ten Liholeum	13 wt-km: 074 Tan Lindeur	I without off Tan 12x12 Simplifie	Lab ID #Client ID #Material/LocationVolumeArea	TEM: AHERA 7400 Bulk/NOB EPA Level II	Mold: Bulk BioSIS Other	48 hour 12 hour Paint Soil	1177	Asbestos: Bulk X Wipe Point Count PCM	Turn Around Times: (Circle One) PLM EPA 600, PC all samples with a detection of <5% ACM.	Phone: (888) 449-4566	Address: PO Box 13216 Project: 2040 Wood St	
Date ·	Received by:												Area	И	Other Viable	Soil		PCM	@redcedarcon	Paquet	大九	97.1
													Results		ıble				isulting.net		Report	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: 577-16	Relinquished by:				A CONTRACTOR OF THE CONTRACTOR		4 C	23	Lab ID #		Other:	48 hour /2 hour	Rush 24 hour	Turn Arou	Phone: (888) 449-456	City, St., Zip:	Address:	Client Name:
Date:	Received by MAY						Ster while	w1-4m-12N	Client ID#		(TTP) All Samples Except			Turn Around Times: (Circle One)	49-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
Date:	MAY 1 7 12018 Relinquished by:						Clarin	Clarin	Material/Location		Mold: Bulk Tape	Lead: Bulk Wipe	os: Bulk	PLM EPA 600, PC	(888) 448-8739	Project #:	Project	
177 7-100									Volume	IOB EPA Level II	BioSIS	_ Air Paint	_ Point Count	apaquet@redcedarconsulting.net all samples with a detection of <5% ACM.	rson: Aaron		Ò	Date of Survey: 3-19
Date:	Received by:								Area I	el II	Other Viable _	Soil	PCM	t@redcedarconsultection of <5% F	Paquet		254.	3-14-16
				-					Results					ting.net 1CM.			Report	Lab Use Only Log-In

Date:_

Rev: 12/03 Work Forms: COC

Other:

48 hour

Rush

Red Cedar Consulting

Tables

Table 1 - Summary of Hazardous Materials, 2040 Wood St., Muskegon Heights, Michigan

Hazardous Materials Description and Location									
Location Material Description									
Living	Thermostat	1							
N Bedroom	Smoke Detector	1							
Front Entry	Smoke Detector	1							

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2040 Wood St., Muskegon Heights, Michigan

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
WM-HM-01A	Asphalt Shingle	No	M	Category I	ND/ND/ND	Exterior	NA
WM-HM-01B	Asphalt Shingle	No	M	Category I	ND/ND/ND	Exterior	NA
WM-HM-02A	Asphalt Lap Siding	No	M	Category I	ND/ND	Exterior	NA
WM-HM-02B	Asphalt Lap Siding	No	M	Category I	ND/ND	Exterior	NA
WM-HM-03A	White 12x12 Vinyl Tile	No	M	Category I	ND/ND/ND	Front Entry	NA
WM-HM-03B	White 12x12 Vinyl Tile	No	M	Category I	ND/ND/ND	Front Entry	NA
WM-HM-04A	Beige 12x12 Vinyl Tile	No	M	Category I	ND/ND/ND/ND/ND /ND	Living	NA
WM-HM-04B	Beige 12x12 Vinyl Tile	No	M	Category I	ND/ND/ND/ND/ND /ND	Living	NA
WM-HM-05A	White Linoleum	No	M	Category I	ND/ND	Dining	NA
WM-HM-05B	White Linoleum	No	M	Category I	ND/ND	Dining	NA
WM-HM-06A	Tan 12x12 Vinyl Tile	No	M	Category I	ND/ND	Kitchen	NA
WM-HM-06B	Tan 12x12 Vinyl Tile	No	M	Category I	ND/ND	Kitchen	NA
WM-HM-07A	Tan Linoleum	No	M	Category I	ND/ND/ND/ND/ 10% CH/10%CH	Laundry	60 sq. ft.
WM-HM-07B	Tan Linoleum	No	M	Category I	ND/ND/ND/ND/ NA/NA	Laundry	NA
WM-HM-08A	Green Linoleum	No	M	Category I	ND/ND	N Bedroom	NA
WM-HM-08B	Green Linoleum	No	M	Category I	ND/ND	N Bedroom	NA
WM-HM-09A	White 1'x1' Ceiling Tile	Yes	M	Category II	ND	Living	NA
WM-HM-09B	White 1'x1' Ceiling Tile	Yes	M	Category II	ND	Living	NA
WM-HM-10A	Drywall	Yes	M	Category II	ND	Front Entry Ceiling	NA
WM-HM-10B	Drywall	Yes	M	Category II	ND	Front Entry Wall	NA
WM-HM-11A	Fiberboard	Yes	M	Category II	ND	N Bedroom Ceiling	NA
WM-HM-11B	Fiberboard	Yes	M	Category II	ND	Living Wall	NA
WM-HM-12A	Glazing	Yes	M	Category II	ND	Living	NA
WM-HM-12B	Glazing	Yes	M	Category II	5%CH	Dining	10 Windows

Notes:

Material Types

Abbreviations

M = Miscellaneous building material

NQ = Not quantified

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2040 Wood 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 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, 2040 Wood St., Muskegon Heights, Michigan

A	Asbestos 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, 2040 Wood St., Muskegon Heights, Michigan

Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Laundry	Tan Linoleum		No	25 sq. ft.
Bathroom	Tan Linoleum		No	35 sq. ft.
		Total		60 sq. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Front Entry (2 windows 28" wide x 52" tall)	Glazing		Yes	2 Windows
Living (2 windows 28" wide x 52" tall)	Glazing		Yes	2 Windows
Living (1 window 34" wide x 20" tall)	Glazing		Yes	1 Window
N Bedroom (1 window 28" wide x 52" tall)	Glazing		Yes	1 Window
Laundry (1 window 22" wide x 30" tall)	Glazing		Yes	1 Window
Bathroom (1 window 24" wide x 22" tall)	Glazing		Yes	1 Window
Dining (1 window 28" wide x 52" tall)	Glazing		Yes	1 Window
Kitchen (1 window 28" wide x 52" tall)	Glazing		Yes	1 Window
		Total		10 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 27, 2016

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 2110 5th St., Muskegon Heights, MI 49444
Parcel ID: 61-26-185-051-0021-10

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 2110 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 .12 acre residential parcel which contains an approximate 1,008 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 wood lap while the roof was sealed with asphalt shingles. The Building can be further divided into a front porch, living room, dining room, kitchen, bath, and three bedrooms on the first floor.

VISUAL INSPECTION AND SAMPLING

Asbestos Containing Materials Inspection

Mr. Aaron Paquet of Red Cedar Consulting (Red Cedar), an accredited State Of Michigan/EPA Asbestos Building Inspector (Accreditation Number A30955) whom completed training per the Michigan Asbestos Workers Accreditation Act 440 completed an inspection of the Subject Property on May 7, 2016 for suspected asbestos containing building materials.

Project No.: 16-1070 Muskegon County Land Bank Parcel ID: 61-26-185-051-0021-10

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
- Linoleum
- 1'x1' Ceiling Tile
- 12"x12" Vinyl Tile
- 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 May 7, 2016 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.

Project No.: 16-1070

Muskegon County Land Bank Parcel ID: 61-26-185-051-0021-10

INSPECTION RESULTS AND RECOMMENDATIONS

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

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

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

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

Presumed Asbestos Containing Material

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

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

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

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

Friable ACM's

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

- Living (1 register, 10 sq. ft.)
- Dining (1 register, 10 sq. ft.)
- Kitchen (1 register, 10 sq. ft.)
- Center Bedroom (1 register, 10 sq. ft.)
- Basement (misc. HVAC wrap on old living room register, 10 sq. ft.)

Project No.: 16-1070

Muskegon County Land Bank Parcel ID: 61-26-185-051-0021-10

• Basement (10 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 (1 register, 10 sq. ft.)
- Dining (1 register, 10 sq. ft.)
- Kitchen (1 register, 10 sq. ft.)
- Center Bedroom (1 register, 10 sq. ft.)
- Basement (misc. HVAC wrap on old living room register, 10 sq. ft.)
- Basement (10 in. dia. HVAC Wrapped Ductwork, 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:

- Gallon Container Misc. Paint (2)
- 2 Gallon Container Epoxy (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.

Project No.: 16-1070

Muskegon County Land Bank Parcel ID: 61-26-185-051-0021-10

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.: 16-1070 Muskegon County Land Bank

Parcel ID: 61-26-185-051-0021-10

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 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: 2110 Fifth St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64726

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/16/16 Date Reported: 05/17/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 30%

Other - 70%

Lab ID #: 64726 - 01

Cust. #: FS-HM--01A

Material: Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO**No Asbestos Observed

NO

Cellulose - 30%

Other - 70%

Lab ID #: 64726 - 02 Cust. #: FS-HM-01B

Material: Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Lab ID #: 64726 - 03 Cust. #: FS-HM-02A

Material: Red 12x12 Vinyl Tile

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: 2110 Fifth St.

Report To:

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

ARI Report # 16-64726

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/16/16

Date Reported: 05/17/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Cellulose - 60%

Other - 40%

Other - 100%

Lab ID #: 64726 - 03a

Cust. #: FS-HM-02A

Material: Floor Tile

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 2 of 3

Lab ID #: 64726 - 03b Cust. #: FS-HM-02A

Material: Tar Paper

Location:

Appearance: black, fibrous, homogenous

Layer: 3 of 3

Lab ID #: 64726 - 04

Cust. #: FS-HM-02B

Material: Red 12x12 Vinyl Tile

Location:

Appearance: brown,nonfibrous,homogenous

Asbestos Present: **NO**

No Asbestos Observed

Asbestos Present: **NO**

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

Other - 100%

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: 2110 Fifth St.

Report To:

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

ARI Report # 16-64726

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/16/16

Date Reported: 05/17/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64726 - 04a

Cust. #: FS-HM-02B

Material: Floor Tile

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 2 of 2

Asbestos Present: **NO**

No Asbestos Observed

Other - 100%

Lab ID #: 64726 - 05 Cust. #: FS-HM-03A

Material: Stone Linoleum

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 3

Asbestos Present: NO

Cellulose - 10%

Cust. #: FS-HM-03A

No Asbestos Observed

Fiberglass - 10% Other - 80%

Material: Stone Linoleum

Lab ID #: 64726 - 05a

Location:

Appearance: grey,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: 2110 Fifth St.

Report To:

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

ARI Report #

16-64726

Date Collected: 05/07/16

Date Received: 05/11/16 Date Analyzed: 05/16/16

Date Reported: 05/17/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64726 - 05b

Cust. #: FS-HM-03A

Material: Stone Linoleum

Location:

Appearance: brown, fibrous, homogenous

Layer: 3 of 3

Lab ID #: 64726 - 06

Cust. #: FS-HM-03B

Material: Stone Linoleum

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 1 of 2

Lab ID #: 64726 - 06a

Cust. #: FS-HM-03B

Material: Stone Linoleum

Location:

Appearance: white, fibrous, homogenous

Asbestos Present: NO

No Asbestos Observed

Cellulose - 80%

Other - 20%

Other - 100%

Asbestos Present: **NO**

No Asbestos Observed

Asbestos Present: NO No Asbestos Observed

Fiberglass - 20%

Other - 80%

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: 2110 Fifth St.

Report To:

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

ARI Report # 16-64726

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/16/16

Date Reported: 05/17/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64726 - 07

Cust. #: FS-HM-04A

Material: Black 12x12 Vinyl Tile

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 1 of 1

Asbestos Present: **NO**

No Asbestos Observed

Fiberglass - 5%

Other - 95%

Other - 100%

Lab ID #: 64726 - 08 Cust. #: FS-HM-04B

Material: Black 12x12 Vinyl Tile

Location:

Appearance: grey, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64726 - 09

Cust. #: FS-HM-05A

Material: Grey 12x12 Vinyl Tile

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: 2110 Fifth St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64726

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/16/16

Date Reported: 05/17/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64726 - 09a

Cust. #: FS-HM-05A Material: Tar Paper

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: **NO**No Asbestos Observed

Cellulose - 65%

Other - 35%

Lab ID #: 64726 - 10

Cust. #: FS-HM-05B

Material: Grey 12x12 Vinyl Tile

Location:

Appearance: white, fibrous, homogenous

Layer: 1 of 2

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 30%

Other - 70%

Other - 100%

Lab ID #: 64726 - 10a

Cust. #: FS-HM-05B

Material: Grey 12x12 Vinyl Tile

Location:

Appearance: black,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: 2110 Fifth St.

Report To:

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

ARI Report # 16-64726

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/16/16 Date Reported: 05/17/16

Sample Information

Non-Asbestos

Other - 100%

Lab ID #: 64726 - 11

Cust. #: FS-HM-06A

Material: Black/White Linoleum

Location:

Appearance: black,nonfibrous,homogenous

Layer: 1 of 2

Lab ID #: 64726 - 11a

Cust. #: FS-HM-06A

Material: Backing

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 64726 - 12

Cust. #: FS-HM-06B

Material: Black/White Linoleum

Location:

Appearance: black,nonfibrous,homogenous

Layer: 1 of 2

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO**

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Cellulose - 80%

Other - 20%

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: 2110 Fifth St.

Report To:

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

ARI Report #

16-64726

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/16/16

Date Reported: 05/17/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 80%

Other - 20%

Lab ID #: 64726 - 12a

Cust. #: FS-HM-06B

Material: Backing

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: **NO**

Chrysotile - Trace

Other - 100%

Other - 100%

Lab ID #: 64726 - 13 Cust. #: FS-HM-07A

Material: Glazing

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

POINT COUNT RESULT

Lab ID #: 64726 - 14

Cust. #: FS-HM-07B

Material: Glazing

Location:

Appearance: grey,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

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 2110 Fifth St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64726

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/16/16

Date Reported: 05/17/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64726 - 15

Cust. #: FS-HM-08A

Material: White 1x1 Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO**No Asbestos Observed

Cellulose - 80%

Other - 20%

Lab ID #: 64726 - 16

Cust. #: FS-HM-08B

Material: White 1x1 Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Cellulose - 80%

Other - 20%

Other - 100%

Lab ID #: 64726 - 17

Cust. #: FS-HM-09A

Material: 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

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Test Method, Polarized Light Microscopy (PLM)

Project: 2110 Fifth St.

Report To:

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

ARI Report #

16-64726 Date Collected: 05/07/16

Date Received: 05/11/16 Date Analyzed: 05/16/16

Date Reported: 05/17/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64726 - 18

Cust. #: FS-HM-09B

Material: Glazing

Location:

Appearance: brown, fibrous, homogenous Layer: 1 of 1

Asbestos Present: **NO**

Chrysotile - Trace

POINT COUNT RESULT

Lab ID #: 64726 - 19

Cust. #: FS-HS-01A

Material: Plaster

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 64726 - 19a

Cust. #: FS-HS-01A

Location:

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

Layer: 2 of 2

Other - 100%

Asbestos Present: **NO**

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Material: Mortar

Appearance: grey,fibrous,homogenous

Cellulose - 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: 2110 Fifth St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64726

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/16/16 Date Reported: 05/17/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64726 - 20

Cust. #: FS-HS-01B

Material: Plaster

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: **NO**No Asbestos Observed

Cellulose - 2% Other - 98%

Lab ID #: 64726 - 20a Cust. #: FS-HS-01B

Material: Mortar

Location:

A

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Lab ID #: 64726 - 21 Cust. #: FS-HS-01C

Material: Plaster

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: 2110 Fifth St.

Report To:

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

ARI Report # 16-64726

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/16/16

Date Reported: 05/17/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Other - 100%

Lab ID #: 64726 - 21a

Cust. #: FS-HS-01C Material: Mortar

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 2 of 2

Asbestos Present: NO No Asbestos Observed

Asbestos Present: **NO**

Other - 100%

Lab ID #: 64726 - 22 Cust. #: FS-HS-01D

Material: Plaster

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 64726 - 22a

Cust. #: FS-HS-01D

Material: Mortar

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Asbestos Present: NO

Cellulose - 2%

No Asbestos Observed

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: 2110 Fifth St.

Report To:

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

ARI Report #

16-64726

Date Collected: 05/07/16

Date Received: 05/11/16

Date Analyzed: 05/16/16

Date Reported: 05/17/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

Asbestos Present: **NO**

No Asbestos Observed

No Asbestos Observed

Non-Asbestos

Other - 100%

Cellulose - 2%

Other - 98%

Lab ID #: 64726 - 23

Cust. #: FS-HS-01E

Material: Plaster

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 64726 - 23a

Cust. #: FS-HS-01E

Material: Mortar

Location:

Appearance: grey,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

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research 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 # 64726

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: 5-10-16	Relinquished by:		ò	2	N	7	6	5.	· (-)	U	9		Lab ID #	Other: I Day		48 hour 72 hour	Rush 24 hour	Turn Arou	Phone: (888) 449-456	City, St., Zip:	Address:	Client Name: _
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Date:	Received by:												Volume Area	OBEPA Level II	BioSIS Other	Air Paint	Point Count PCM	apaquet@redceo all samples with a detection	Person: Aaron Paquet	#:	Project: 2110 Fith St.	Survey: 5-7-16
	l by:												a Results		Viable	Soil		apaquet@redcedarconsulting.net with a detection of <5% 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

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	PCM	Point Count	Asbestos: Bulk Wipe	Asl	Rush 24 hour
lting.net ACM.	apaquet@redcedarconsulting.net with a detection of <5% ACM.	apaque all samples with a d	PLM EPA 600, PC	(Circle O	Turn Around Times: (Circle One)
	Aaron Paquet		448-8739	Fax: (888)	449-4566
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Lab Use Only Log-In	5-7-16	• •	Date of Survey	ing	Client Name: Red Cedar Consulting

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: 5-10-16	Relinquished by						23 7	Lab ID#		<u>,</u>	48 hour 72 hour	Rush 24 hour	Turn Around Times: (Circle One)	Phone: (888) 449-4566	City, St., Zip: La	Address: PO	Client Name: Rep
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Rev: 12/03 Work Forms: COC

Red Cedar Consulting

Tables

 $Table\ 1-Summary\ of\ Hazardous\ Materials,\ 2110\ 5^{th}\ St.,\ Muskegon\ Heights,\ Michigan$

	Hazardous Materials Description and Location	
Location	Material Description	Quantity
Basement	Gallon Container Misc. Paint	2
Basement	2 Gallon Container Epoxy	1

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2110 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	Asphalt Shingle	No	M	Category I	ND	Exterior	NA
FS-HM-01B	Asphalt Shingle	No	M	Category I	ND	Exterior	NA
FS-HM-02A	Red 12x12 Vinyl Tile	No	M	Category I	ND/ND/ND	Front Entry	NA
FS-HM-02B	Red 12x12 Vinyl Tile	No	M	Category I	ND/ND	Front Entry	NA
FS-HM-03A	Stone Linoleum	No	M	Category I	ND/ND/ND	Kitchen	NA
FS-HM-03B	Stone Linoleum	No	M	Category I	ND/ND	Kitchen	NA
FS-HM-04A	Black 12x12 Vinyl Tile	No	M	Category I	ND	Bathroom	NA
FS-HM-04B	Black 12x12 Vinyl Tile	No	M	Category I	ND	Bathroom	NA
FS-HM-05A	Gray 12x12 Vinyl Tile	No	M	Category I	ND/ND	Center Bedroom	NA
FS-HM-05B	Gray 12x12 Vinyl Tile	No	M	Category I	ND/ND	Center Bedroom	NA
FS-HM-06A	Black & White Linoleum	No	M	Category I	ND/ND	NE Bedroom	NA
FS-HM-06B	Black & White Linoleum	No	M	Category I	ND/ND	NE Bedroom	NA
FS-HM-07A	Glazing	Yes	M	Category II	Trace CH	Front Porch	NA
FS-HM-07B	Glazing	Yes	M	Category II	ND	Front Porch	NA
FS-HM-08A	White 1'x1' Ceiling Tile	Yes	M	Category II	ND	Living	NA
FS-HM-08B	White 1'x1' Ceiling Tile	Yes	M	Category II	ND	Living	NA
FS-HM-09A	Glazing	Yes	M	Category II	ND	NW Bedroom	NA
FS-HM-09B	Glazing	Yes	M	Category II	Trace CH	Living	NA
FS-HS-01A	Plaster	No	S	Category II	ND/ND	Center Bedroom Wall	NA
FS-HS-01B	Plaster	No	S	Category II	ND/ND	NW Bedroom Wall	NA
FS-HS-01C	Plaster	No	S	Category II	ND/ND	Kitchen Wall	NA
FS-HS-01D	Plaster	No	S	Category II	ND/ND	NW Bedroom Ceiling	NA
FS-HS-01E	Plaster	No	S	Category II	ND/ND	Kitchen Ceiling	NA

Notes:

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2110 5th St., Muskegon Heights, Michigan

Mater	ial Types	Abbrev	<u>riations</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
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, 2110 5th St., Muskegon Heights, Michigan

. I	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.) Center Bedroom (1 register, 10 sq. ft.) Basement (misc. HVAC wrap on old living room register, 10 sq. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	50 sq. ft.
Basement (10 in. dia. HVAC Wrapped Ductwork, 8 lin. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	8 lin. ft.

Notes:

Material Types

M = Miscellaneous building material TSI = Thermal System Insulation

S = Surfacing Material

Abbreviations

lin. ft. = linear feet

sq. ft. = square feet

Table 4 - Summary of All Asbestos Containing Materials, 2110 5th St., Muskegon Heights, Michigan

Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Living (1 register, 10 sq. ft.) Dining (1 register, 10 sq. ft.) Kitchen (1 register, 10 sq. ft.) Center Bedroom (1 register, 10 sq. ft.) Basement (misc. HVAC wrap on old living room register, 10 sq. ft.)	HVAC Duct Wrap		Yes	50 sq. ft.
		Total		50 sq. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Basement (10 in. dia. HVAC Wrapped Ductwork, 8 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 27, 2016

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 Superior St., Muskegon Heights, MI 49444 Parcel ID: 61-26-650-014-0007-00

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 2113 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 .11 acre residential parcel which contains an approximate 772 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 front entry, living room, kitchen/dining room, bath, bedroom and rear entry on the first floor while the second floor contains two bedrooms.

VISUAL INSPECTION AND SAMPLING

Asbestos Containing Materials Inspection

Mr. Aaron Paquet of Red Cedar Consulting (Red Cedar), an accredited State Of Michigan/EPA Asbestos Building Inspector (Accreditation Number A30955) whom completed training per the Michigan Asbestos

Muskegon County Land Bank Parcel ID: 61-26-650-014-0007-00

Workers Accreditation Act 440 completed an inspection of the Subject Property on May 14, 2016 for suspected asbestos containing building materials.

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

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

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

- Asphalt Shingle
- Linoleum
- 1'x1' Ceiling Tile/Glue Pod
- Fiberboard
- 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: 61-26-650-014-0007-00

Hazardous Materials Inspection

On May 14, 2016 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.

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: 61-26-650-014-0007-00

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 thirteen windows at the following locations that would fall into the same homogenous group. The locations of the windows are listed below:

- E Bedroom (2 windows 30" wide x 52" tall)
- Living (2 windows 30" wide x 52" tall)
- Kitchen (3 windows 28" wide x 44" tall)
- Kitchen (1 window 28" wide x 28" tall)
- Bathroom (1 window 28" wide x 28" tall)
- 2nd Fl. E Bedroom (1 window 28" wide x 26" tall)
- 2nd Fl. E Bedroom (1 window 26" wide x 44" tall)
- 2nd Fl. W Bedroom (2 windows 28" wide x 44" tall)

Vermiculite insulation identified in the Building is classified as friable ACM. The visual assessment to quantify the extent of this material identified approximately 35 cu. ft. above the ceiling of the Bath and Rear Entry as well as within the walls of the Bath.

Category I ACM

One type of resilient floor covering (Stone Linoleum) located within the Front Entry was found to contain up to 30% Chrysotile asbestos. The assessment to quantify the extent of this material identified approximately 12 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 thirteen windows throughout the Building. The locations of these windows that should be abated prior to demolition/renovation activities are listed below:

- E Bedroom (2 windows 30" wide x 52" tall)
- Living (2 windows 30" wide x 52" tall)
- Kitchen (3 windows 28" wide x 44" tall)
- Kitchen (1 window 28" wide x 28" tall)
- Bathroom (1 window 28" wide x 28" tall)
- 2nd Fl. E Bedroom (1 window 28" wide x 26" tall)
- 2nd Fl. E Bedroom (1 window 26" wide x 44" tall)
- 2nd Fl. W Bedroom (2 windows 28" wide x 44" tall)

Muskegon County Land Bank Parcel ID: 61-26-650-014-0007-00

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.

Vermiculite insulation identified within the Building is classified as Friable ACM and should be abated prior to demolition/renovation activities.

The Category I resilient floor covering (Stone Linoleum) is a non-friable ACM that may be left in place as long as the demolition/renovation activities are completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

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

Hazardous Materials

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

- Automobile Tire (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.

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: 61-26-650-014-0007-00

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: 2113 Superior St.

Report To:

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

ARI Report #

16-64873 Date Collected: 05/14/16

Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Fiberglass - 30%

Other - 70%

Lab ID #: 64873 - 01

Cust. #: SS-HM-01A

Material: Brown Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 4

Lab ID #: 64873 - 01a

Cust. #: SS-HM-01A

Material: Black Shingle

Asbestos Present: **NO**

Fiberglass - 30%

No Asbestos Observed

Other - 70%

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 4

Asbestos Present: NO

Cellulose - 40%

Cust. #: SS-HM-01A

Lab ID #: 64873 - 01b

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

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

Report To:

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

ARI Report # 16-64873

Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64873 - 01c

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

Location:

Appearance: black,fibrous,homogenous

Layer: 4 of 4

Asbestos Present: **NO** No Asbestos Observed

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 50%

Other - 50%

Lab ID #: 64873 - 02

Cust. #: SS-HM-01B

Material: Brown Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 4

Lab ID #: 64873 - 02a

Cust. #: SS-HM-01B

Material: Black Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 4

Asbestos Present: NO

No Asbestos Observed

Cellulose - 40%

Fiberglass - 30%

Other - 70%

Other - 60%

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Test Method, Polarized Light Microscopy (PLM)

Project: 2113 Superior St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64873

Date Collected: 05/14/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 40%

Other - 60%

Lab ID #: 64873 - 02b

Cust. #: SS-HM-01B

Material: Red Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 3 of 4

Asbestos Present: **NO**No Asbestos Observed

Cellulose - 50% Other - 50%

Lab ID #: 64873 - 02c Cust. #: SS-HM-01B

Material: Tar Paper

Location:

Appearance: black, fibrous, homogenous

Layer: 4 of 4

Asbestos Present: **YES**Chrysotile - 30%

ES

Other - 70%

Lab ID #: 64873 - 03

Cust. #: SS-HM-02A

Material: Stone Linoleum

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 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: 2113 Superior St.

Report To:

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

ARI Report # 16-64873

Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Other - 100%

Lab ID #: 64873 - 03a

Cust. #: SS-HM-02A

Material: Floor Tile

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 2 of 3

Lab ID #: 64873 - 03b

Cust. #: SS-HM-02A

Material: Glue

Location:

Appearance: yellow,nonfibrous,homogenous

Layer: 3 of 3

Lab ID #: 64873 - 04

Cust. #: SS-HM-02B

Material: Stone Linoleum

Location:

Appearance:

Layer: 1 of 3

Asbestos Present: **NO**

No Asbestos Observed

Asbestos Present: **NO**

No Asbestos Observed

Other - 100%

Asbestos Present:

NOT ANALYZED

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Robert T. Letarte Jr., Laboratory Director

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Test Method, Polarized Light Microscopy (PLM)

Project: 2113 Superior St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64873

Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64873 - 04a

Cust. #: SS-HM-02B

Material: Floor Tile

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 2 of 3

Asbestos Present: **NO**

No Asbestos Observed

Other - 100%

Lab ID #: 64873 - 04b

Cust. #: SS-HM-02B

Material: Glue

Location:

Appearance: yellow,nonfibrous,homogenous

Layer: 3 of 3

Lab ID #: 64873 - 05

Cust. #: SS-HM-03A

Material: White Linoleum

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Cellulose - 10% Fiberglass - 10%

Other - 80%

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Robert T. Letarte Jr., Laboratory Director

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Test Method, Polarized Light Microscopy (PLM)

Project: 2113 Superior St.

Report To:

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

ARI Report # 16-64873

Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 10%

Fiberglass - 10%

Other - 80%

Lab ID #: 64873 - 06

Cust. #: SS-HM-03B

Material: White Linoleum

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 20%

Other - 80%

Lab ID #: 64873 - 07 Cust. #: SS-HM-04A

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

Lab ID #: 64873 - 07a

Cust. #: SS-HM-04A

Material: Texture

Location:

Appearance: white, nonfibrous, 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

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Test Method, Polarized Light Microscopy (PLM)

Project: 2113 Superior St.

Report To:

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

ARI Report # 16-64873

Date Collected: 05/14/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 20%

Other - 80%

Lab ID #: 64873 - 08

Cust. #: SS-HM-04B

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: **NO**

No Asbestos Observed

No Asbestos Observed

Cellulose - 80%

Other - 20%

Cust. #: SS-HM-05A Material: White 1x1 Ceiling Tile

Lab ID #: 64873 - 09

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 2

Asbestos Present: NO

Cellulose - 1% Other - 99%

Cust. #: SS-HM-05A

Material: Glue Pod

Lab ID #: 64873 - 09a

Location:

Appearance: brown,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: 2113 Superior St.

Report To:

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

ARI Report # 16-64873

Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 80%

Other - 20%

Lab ID #: 64873 - 10

Cust. #: SS-HM-05B

Material: White 1x1 Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 2

Asbestos Present: **NO**

No Asbestos Observed

Other - 100%

Lab ID #: 64873 - 10a Cust. #: SS-HM-05B

Material: Glue Pod

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 64873 - 11

Cust. #: SS-HM-06A

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)

Project: 2113 Superior St.

Report To:

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

ARI Report # 16-64873 Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

Asbestos Present: YES

Chrysotile - 5%

No Asbestos Observed

Non-Asbestos

Cellulose - 80%

Other - 20%

Other - 95%

Lab ID #: 64873 - 12

Cust. #: SS-HM-06B

Material: Fiberboard

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64873 - 13

Cust. #: SS-HM-07A

Material: Glazing

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64873 - 14

Cust. #: SS-HM-07B

Material: Glazing

Location:

Appearance: Layer: of

Asbestos Present:

NOT ANALYZED

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

Robert T. Letarte Jr., Laboratory Director

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Test Method, Polarized Light Microscopy (PLM)

Project: 2113 Superior St.

Report To:

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

ARI Report #

16-64873 Date Collected: 05/14/16

Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64873 - 15

Cust. #: SS-HS-01A

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 64873 - 15a

Asbestos Present: **NO**

Cellulose - 1%

Cust. #: SS-HS-01A No Asbestos Observed Material: Plaster Base Coat

Hair - 2%

Other - 97%

Other - 100%

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 64873 - 16

Asbestos Present: NO

Cust. #: SS-HS-01B

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

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Test Method, Polarized Light Microscopy (PLM)

Project: 2113 Superior St.

Report To:

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

ARI Report #

16-64873

Date Collected: 05/14/16

Date Received: 05/17/16

Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 1%

Hair - 1% Other - 98%

Lab ID #: 64873 - 16a Cust. #: SS-HS-01B

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO**

Other - 100%

Other - 100%

Lab ID #: 64873 - 17 Cust. #: SS-HS-01C

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 64873 - 17a

Cust. #: SS-HS-01C

Material: Plaster Base Coat

Location:

Appearance: brown,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: 2113 Superior St.

Report To:

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

ARI Report # 16-64873

Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64873 - 18

Cust. #: SS-HS-01D

Material: Plaster

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO**

No Asbestos Observed

Other - 100%

Cust. #: SS-HS-01E

Lab ID #: 64873 - 19

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 64873 - 19a

Cust. #: SS-HS-01E

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Hair - 2%

Other - 97%

Cellulose - 1%

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

Robert T. Letarte Jr., Laboratory Director

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64873

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: 5-17-6	Relinquished by: OV	- Y	 10 SS-1	7 55 7	252		6 35-	, ss 5	<u> </u>	\\ \times \\ \ti	2 55-	- SS-	Lab ID# C1	Other: (Tree		48 hour 72 hour	Rush 24 hour		Turn Around Times: (Circle One)	Phone: (888) 449-4566	City, St., Zip: Lansing,	Address: PO Box	Client Name: Red Ce
. Date :	Received by:	J-481-06 H	55-Harr-0613	55-HM-051	Stamples	55-Wm-oy A	55-Hm-03B	55 - Am -034	58 Hm-023	Somon	55 JAN -015	85-18x-014	Client ID#	TTP) All Samples Except	y	-				Fax:	ng, MI 48901	c 13216	Red Cedar Consulting
		Tiber board	white last cailing the 16 law Pool	while we ceiling Tile (Chur Pa)	Dry stool	Dry wall	white Lindeum	white Lindeum	Stone Lineleur	Stone Lincleum	Shingle	Shingle	Material/Location	cept Plaster TEM: AHERA 7400	Mold: Bulk		Lood. Built	Asbestos: Bulk x	PLM EPA	(888) 448-8739			g
Date :	Relinquished by:		16 (me pos)	(क्रिज)										Bulk/NOB	Tape B		Wine	Wipe Po	600, PC all samples	Contact Person:	Project #:	Project:	Date of Survey
								and the first of the control of the					Volume	EPA Level II	BioSISC		Daint	Point Count		Aaron		2113 5,, >0	vey: 514-6
Date:	Received by:		:										Area	П	Other Viable		<u> </u>	PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	Paquet		seriorSt.	7-1
			:										Results			1			ACM:			Report	Lab Use Only Log-In

Rev: 12/03 Work Forms: COC

PEX PESENDA

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



Client Name: _ I	Red Cedar Consulting		Date of Survey: 5-	8-14-8	Lab Use Only
Address:	PO Box 13216	Project:	W	Superior A.	Report
City, St., Zip:	Lansing, MI 48901	Project # :			
Phone: (888) 449-4566	9-4566 Fax:	(888) 448-8739	Contact Person: Aaron Paquet	Paquet	
Turn Arou	Around Times: (Circle One)	PLM EPA 600, PC	apaque apaque	apaquet@redcedarconsulting.net with a detection of <5% ACM.	lting.net ACM.
		Asbestos: Bulk X Wipe	Point Count	PCM	
Rush 24 hour		; :			
48 how 72 hour		Lead: Bulk Wipe	Air Paint	Soil	
\		Mold: Bulk Tape	BioSIS	Other Viable	
Culci .	All Samples Except	TEM: AHERA 7400 Bulk/NOB	NOB EPA Level II	el II	
Lab ID#	Client ID#	Material/Location	Volume	Area	Results
تو	SSAMOGB	Fiber power			10 cm
13	25-Hm-27/7	Clazin			
4)	55-HM-0713	Clazia			
2	35-HS-01A	Paster			
K	SSASJOR				
17	20-52-55				
8	SS-45-01D	,			
7	\$5-WS-01E	<			
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Relinquished by:	Received by A	IAM 1 7 2016 Relinquished by:		Received hy:	
Date: 5-17-16				Data -	
		Date .		Date:	

Rev: 12/03 Work Forms: COC

Red Cedar Consulting

Tables

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

	Hazardous Materials Description and Location	
Location	Material Description	Quantity
Exterior	Automobile Tire	2
Living	Thermostat	1

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2113 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	Asphalt Shingle	No	M	Category I	ND/ND/ND/ND	Exterior	NA
SS-HM-01B	Asphalt Shingle	No	M	Category I	ND/ND/ND/ND	Exterior	NA
SS-HM-02A	Stone Linoleum	No	М	Category I	30%CH/ ND/ND	Front Entry	12 sq. ft.
SS-HM-02B	Stone Linoleum	No	M	Category I	NA/ND/ND	Front Entry	NA
SS-HM-03A	White Linoleum	No	M	Category I	ND	Kitchen/Dining	NA
SS-HM-03B	White Linoleum	No	M	Category I	ND	Kitchen/Dining	NA
SS-HM-04A	Drywall	No	M	Category II	ND/ND	Living Ceiling	NA
SS-HM-04B	Drywall	No	M	Category II	ND	Living Wall	NA
SS-HM-05A	White 1'x1' Ceiling Tile/Glue Pod	Yes	M	Category II	ND/ND	Bath	NA
SS-HM-05B	White 1'x1' Ceiling Tile/Glue Pod	Yes	М	Category II	ND/ND	Bath	NA
SS-HM-06A	Fiberboard	Yes	M	Category II	ND	Living Ceiling	NA
SS-HM-06B	Fiberboard	Yes	M	Category II	ND	Living Ceiling	NA
SS-HM-07A	Glazing	Yes	M	Category II	5% CH	Living	13 Windows
SS-HM-07B	Glazing	Yes	M	Category II	NA	2 nd Fl. E Bedroom	NA
SS-HS-01A	Plaster	No	S	Category II	ND/ND	Kitchen Wall	NA
SS-HS-01B	Plaster	No	S	Category II	ND/ND	Living Wall	NA
SS-HS-01C	Plaster	No	S	Category II	ND/ND	Kitchen Ceiling	NA
SS-HS-01D	Plaster	No	S	Category II	ND	2 nd Fl. E Bedroom Wall	NA
SS-HS-01E	Plaster	No	S	Category II	ND/ND	2 nd Fl. W Bedroom Ceiling	NA

Material Types

= Miscellaneous building material

TSI = Thermal System Insulation

= Surfacing Material

= Point Count Analysis PC

CH = Chrysotile Asbestos

Abbreviations

= Not quantified NQ

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, 2113 Superior St., Muskegon Heights, Michigan

Asb	Asbestos Containing Material Description and Location										
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity						
Bath and Rear Entry Ceiling, Walls and Floors (25 cu. ft.)	Vermiculite	Yes	Fair	M	25 cu. ft.						

Material Types

= Miscellaneous building material TSI = Thermal System Insulation

= Surfacing Material

Abbreviations

lin. ft. = linear feet

sq. ft. = square feet cu. ft. = cubic feet

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

Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Front Entry	Stone Linoleum		No	12 sq. ft.
		Total		12 sq. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
E Bedroom (2 windows 30" wide x 52" tall)	Glazing		Yes	2 Windows
Living (2 windows 30" wide x 52" tall)	Glazing		Yes	2 Windows
Kitchen (3 windows 28" wide x 44" tall)	Glazing		Yes	3 Windows
Kitchen (1 window 28" wide x 28" tall)	Glazing		Yes	1 Window
Bathroom (1 window 28" wide x 28" tall)	Glazing		Yes	1 Window
2 nd Fl. E Bedroom (1 window 28" wide x 26" tall)	Glazing		Yes	1 Window
2 nd Fl. E Bedroom (1 window 26" wide x 44" tall)	Glazing		Yes	1 Window
2 nd Fl. W Bedroom (2 windows 28" wide x 44" tall)	Glazing		Yes	2 Windows
		Total		13 Windows
Interior - Asbestos Containing Materials			-	
Location	Material Description		Friable	Approx. Quantity
Bath and Rear Entry Ceiling, Walls and Floors (25 cu. ft.)	Vermiculite		Yes	25 cu. ft.
		Total		25 cu. 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, 2113 Superior St., 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 27, 2016

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 2124 6th St., Muskegon Heights, MI 49444

Parcel ID: 61-26-185-050-0018-00

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 2124 6th 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 840 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 lap and stucco while the roof was sealed with asphalt shingles. The Building can be further divided into a living room, dining room, kitchen, bath, and rear entry on the first floor while the second floor contains a bath and three bedrooms.

VISUAL INSPECTION AND SAMPLING

Asbestos Containing Materials Inspection

Mr. Aaron Paquet of Red Cedar Consulting (Red Cedar), an accredited State Of Michigan/EPA Asbestos Building Inspector (Accreditation Number A30955) whom completed training per the Michigan Asbestos

Project No.: 16-1070 Muskegon County Land Bank Parcel ID: 61-26-185-050-0018-00

Workers Accreditation Act 440 completed an inspection of the Subject Property on May 7, 2016 for suspected asbestos containing building materials.

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

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

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

- Asphalt Shingle
- Asphalt Siding
- Linoleum
- 1'x1' Ceiling Tile
- 2'x4' Ceiling Tile
- 12"x12" Vinyl Tile
- 9"x9" Vinyl Tile
- Fiberboard
- Glazing
- Plaster
- Stucco

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 twenty six samples is included as Attachment A.

Muskegon County Land Bank Parcel ID: 61-26-185-050-0018-00

Hazardous Materials Inspection

On May 7, 2016 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.

The Air-O-Cell Pipe 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: 61-26-185-050-0018-00

Friable ACM's

Air-O-Cell Pipe Wrap identified in the Building in conjunction with the hot water heating system are classified as friable ACM. The visual assessment to quantify the extent of this material identified Friable ACM at the following locations within the basement:

• Basement Boiler Pipe (Air-O-Cell 3" to 4") (22 lin. ft.)

HVAC 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.)
- 2nd Fl. Bath (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- 2nd Fl. NE Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- Basement (misc. HVAC wrap on Ductwork, 5 sq. ft.)
- Basement (12 in. dia. HVAC Wrapped Ductwork, 14 lin. ft.)

Category I ACM

One type of resilient floor covering (9"x9" Beige Vinyl Floor Tile) located within the living room was found to contain up to 5% Chrysotile asbestos. The assessment to quantify the extent of this material identified approximately 408 sq. ft. of this material within the Building.

Category II ACM

Stucco samples, collected from the exterior of the Building were found to contain up to 5% asbestos following analysis. The assessment to quantify the extent of this material identified approximately 1,344 sq. ft. of stucco 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.

- Living (1 register, 15 sq. ft.)
- Dining (1 register, 15 sq. ft.)
- 2nd Fl. Bath (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- 2nd Fl. NE Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- Basement (misc. HVAC wrap on Ductwork, 5 sq. ft.)
- Basement (12 in. dia. HVAC Wrapped Ductwork, 14 lin. ft.)
- Basement Boiler Pipe (Air-O-Cell 3" to 4") (22 lin. ft.)

Muskegon County Land Bank Parcel ID: 61-26-185-050-0018-00

Stucco 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 covering (9"x9" Beige Vinyl Floor Tile) 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:

- Thermostat (1)
- Automobile Tire (1)
- 4' Fluorescent Bulb (1)
- Mercury Bulb (2)
- Television (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: 61-26-185-050-0018-00

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: 2124 Sixth St.

Report To:

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

ARI Report # 16-64735

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 30%

Other - 70%

Lab ID #: 64735 - 01

Cust. #: SS-HM-01A

Material: Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 30%

Other - 70%

Cust. #: SS-HM-01B Material: Shingle

Lab ID #: 64735 - 02

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64735 - 03

Cust. #: SS-HM-02A

Material: Asphalt Siding

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 1

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: 2124 Sixth St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64735

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16 Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 60%

Other - 40%

Lab ID #: 64735 - 04

Cust. #: SS-HM-02B

Material: Asphalt Siding

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Chrysotile - 5%

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: YES

Other - 95%

Other - 100%

Lab ID #: 64735 - 05 Cust. #: SS-HM-03A

Material: 9x9 Beige Floor Tile

iviaiciiai. 9x9 L

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 2

Lab ID #: 64735 - 05a

Cust. #: SS-HM-03A

Material: Mastic

Location:

Appearance: black,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: 2124 Sixth St.

Report To:

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

ARI Report # 16-64735

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64735 - 06

Cust. #: SS-HM-03B

Material: 9x9 Beige Floor Tile

Location:

NOT ANALYZED

Appearance: of

Layer:

Lab ID #: 64735 - 07

Cust. #: SS-HM-04A

Material: Beige Linoleum

Location:

Appearance: white, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64735 - 08

Cust. #: SS-HM-04B

Material: Beige Linoleum

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Asbestos Present:

Asbestos Present: **NO** No Asbestos Observed

Fiberglass - 20%

Other - 80%

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: 2124 Sixth St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64735

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16 Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64735 - 09

Cust. #: SS-HM-05A

Material: 2x4 White Ceiling Tile

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: **NO**No Asbestos Observed

Cellulose - 40%

Mineral Wool - 20%

Other - 40%

Lab ID #: 64735 - 10

Cust. #: SS-HM-05B

Material: 2x4 White Ceiling Tile

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 40%

Mineral Wool - 20%

Other - 40%

Other - 100%

Lab ID #: 64735 - 11

Cust. #: SS-HM-06A

Material: Glazing

Location:

Appearance: white, 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

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 2124 Sixth St.

Report To:

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

ARI Report # 16-64735

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64735 - 12

Cust. #: SS-HM-06B

Material: Glazing

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 1 of 1

Asbestos Present: **NO** No Asbestos Observed

Other - 100%

Lab ID #: 64735 - 13 Cust. #: SS-HM-07A

Material: 12x12 White Vinyl Tile

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 1

Lab ID #: 64735 - 14

Cust. #: SS-HM-07B

Material: 12x12 White Vinyl Tile

Location:

Appearance: white, fibrous, homogenous

Layer: 1 of 1

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

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 2124 Sixth St.

Report To:

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

ARI Report # 16-64735

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16 Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64735 - 15

Cust. #: SS-HM-08A

Material: Brown Linoleum

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 64735 - 16

Cust. #: SS-HM-08B

Material: Brown Linoleum

Location:

Appearance: grey,fibrous,nonhomogenous

Layer: 1 of 1

Lab ID #: 64735 - 17

Cust. #: SS-HM-09A

Material: 1x1 White Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Cellulose - 30%

Cellulose - 30% Other - 70%

Other - 70%

Asbestos Present: NO

Cellulose - 60%

No Asbestos Observed

Asbestos Present: **NO**

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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Test Method, Polarized Light Microscopy (PLM)

Project: 2124 Sixth St.

Report To:

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

ARI Report # 16-64735

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16 Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 80%

Other - 20%

Lab ID #: 64735 - 18

Cust. #: SS-HM-09B

Material: 1x1 White Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 40%

Other - 60%

Cust. #: SS-HM-10A

Material: Orange Linoleum

Lab ID #: 64735 - 19

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Cellulose - 40%

Other - 60%

Lab ID #: 64735 - 20 Cust. #: SS-HM-10B

Material: Orange 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: 2124 Sixth St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64735

Date Collected: 05/07/16 Date Received: 05/11/16 Date Analyzed: 05/17/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 65%

Other - 35%

Lab ID #: 64735 - 21

Cust. #: SS-HM-11A

Material: Fiberboard

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO**No Asbestos Observed

Cellulose - 65% Other - 35%

Lab ID #: 64735 - 22 Cust. #: SS-HM-11B

Material: Fiberboard

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO**No Asbestos Observed

Other - 100%

Lab ID #: 64735 - 23 Cust. #: SS-HS-01A

Material: Stucco

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: 2124 Sixth St.

Report To:

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

ARI Report # 16-64735

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16 Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Other - 95%

Other - 100%

Lab ID #: 64735 - 24

Cust. #: SS-HS-01B

Material: Stucco

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Lab ID #: 64735 - 25

Cust. #: SS-HS-01C

Material: Stucco

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 64735 - 26

Cust. #: SS-HS-01D

Material: Stucco

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: YES

Chrysotile - 5%

Asbestos Present: **NO**

No Asbestos Observed

Asbestos Present: YES

Chrysotile - 5%

Other - 95%

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

Robert T. Letarte Jr., Laboratory Director

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Test Method, Polarized Light Microscopy (PLM)

Project: 2124 Sixth St.

Report To:

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

ARI Report # 16-64735

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16 Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64735 - 27

Cust. #: SS-HS-01E

Material: Stucco

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: YES

Chrysotile - 2.0%

POINT COUNT RESULT

Lab ID #: 64735 - 28

Cust. #: SS-HS-02A

Material: Plaster

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Lab ID #: 64735 - 29

Cust. #: SS-HS-02B

Material: Plaster

Location:

Appearance: grey,fibrous,homogenous

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

Layer: 1 of 1

Other - 98.0%

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 2%

Other - 98%

Asbestos Present: NO Cellulose - 2% Other - 98% 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: 2124 Sixth St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64735

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16 Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64735 - 30

Cust. #: SS-HS-02C

Material: Plaster

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 1 of 1

Lab ID #: 64735 - 31

Cust. #: SS-HS-02D

Asbestos Present: NO

No Asbestos Observed

Cellulose - 2%

Other - 98%

Material: Plaster

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Lab ID #: 64735 - 32

Cust. #: SS-HS-02E

Material: Plaster

Location:

Appearance: grey, fibrous, homogenous

Layer: 1 of 1

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

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research 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: 51016	Relinquished by		10	9	<i>∞</i> ,	7	6	Ŋ	4	W	2		Lab ID #	Other: S V	1	Ĭ	Rush 24 hour	Turn Arou	Phone: (888) 449-4566	City, St., Zip:	Address:	Client Name:
Date:	Received by:	85-Hm-06A	83-HM-088	S5-4m-05A	55-HM-04B	S5-4m-04A	SS-HM-03B	55-HM-03A	SS-HM-02B	55-HM-02A	SS HM-018	SS-HM-OIA	Client ID#	(ITP)All Samples Except				Around Times: (Circle One)	9-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
		£	1×C		inal	Baige Lingleun	Beige gog Vinyl Tile	Beine gra VinylTile	Asshalf Siding	Asshalf Siding	Shingle	Shingle	Material/Location	CCEPT Plaster TEM: AHERA 7400	Mold: Bulk	Lead: Bulk	Asbestos: Bulk X	PLM EPA	(888) 448-8739			ng
Date:	Relinquished by:		tile	Tile			ik	ik					Vol	Bulk/NOB	Tape BioSIS	Wipe Air	Wipe Point Cou	600, PC all samples w	Contact Person:		Project: 2124	Date of Survey
Date :	Received by:												ume Area	EPA Level II	Other \	Paint Soil _	ount PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	Aaron Paquet		4 sixth st.	: 57-16
													Results		Viable			onsulting.net			Report	Lab Use Only Log-In

Rev: 12/03 Work Forms: COC

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APEX	2 of 3

Rev: 12/03 Work Forms: COC	Date: 5-16-16	Relinquished by:	وه	2	20	10	18	n	8	IS	7	13	12	Lab ID#		Other: 50	48 hour 72 hour	Rush 24 hour	Turn Around	Phone: (888) 449-456	City, St., Zip:	Address:	Client Name:
- Ann	Date :	m Copyro Received by:	SSIMIIB	SS-HM-11A	801 -mH-55.	85-HM-10A	85-HM-09B	\$5-Hm-09A	SS-HM-08B	55-14m-08A	SS-HM-0713	SS-HM-07A	\$30-my-23	Client ID#		(TTP) All Samples Except			ind Times: (Circle One)	19-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
APEX RESEARCH	2016 Date:		Tiberbeard		Orange Linoleum	e Liveleum	lock ceiling 7	`		Brown Linoleum	white 12x12 vingstile	white 12×12 viny17 de	Glazina	Material/Location	TEM: AHERA 7400 Bulk/NOB	Mold: Bulk Tape	Lead: Bulk Wipe	Asbestos: Bulk Wipe	PLM EPA 60	148-8739	Project # :	Project:	
	L	R.												Volume	IOB EPA Level II	BioSIS Other	Air Paint	Point Count	apaquet@: samples with a dete	Contact Person: Aaron Par		3 72	Date of Survey: 6-7
	Date:	Received by:										·		Area Res		ıer Viable	Soil	PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	Paquet		87	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

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Rev: 12/03 Work Forms: COC

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Red Cedar Consulting

Tables

Table 1 - Summary of Hazardous Materials, 2124 6th St., Muskegon Heights, Michigan

	Hazardous Materials Description and Location									
Location	Material Description	Quantity								
Exterior	Automobile Tire	1								
Living	Thermostat	1								
Kitchen	4' Fluorescent Bulb	1								
Kitchen	Mercury Bulb	2								
2 nd Fl. NE Bedroom	Television	1								
Basement	Television	3								

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2124 6th 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	Exterior	NA
SS-HM-01B	Asphalt Shingle	No	M	Category I	ND	Exterior	NA
SS-HM-02A	Asphalt Siding	No	M	Category I	ND	Exterior	NA
SS-HM-02B	Asphalt Siding	No	M	Category I	ND	Exterior	NA
SS-HM-03A	Beige 9"x9" Vinyl Tile	No	M	Category I	5% CH/ND	Living	408 sq. ft.
SS-HM-03B	Beige 9"x9" Vinyl Tile	No	M	Category I	NA	Living	NA
SS-HM-04A	Beige Linoleum	No	M	Category I	ND	Kitchen	NA
SS-HM-04B	Beige Linoleum	No	M	Category I	ND	Kitchen	NA
SS-HM-05A	White 2'x4' Ceiling Tile	Yes	M	Category II	ND	Kitchen	NA
SS-HM-05B	White 2'x4' Ceiling Tile	Yes	M	Category II	ND	Kitchen	NA
SS-HM-06A	Glazing	Yes	M	Category II	ND	Dining	NA
SS-HM-06B	Glazing	Yes	M	Category II	ND	2 nd Fl. NE Bedroom	NA
SS-HM-07A	White 12x12 Vinyl Tile	No	M	Category I	ND	2 nd Fl. Bath	NA
SS-HM-07B	White 12x12 Vinyl Tile	No	M	Category I	ND	2 nd Fl. Bath	NA
SS-HM-08A	Brown Linoleum	No	M	Category I	ND	2 nd Fl. NE Bedroom	NA
SS-HM-08B	Brown Linoleum	No	M	Category I	ND	2 nd Fl. NE Bedroom	NA
SS-HM-09A	White 1'x1' Ceiling Tile	Yes	M	Category II	ND	2 nd Fl. Bath	NA
SS-HM-09B	White 1'x1' Ceiling Tile	Yes	M	Category II	ND	2 nd Fl. Bath	NA
SS-HM-10A	Orange Linoleum	No	M	Category I	ND	Basement	NA
SS-HM-10B	Orange Linoleum	No	M	Category I	ND	Basement	NA
SS-HM-11A	Fiberboard	Yes	M	Category II	ND	Basement Wall	NA
SS-HM-11B	Fiberboard	Yes	M	Category II	ND	Basement Wall	NA
SS-HS-01A	Stucco	No	S	Category II	ND	Exterior W Side	NA
SS-HS-01B	Stucco	No	S	Category II	5% CH	Exterior S Side	1,344 sq. ft.
SS-HS-01C	Stucco	No	S	Category II	ND	Exterior E Side	NA
SS-HS-01D	Stucco	No	S	Category II	5% CH	Exterior NE Side	NA
SS-HS-01E	Stucco	No	S	Category II	2.0% CH	Exterior NW Side	NA
SS-HS-02A	Plaster	No	S	Category II	ND	Dining Wall	NA

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2124 6th St., Muskegon Heights, Michigan

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
SS-HS-02B	Plaster	No	S	Category II	ND	Kitchen Wall	NA
SS-HS-02C	Plaster	No	S	Category II	ND	Kitchen Ceiling	NA
SS-HS-02D	Plaster	No	S	Category II	ND	2 nd Fl. Hall Wall	NA
SS-HS-02E	Plaster	No	S	Category II	ND	2 nd Fl. Hall Ceiling	NA

Material Types Abbreviations

 $\begin{array}{lll} M &= \mbox{Miscellaneous building material} & \mbox{NQ} &= \mbox{Not quantified} \\ TSI &= \mbox{Thermal System Insulation} & \mbox{NA} &= \mbox{Not applicable} \\ \end{array}$

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, 2124 6th St., Muskegon Heights, Michigan

A	Asbestos Containing Material Description a	and Location				
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity	
Basement Boiler Pipe	Air-O-Cell 3" to 4"	Yes	Fair	TSI	22 lin. ft.	
Living (1 register, 15 sq. ft.) Dining (1 register, 15 sq. ft.) 2 nd Fl. Bath (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) 2 nd Fl. NE Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) Basement (misc. HVAC wrap on Ductwork, 5 sq. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	105 sq. ft.	
Basement (12 in. dia. HVAC Wrapped Ductwork, 14 lin. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	14 lin. 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, 2124 6th St., Muskegon Heights, Michigan

Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Living	Beige 9"x9" Vinyl Tile		No	264 sq. ft.
Dining	Beige 9"x9" Vinyl Tile		No	144 sq. ft.
		Total		408 sq. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Basement Boiler Pipe	Air-O-Cell 3" to 4"		Yes	22 lin. ft.
		Total		22 lin. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Living (1 register, 15 sq. ft.) Dining (1 register, 15 sq. ft.) 2 nd Fl. Bath (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) 2 nd Fl. NE Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) Basement (misc. HVAC wrap on Ductwork, 5 sq. ft.)	HVAC Duct Wrap		Yes	105 sq. ft.
		Total		105 sq. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Basement (12 in. dia. HVAC Wrapped Ductwork, 14 lin. ft.)	HVAC Duct Wrap		Yes	14 lin. ft.
		Total		14 lin. ft.
Exterior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Building Exterior	Stucco		No	1,344 sq. ft.
		Total		1,344 sq. ft.

Abbreviations

Table 4 - Summary of All Asbestos Containing Materials, 2124 6th 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 27, 2016

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 2133 Wood St., Muskegon Heights, MI 49444

Parcel ID: 61-26-185-061-0003-00

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 2133 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 .18 acre residential parcel which contains an approximate 741 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 concrete block while the roof was sealed with steel. The Building can be further divided into a living room, kitchen/dining room, bath, and two bedrooms on the first floor.

VISUAL INSPECTION AND SAMPLING

Asbestos Containing Materials Inspection

Mr. Aaron Paquet of Red Cedar Consulting (Red Cedar), an accredited State Of Michigan/EPA Asbestos Building Inspector (Accreditation Number A30955) whom completed training per the Michigan Asbestos Workers Accreditation Act 440 completed an inspection of the Subject Property on May 14, 2016 for suspected asbestos containing building materials.

Muskegon County Land Bank Parcel ID: 61-26-185-061-0003-00

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:

- Linoleum
- 12"x12" Vinyl Tile
- Glazing
- Plaster

Red Cedar staff collected nine samples of suspect ACBM separated into four 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 nine samples is included as Attachment A.

Hazardous Materials Inspection

On May 14, 2016 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: 61-26-185-061-0003-00

INSPECTION RESULTS AND RECOMMENDATIONS

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

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

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

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

Presumed Asbestos Containing Material

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

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

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

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

Friable ACM's

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

Category I ACM

One type of resilient floor covering (12"x12" Green Vinyl Tile) located within the kitchen/dining room and bathroom was found to contain up to 3% Chrysotile asbestos. The assessment to quantify the extent of this material identified approximately 192 sq. ft. of this material within the Building.

Muskegon County Land Bank Parcel ID: 61-26-185-061-0003-00

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 (12"x12" Green Vinyl Tile) 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 (6)

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: 61-26-185-061-0003-00

> 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: 2133 Wood St

Report To:

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

ARI Report # 16-64871

Date Collected: 05/14/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Other - 97.00%

Other - 100%

Lab ID #: 64871 - 01

Cust. #: WS-HM-01A

Material: Green 12x12 Vinyl Tile

Location:

Appearance: green, fibrous, homogenous

Layer: 1 of 2

Asbestos Present: YES

POINT COUNT RESULT

Chrysotile - 3.00%

Asbestos Present: **NO**

No Asbestos Observed

Lab ID #: 64871 - 01a

Cust. #: WS-HM-01A

Material: Glue

Location:

Appearance: yellow,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 64871 - 02

Cust. #: WS-HM-01B

Material: Green 12x12 Vinyl Tile

Location:

Appearance:

Layer: 1 of 2

Asbestos Present:

NOT ANALYZED

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

Robert T. Letarte Jr., Laboratory Director

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



Test Method, Polarized Light Microscopy (PLM)

Project: 2133 Wood St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64871

Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64871 - 02a

Cust. #: WS-HM-01B

Material: Glue

Location:
Appearance: yellow,nonfibrous,homogenous

Layer: 2 of 2

Asbestos Present: **NO**

Asbestos Present: NO

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

No Asbestos Observed

Other - 100%

Cellulose - 60%

Cellulose - 60%

Other - 40%

Other - 40%

Lab ID #: 64871 - 03

Cust. #: WS-HM-02A

Material: Green Linoleum

Location:

Appearance: green, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64871 - 04

Cust. #: WS-HM-02B

Material: Green Linoleum

Location:

Appearance: green, fibrous, homogenous

Layer: 1 of 1

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: 2133 Wood St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64871

Date Collected: 05/14/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Other - 100%

Lab ID #: 64871 - 05

Cust. #: WS-HM-03A

Material: Glazing

Location:

Appearance: beige, nonfibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO**No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Cust. #: WS-HM-03B

Material: Glazing

Lab ID #: 64871 - 06

Location:

Location

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 1

Lab ID #: 64871 - 07

Cust. #: WS-HS-01A

Material: Plaster

Location:

Appearance: white, fibrous, homogenous

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

Layer: 1 of 1

Robert T. Letarte Jr., Laboratory Director

Cellulose - 1%

Other - 99%

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 2133 Wood St

Report To:

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

ARI Report #

16-64871

Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 1%

Other - 99%

Lab ID #: 64871 - 08

Cust. #: WS-HS-01B

Material: Plaster

Location:

Appearance: white, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Lab ID #: 64871 - 09 Cust. #: WS-HS-01C

Material: Plaster Finish Coat

Location:

Appearance: pink,nonfibrous,homogenous

Layer: 1 of 2

Lab ID #: 64871 - 09a

Cust. #: WS-HS-01C

Material: Plaster Base Coat

Location:

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

Cellulose - 1%

Other - 99%

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

64871

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

Fax: 734-449-9991

Phone: Rush 48 hour Other: Address: City, St., Zip: Client Name: Turn Around Times: (Circle One) Lab ID (888)449-4566 24 hour 72 hour # 9 N Lansing, MI 48901 Red Cedar Consulting PO Box 13216 いいよれらるの WS-HM-03A とうとおりい SJAM-OB W5-42-01A 250-MM-CC (TTP) All Samples Except Plaster Client ID# **Hax**: (888) 448-8739 Glazin 6 teen Green Linoleum Green 12×12 vinyl Tile Gren 12-x12 ving/Tile Mold: Asbestos: Bulk Lead: TEM: Material/Location molecur Bulk Bulk AHERA 7400 PLM EPA 600, PC all samples with a detection of <5% ACM. × Wipe Wipe Contact Person: Aaron Paquet Date of Survey: Project #: Project : 2133 Bulk/NOB BioSIS Air Point Count Volume EPA Level II Paint 74 Feb 74. 2-14-8 Other Area PCM Viable Results Report_ Log-In_ Lab Use Only

Relinquished by:	Received by:	. AV. 7 75	Relinquished by:	Received by:
Date: 5-17-6	Date :	Who 1523	Date:	Date :
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NO-54-5CA WS-155-018

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Plaster

Red Cedar Consulting

Tables

Table 1 - Summary of Hazardous Materials, 2133 Wood St., Muskegon Heights, Michigan

Hazardous Materials Description and Location								
Location	Location Material Description							
Exterior	Automobile Tire	4						
Living	Smoke Detector	1						
Living	Automobile Tire	2						

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results 2133 Wood St.., Muskegon Heights, Michigan

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity	
WM-HM-01A	Green 12x12 Vinyl Tile	No	M	Category I	3% CH/ND	Kitchen/Dining	192 sq. ft.	
WM-HM-01B	Green 12x12 Vinyl Tile	No	M	Category I	NA/ND	Kitchen/Dining	NA	
WM-HM-02A	Green Linoleum	No	M	Category I	ND	NE Bedroom	NA	
WM-HM-02B	Green Linoleum	No	M	Category I	ND	NE Bedroom	NA	
WM-HM-03A	Glazing	Yes	M	Category II	ND	NE Bedroom	NA	
WM-HM-03B	Glazing	Yes	M	Category II	ND	Kitchen	NA	
WM-HS-01A	Plaster	No	S	Category II ND		Living Wall	NA	
WM-HS-01B	Plaster	No	S	Category II ND		NW Bedroom Wall	NA	
WM-HS-01C	Plaster	No	S	Category II	ND/ND	NE Bedroom Ceiling	NA	

Notes:

<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 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, 2133 Wood 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

S = Surfacing Material

Abbreviations

lin. ft. = linear feet

sq. ft. = square feet

Table 4 - Summary of All Asbestos Containing Materials, 2133 Wood St., Muskegon Heights, Michigan

Interior - Asbestos Containing Mate	erials			
Location	Material Description		Friable	Approx. Quantity
Kitchen/Dining	Green 12"x12" Vinyl Tile		No	162 sq. ft.
Bathroom	Green 12"x12" Vinyl Tile		No	30 sq. ft.
		Total		192 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 27, 2016

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 McIllwraith St., Muskegon Heights, MI 49444 Parcel ID: 61-26-650-006-0023-00

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 2145 McIllwraith 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 1,498 square foot residential building (the Building) constructed in 1910. The Building was constructed on a concrete block basement with two aboveground floors. The exterior walls of the Building were finished with aluminum lap over wood lap while the roof was sealed with asphalt shingles. The Building can be further divided into a front entry, front hall, living room, dining room, kitchen/pantry, bath, two bedrooms and rear entry on the first floor while the second floor contains a landing, bath and three bedrooms.

VISUAL INSPECTION AND SAMPLING

Asbestos Containing Materials Inspection

Mr. Aaron Paquet of Red Cedar Consulting (Red Cedar), an accredited State Of Michigan/EPA Asbestos Building Inspector (Accreditation Number A30955) whom completed training per the Michigan Asbestos

Project No.: 16-1070 Muskegon County Land Bank Parcel ID: 61-26-650-006-0023-00

Workers Accreditation Act 440 completed an inspection of the Subject Property on May 14, 2016 for suspected asbestos containing building materials.

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

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

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

- Asphalt Shingle
- Linoleum
- 1'x1' Ceiling Tile
- 2'x4' Ceiling Tile
- 9"x9" Vinyl Tile
- Drywall
- 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: 61-26-650-006-0023-00

Hazardous Materials Inspection

On May 14, 2016 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: 61-26-650-006-0023-00

Friable ACM's

A window glazing sample collected from a window in the kitchen was found to contain up to 1.25% 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:

- Rear Entry (4 windows 32" wide x 60" tall)
- Living (2 windows 20" wide x 52" tall)
- Living (1 window 40" wide x 52" tall)
- Living (2 windows 26" wide x 52" tall)
- Front Entry (1 window 22" wide x 56" tall)
- Front Entry (1 window 20" wide x 36" tall)
- Kitchen (3 windows 20" wide x 44" tall)
- Kitchen (1 window 28" wide x 44" tall)
- Bathroom (1 window 24" wide x 56" tall)
- 2nd Fl. Landing (2 windows 22" wide x 38" tall)
- 2nd Fl. Landing (1 window 26" wide x 46" tall)
- 2nd Fl. W Bedroom (2 windows 28" wide x 38" tall)
- 2nd Fl. W Bedroom (1 window 28" wide x 60" tall)
- 2nd Fl. E Bedroom (2 windows 26" wide x 54" tall)
- 2nd Fl. S Bedroom (2 windows 26" wide x 54" tall)

Category I ACM

One type of resilient floor covering (9"x9" Pebbled Vinyl Floor Tile) located within the 2nd Fl. Landing was found to contain up to 5% Chrysotile asbestos. The assessment to quantify the extent of this material identified approximately 102 sq. ft. of this material within the Building.

Category II ACM

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 4,010 sq. ft. of drywall compound within the Building.

RECOMMENDATIONS

Asbestos Containing Materials

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:

- Rear Entry (4 windows 32" wide x 60" tall)
- Living (2 windows 20" wide x 52" tall)
- Living (1 window 40" wide x 52" tall)
- Living (2 windows 26" wide x 52" tall)

Muskegon County Land Bank Parcel ID: 61-26-650-006-0023-00

- Front Entry (1 window 22" wide x 56" tall)
- Front Entry (1 window 20" wide x 36" tall)
- Kitchen (3 windows 20" wide x 44" tall)
- Kitchen (1 window 28" wide x 44" tall)
- Bathroom (1 window 24" wide x 56" tall)
- 2nd Fl. Landing (2 windows 22" wide x 38" tall)
- 2nd Fl. Landing (1 window 26" wide x 46" tall)
- 2nd Fl. W Bedroom (2 windows 28" wide x 38" tall)
- 2nd Fl. W Bedroom (1 window 28" wide x 60" tall)
- 2nd Fl. E Bedroom (2 windows 26" wide x 54" tall)
- 2nd Fl. S Bedroom (2 windows 26" 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.

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" Pebbled 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 (3)
- Gallon Container Misc. Paint (15)
- 4' Fluorescent Light (Fixture and Ballast Only) (2)
- 4' Fluorescent Light (8)
- Television (3)

Muskegon County Land Bank Parcel ID: 61-26-650-006-0023-00

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: 61-26-650-006-0023-00

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

(Laron Pogwet

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 McIllwraith St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64881

Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Fiberglass - 20%

Other - 80%

Lab ID #: 64881 - 01

Cust. #: MS-HM-01A

Material: Asphalt Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 3

Asbestos Present: **NO**No Asbestos Observed

Fiberglass - 20%

Other - 80%

Lab ID #: 64881 - 01a Cust. #: MS-HM-01A

Material: Shingle

Location:

A

Appearance: black, fibrous, homogenous

Layer: 2 of 3

Asbestos Present: NO

esent. 110

Cellulose - 35%

No Asbestos Observed

Other - 65%

Material: Tar Paper

Location:

Lab ID #: 64881 - 01b Cust. #: MS-HM-01A

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.

NVLAP Lab Code 102118-0

APEX Research Inc., 11054 Hi Tech Drive, Whitmore Lake, MI 48189 (734) 449-9990, Fax (734) 449-9991



Test Method, Polarized Light Microscopy (PLM)

Project: 2145 McIllwraith St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64881 Date Collected: 05/14/16

Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Fiberglass - 20%

Other - 80%

Lab ID #: 64881 - 02

Cust. #: MS-HM-01B

Material: Asphalt Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 3

Asbestos Present: NO

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

Fiberglass - 20%

Cellulose - 35%

Other - 65%

Other - 80%

Material: Shingle

Lab ID #: 64881 - 02a

Cust. #: MS-HM-01B

viaiciiai. Si

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 3

Lab ID #: 64881 - 02b

Cust. #: MS-HM-01B

Material: Tar Paper

Location:

Appearance: black, fibrous, homogenous

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

Layer: 3 of 3

Robert T. Letarte Jr., Laboratory Director

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Test Method, Polarized Light Microscopy (PLM)

Project: 2145 McIllwraith St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64881

Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64881 - 03

Cust. #: MS-HM-02A

Material: Brown Linoleum

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 2

Asbestos Present: NO

No Asbestos Observed

Cellulose - 20%

Fiberglass - 10%

Other - 70%

Lab ID #: 64881 - 03a

Cust. #: MS-HM-02A

Material: Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Cellulose - 20%

Fiberglass - 10%

Other - 70%

Lab ID #: 64881 - 04

Cust. #: MS-HM-02B

Material: Brown Linoleum

Location:

Appearance: brown, 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

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Test Method, Polarized Light Microscopy (PLM)

Project: 2145 McIllwraith St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64881 Date Collected: 05/14/16

Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 20%

Fiberglass - 10%

Other - 70%

Lab ID #: 64881 - 04a

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

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 2 of 2

Lab ID #: 64881 - 05

Cust. #: MS-HM-03A

Material: Beige Linoleum

Asbestos Present: NO

No Asbestos Observed

Cellulose - 20%

Fiberglass - 10%

Other - 70%

Location:

Location.

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 64881 - 06

Cust. #: MS-HM-03B

Material: Beige 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

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Test Method, Polarized Light Microscopy (PLM)

Project: 2145 McIllwraith St.

Report To:

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

ARI Report # 16-64881

Date Collected: 05/14/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64881 - 07

Cust. #: MS-HM-04A

Material: White 4" 5a. Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 20%

Fiberglass - 10%

Cellulose - 20%

Fiberglass - 10%

Other - 70%

Other - 70%

Lab ID #: 64881 - 08

Cust. #: MS-HM-04B

Material: White 4" 5a. Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 64881 - 09

Cust. #: MS-HM-05A

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: NO No Asbestos Observed

Cellulose - 20%

Fiberglass - 10%

Other - 70%

Material: White Linoleum 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: 2145 McIllwraith St.

Report To:

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

ARI Report # 16-64881

Date Collected: 05/14/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64881 - 10

Cust. #: MS-HM-05B

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%

Cellulose - 95%

Other - 5%

Lab ID #: 64881 - 11

Cust. #: MS-HM-06A

Material: White 2'x4' Rough Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Cellulose - 95%

Other - 5%

Lab ID #: 64881 - 12 Cust. #: MS-HM-06B

Material: White 2'x4' Rough 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: 2145 McIllwraith St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64881

Date Collected: 05/14/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Cellulose - 95%

Lab ID #: 64881 - 13

Cust. #: MS-HM-07A

Material: White 1x1 Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

No Asbestos Observed

Asbestos Present: **NO**

Other - 5%

Lab ID #: 64881 - 14

Cust. #: MS-HM-07B

Material: White 1x1 Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

Cellulose - 95%

No Asbestos Observed

Other - 5%

Lab ID #: 64881 - 15 Cust. #: MS-HM-08A

Material: White 2x4 Swirl Ceiling Tile

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: 2145 McIllwraith St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64881

Date Collected: 05/14/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64881 - 16

Cust. #: MS-HM-08B

Material: White 2x4 Swirl Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO**No Asbestos Observed

Cellulose - 95%

Other - 5%

Lab ID #: 64881 - 17

Cust. #: MS-HM-09A

Material: White 2x4 Pitted Ceiling Tile

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Cellulose - 65%

Mineral Wool - 30%

Other - 5%

Lab ID #: 64881 - 18

Cust. #: MS-HM-09B

Material: White 2x4 Pitted Ceiling Tile

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

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Test Method, Polarized Light Microscopy (PLM)

Project: 2145 McIllwraith St.

Report To:

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

ARI Report # 16-64881

Date Collected: 05/14/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 20%

Other - 80%

Lab ID #: 64881 - 19

Cust. #: MS-HM-10A

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

Asbestos Present: YES

POINT COUNT RESULT

Chrysotile - 1.50%

Other - 98.50%

Cust. #: MS-HM-10A

Lab ID #: 64881 - 19a

Material: Joint Compound

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

Cellulose - 20%

No Asbestos Observed

Other - 80%

Material: Drywall

Lab ID #: 64881 - 20 Cust. #: MS-HM-10B

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: 2145 McIllwraith St.

Report To:

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

Lansing, MI 48901

ARI Report # 16-64881

Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Other - 98.75%

Lab ID #: 64881 - 20a

Cust. #: MS-HM-10B

Location:

Material: Joint Compound

Appearance:

NOT ANALYZED

Layer: 2 of 2

Lab ID #: 64881 - 21

Cust. #: MS-HM-11A

Material: Glazing

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64881 - 22

Cust. #: MS-HM-11B

Material: Glazing

Location:

Appearance: Layer: of Asbestos Present:

Asbestos Present: **YES**

Chrysotile - 1.25% POINT COUNT RESULT

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 McIllwraith St.

Report To:

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

ARI Report # 16-64881

Date Collected: 05/14/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64881 - 23

Cust. #: MS-HM-12A

Material: Pebbled 9x9 Vinyl Tile

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 3

Asbestos Present: YES Chrysotile - 5%

Other - 95%

Lab ID #: 64881 - 23a

Cust. #: MS-HM-12A

Material: Mastic

Location:

Appearance: black,nonfibrous,homogenous

Layer: 2 of 3

Lab ID #: 64881 - 23b

Cust. #: MS-HM-12A

Material: Flooring

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 3 of 3

No Asbestos Observed

Asbestos Present: **NO**

Asbestos Present: NO

No Asbestos Observed

Cellulose - 35%

Other - 65%

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 McIllwraith St.

Report To:

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

ARI Report # 16-64881 Date Collected: 05/14/16

Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present:

Non-Asbestos

Lab ID #: 64881 - 24

Cust. #: MS-HM-12B

Material: Pebbled 9x9 Vinyl Tile

Location:

NOT ANALYZED

Appearance:

Layer: 1 of 3

Lab ID #: 64881 - 24a

Cust. #: MS-HM-12B

Material: Mastic

Location:

Appearance: black,nonfibrous,homogenous

Layer: 2 of 3

Lab ID #: 64881 - 24b

Cust. #: MS-HM-12B

Material: Flooring

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 3 of 3

Asbestos Present: **NO**

No Asbestos Observed

Asbestos Present: NO

Cellulose - 35%

Other - 100%

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: 2145 McIllwraith St.

Report To:

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

ARI Report # 16-64881

Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 95%

Other - 5%

Lab ID #: 64881 - 25

Cust. #: MS-HM-13A

Material: White Smooth 2x4 Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 95%

Other - 5%

Cust. #: MS-HM-13B

Lab ID #: 64881 - 26

Material: White Smooth 2x4 Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64881 - 27

Asbestos Present: NO

Cellulose - 2%

Cust. #: MS-HS-01A

Material: Plaster Base Coat

No Asbestos Observed

Other - 98%

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: 2145 McIllwraith St.

Report To:

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

ARI Report # Date Collected: 05/14/16

16-64881

Date Received: 05/17/16

Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 2%

Other - 98%

Lab ID #: 64881 - 28

Cust. #: MS-HS-01B

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 2% Other - 98%

Other - 100%

Lab ID #: 64881 - 29 Cust. #: MS-HS-01C

Material: Plaster Base Coat

Location:

Appearance: grey, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64881 - 30

Cust. #: MS-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: 2145 McIllwraith St.

Report To:

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

ARI Report #

16-64881

Date Collected: 05/14/16

Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

Asbestos Present: **NO**

No Asbestos Observed

No Asbestos Observed

Non-Asbestos

Cellulose - 2%

Cellulose - 2%

Other - 98%

Other - 98%

Lab ID #: 64881 - 30a

Cust. #: MS-HS-01D

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Lab ID #: 64881 - 31

Cust. #: MS-HS-01B\E

Material: Plaster Base Coat

Location:

Appearance: grey, fibrous, homogenous

Layer: 1 of 1

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.

64881

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

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

Date: 5-17-16 Date:	Relinquished by: Received by:	11 ons Jun 064	10 mg-Hm-05B	150 my sm p	gho, we show one	7 mg-Hm. call	6 mg-4m-033	5 NS-4m-024	4 Mayn-023	3 ms-4m-024	\$10 - LM- SW	ms-Hm-oin	Lab ID # Client ID #	Other: (TTP) All Samples Except		·		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
MAY 1 7 2010 Date:	by: Relinquished by:	white 24 rough Ceiling Tile	white Lindleum	whetchiroleum	white 4" sa Linsleam	white 45 So, Linden	Beige Lindeum	Beige Livoleum	Brown Linoleum.	Brown Linstein	Asphalt Shingle	Asphatshingle	Material/Location	Plaster TEM: AHERA 7400	Mold: Bulk Tape	Lead: Bulk Wipe	Asbestos: Bulk Wipe	PLM EPA 600, PC	(888) 448-8739 Co	Project #:	Project :	ing Date of Survey
Date :	Received by:												Volume Area	DB EPA Level Π	BioSISOtherViable_	Air Soil	Point Count PCM	apaquet@redcedarconsulting.net all samples with a detection of <5% ACM.	Person: Aaron Paquet	#:	Project: 2145 McIlwrithSt	Survey: \$74-16
													Results					lting.net ACM.			Report	Lab Use Only Log-In

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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APEX	100
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Date: 5-17-16	Relinquished by: C_{K}	S.	6	8	200	× ×	77	3	5	14	13	ũ	Lab ID#	Other:	To the line of the	kusn 24 hour		Turn Arou	Phone: (888) 449-4566	City, St., Zip:	Address: _	Client Name:
Date: MAY	\(\frac{1}{2}\)	511- my-sm	ms Hundist	5101- with SM	Mormy SM	2920-my-820	the my sm	88 my 824	MS-HM-08A	Stormoll	ms. Hm 074	830-my-2m	Client ID#	(11P) All Samples Except)			Around Times: (Circle One)	9-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
7 2 2016 Date:		Clarix	Clazing	Drywoll	Dry word	white oxx Pixed Ceiling tile	white 2x4 Distra Coding tile	white Jet Suist Ceiling Tile	white 2 and Sould Coiling tile	white las ceiling Tile	white Let Colling tile	white 2>4 Zough Celling Tille	Material/Location	ccept Plaster TEM: AHERA 7400	Mold: Bulk	Lead: Bulk Wipe	Asbestos: Bulk Wipe	Circle One) PLM EPA 600, PC	(888) 448-8739			
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Date:	Received by:												Area I	EPA Level II	OtherViable _	PaintSoil	PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	on Paquet		Inc Illuraithst.	5-14-16
						The state of the s							Results					ting.net CM.			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



Date: 5-19-76 Date:	Relinquished by: Received by		3 ms Jes-eit	Glastism OE	26 m5-145-01C	DIO-STIFFEN BE	27 ms-W5-01A	2 mg-1m 133	25 ms-4m-13.4	24 ms-km-12B	28 ms- Han-124	Lab ID # Client ID #	OutorAll Samples Except		Ĕ	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
Date:	by//// 1 7/ 2016 Relinquished by:		4				Pasto	י א	white smooth good cailing Tile	Pebblia grap oring the	Pebblio exq simplifie	Material/Location	Except Plaster TEM: AHERA 7400 Bulk/NOB		Lead: Bulk Wipe	Ashestos: Bulk X Wipe	H WTd	Fax: (888) 448-8739 Contact Perso		Project	ing Date of Survey:
Date :	Received by:											Volume Area	DBEPA Level II	BioSIS Other Viable	Air Soil	Point Count PCM	apaquet@redcedarconsulting.net	Person: Aaron Paquet			Survey: 5-14-16
												Results					lting.net ACM.			Report	Lab Use Onl

Rev: 12/03 Work Forms: COC

Red Cedar Consulting

Tables

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

	Hazardous Materials Description and Location	
Location	Material Description	Quantity
NW Bedroom	Smoke Detector	1
2 nd Fl. E Bedroom	Smoke Detector	1
2 nd Fl. Landing	Smoke Detector	1
Basement	Gallon Container Misc. Paint	15
Front Hall	4' Fluorescent Light (Fixture and Ballast Only)	1
Front Hall	4' Fluorescent Bulb	4
Kitchen	4' Fluorescent Light (Fixture and Ballast Only)	1
Kitchen	4' Fluorescent Bulb	4
Basement	Television	3

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2145 McIllwraith St., Muskegon Heights, 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/ND/ND	Exterior	NA
MS-HM-01B	Asphalt Shingle	No	M	Category I	ND/ND/ND	Exterior	NA
MS-HM-02A	Brown Linoleum	No	M	Category I	ND/ND	Kitchen/Pantry	NA
MS-HM-02B	Brown Linoleum	No	M	Category I	ND/ND	Kitchen/Pantry	NA
MS-HM-03A	Beige Linoleum	No	M	Category I	ND	Bath	NA
MS-HM-03B	Beige Linoleum	No	M	Category I	ND	Bath	NA
MS-HM-04A	White 4" sq. Linoleum	No	M	Category I	ND	Rear Entry	NA
MS-HM-04B	White 4" sq. Linoleum	No	M	Category I	ND	Rear Entry	NA
MS-HM-05A	White Linoleum	No	M	Category I	ND	Front Hall	NA
MS-HM-05B	White Linoleum	No	M	Category I	ND	Front Hall	NA
MS-HM-06A	White 2'x4' Rough Ceiling Tile	Yes	M	Category II	ND	Kitchen	NA
MS-HM-06B	White 2'x4' Rough Ceiling Tile	Yes	M	Category II	ND	Kitchen	NA
MS-HM-07A	White 1'x1' Ceiling Tile	Yes	M	Category II	ND	NE Bedroom	NA
MS-HM-07B	White 1'x1' Ceiling Tile	Yes	M	Category II	ND	NE Bedroom	NA
MS-HM-08A	White 2'x4' Swirl Ceiling Tile	Yes	M	Category II	ND	Living/Dining	NA
MS-HM-08B	White 2'x4' Swirl Ceiling Tile	Yes	M	Category II	ND	Living/Dining	NA
MS-HM-09A	White 2'x4' Pitted Ceiling Tile	Yes	M	Category II	ND	NW Bedroom	NA
MS-HM-09B	White 2'x4' Pitted Ceiling Tile	Yes	M	Category II	ND	NW Bedroom	NA
MS-HM-10A	Drywall	No	M	Category II	ND/1.5% CH	Kitchen Wall	4,010 sq. ft.
MS-HM-10B	Drywall	No	M	Category II	ND/NA	2 nd Fl. Landing Ceiling	NA
MS-HM-11A	Glazing	Yes	M	Category II	1.25% CH	Kitchen	26 Windows
MS-HM-11B	Glazing	Yes	M	Category II	NA	2 nd Fl. Landing Ceiling	NA
MS-HM-12A	Pebbled 9"x9" Vinyl Tile	No	M	Category I	5% CH/ND/ND	2 nd Fl. Landing	102 sq. ft.
MS-HM-12B	Pebbled 9"x9" Vinyl Tile	No	M	Category I	NA/ND/ND	2 nd Fl. Landing	NA
MS-HM-13A	White Smooth 2'x4' Ceiling Tile	Yes	M	Category II	ND	E Bedroom	NA
MS-HM-13B	White Smooth 2'x4' Ceiling Tile	Yes	M	Category II	ND	E Bedroom	NA
MS-HS-01A	Plaster	No	S	Category II	ND	Living Wall	NA
MS-HS-01B	Plaster	No	S	Category II	ND	Front Hall Wall	NA

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2145 McIllwraith St., Muskegon Heights, Michigan

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
MS-HS-01C	Plaster	No	S	Category II	ND	E Bedroom Ceiling	NA
MS-HS-01D	Plaster	No	S	Category II	ND/ND	2 nd Fl. Landing Wall	NA
MS-HS-01E	Plaster	No	S	Category II	ND	2 nd Fl. S Bedroom Ceiling	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, 2145 McIllwraith 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, 2145 McIllwraith St., Muskegon Heights, Michigan

Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
2 nd Fl. Landing	Pebbled 9"x9" Vinyl Tile		No	102 sq. ft.
		Total		102 sq. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Rear Entry (4 windows 32" wide x 60" tall)	Glazing		Yes	4 Windows
Living (2 windows 20" wide x 52" tall)	Glazing		Yes	2 Windows
Living (1 window 40" wide x 52" tall)	Glazing		Yes	1 Window
Living (2 windows 26" wide x 52" tall)	Glazing		Yes	2 Windows
Front Entry (1 window 22" wide x 56" tall)	Glazing		Yes	1 Window
Front Entry (1 window 20" wide x 36" tall)	Glazing		Yes	1 Window
Kitchen (3 windows 20" wide x 44" tall)	Glazing		Yes	3 Windows
Kitchen (1 window 28" wide x 44" tall)	Glazing		Yes	1 Window
Bathroom (1 window 24" wide x 56" tall)	Glazing		Yes	1 Window
2 nd Fl. Landing (2 windows 22" wide x 38" tall)	Glazing		Yes	2 Windows
2 nd Fl. Landing (1 window 26" wide x 46" tall)	Glazing		Yes	1 Window
2 nd Fl. W Bedroom (2 windows 28" wide x 38" tall)	Glazing		Yes	2 Windows
2 nd Fl. W Bedroom (1 window 28" wide x 60" tall)	Glazing		Yes	1 Window
2 nd Fl. E Bedroom (2 windows 26" wide x 54" tall)	Glazing		Yes	2 Windows
2 nd Fl. S Bedroom (2 windows 26" wide x 54" tall)	Glazing		Yes	2 Windows
		Total		26 Windows
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Kitchen, Front Entry, Bath, E Bedroom and W Bedroom Walls	Drywall Compound		No	2,034 sq. ft.
2 nd Fl. Landing, E Bedroom and S Bedroom Walls	Drywall Compound		No	1,440 sq. ft.
2 nd Fl. Landing, E Bedroom and S Bedroom Ceilings	Drywall Compound		No	530 sq. ft.
		Total		4,010 sq. ft.

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

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 27, 2016

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

2200 Riordan St., Muskegon Heights, MI 49444

Parcel ID: 06-15-114-200

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 2200 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 1,052 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 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 three bedrooms on the first floor.

VISUAL INSPECTION AND SAMPLING

Asbestos Containing Materials Inspection

Mr. Aaron Paquet of Red Cedar Consulting (Red Cedar), an accredited State Of Michigan/EPA Asbestos Building Inspector (Accreditation Number A30955) whom completed training per the Michigan Asbestos Workers Accreditation Act 440 completed an inspection of the Subject Property on May 14, 2016 for suspected asbestos containing building materials.

Muskegon County Land Bank Parcel ID: 61-26-185-063-0024-00

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
- 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 May 14, 2016 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: 61-26-185-063-0024-00

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.

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

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

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

Friable ACM's

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

- Living-1 (1 register, 10 sq. ft.)
- Living-2 (1 register, 10 sq. ft.)
- Bathroom (1 register, 10 sq. ft.)

Muskegon County Land Bank Parcel ID: 61-26-185-063-0024-00

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 (1 register, 10 sq. ft.)
- Living-2 (1 register, 10 sq. ft.)
- Bathroom (1 register, 10 sq. ft.)

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

Hazardous Materials

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

• Smoke Detector (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: 61-26-185-063-0024-00

- 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: 2200 Riordan St.

Report To:

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

ARI Report # 16-64872

Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Fiberglass - 30%

Other - 70%

Other - 70%

Lab ID #: 64872 - 01

Cust. #: ST-HM-01A

Material: Grey Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 4

Asbestos Present: **NO**

No Asbestos Observed

Fiberglass - 30%

Lab ID #: 64872 - 01a Cust. #: ST-HM-01A

Material: Black Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 4

Asbestos Present: NO

No Asbestos Observed

Fiberglass - 30%

Other - 70%

Lab ID #: 64872 - 01b Cust. #: ST-HM-01A

Material: White 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: 2200 Riordan St.

Report To:

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

ARI Report # 16-64872

Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 50%

Other - 50%

Lab ID #: 64872 - 01c

Cust. #: ST-HM-01A Material: Tar Paper

Location:

Appearance: black,fibrous,homogenous

Layer: 4 of 4

Lab ID #: 64872 - 02

Asbestos Present: **NO**

Fiberglass - 30%

Cust. #: ST-HM-01B

Material: Grey Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 4

No Asbestos Observed

Other - 70%

Lab ID #: 64872 - 02a

Cust. #: ST-HM-01B

Material: Black 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: 2200 Riordan St.

Report To:

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

ARI Report # 16-64872

Date Collected: 05/14/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64872 - 02b

Cust. #: ST-HM-01B Material: White Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 3 of 4

Asbestos Present: **NO**

No Asbestos Observed

Fiberglass - 30%

Other - 70%

Lab ID #: 64872 - 02c

Cust. #: ST-HM-01B

Material: Tar Paper

Location:

Appearance: black, fibrous, homogenous

Layer: 4 of 4

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 50%

Other - 50%

Lab ID #: 64872 - 03

Cust. #: ST-HM-02A

Material: White Floral Linoleum

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: 2200 Riordan St.

Report To:

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

ARI Report # 16-64872 Date Collected: 05/14/16

Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 10%

Fiberglass - 10%

Other - 80%

Lab ID #: 64872 - 04

Cust. #: ST-HM-02B

Material: White Floral Linoleum

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 64872 - 05

Cust. #: ST-HM-03A

Asbestos Present: NO

No Asbestos Observed

Fiberglass - 10%

Other - 90%

Material: Beige Linoleum

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64872 - 06

Cust. #: ST-HM-03B

Material: Beige Linoleum

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

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Test Method, Polarized Light Microscopy (PLM)

Project: 2200 Riordan St.

Report To:

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

ARI Report # 16-64872

Date Collected: 05/14/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64872 - 07

Cust. #: ST-HM-04A

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 #: 64872 - 08

Cust. #: ST-HM-04B

Material: Grey Linoleum

Location:

Appearance: grey,fibrous,nonhomogenous

Layer: 1 of 1

Lab ID #: 64872 - 09

Asbestos Present: NO

No Asbestos Observed

Fiberglass - 10%

Other - 90%

Cust. #: ST-HM-05A

Material: Old Linoleum

Location:

Appearance: beige, 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: 2200 Riordan St.

Report To:

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

ARI Report # 16-64872

Date Collected: 05/14/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64872 - 09a

Cust. #: ST-HM-05A Material: Linoleum

Location:

Appearance: grey, fibrous, nonhomogenous

Layer: 2 of 2

No Asbestos Observed

Cellulose - 10%

Other - 80%

Lab ID #: 64872 - 10 Cust. #: ST-HM-05B

Material: Old Linoleum

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 2

Lab ID #: 64872 - 10a

Cust. #: ST-HM-05B

Material: Linoleum

Location:

Appearance: grey,fibrous,nonhomogenous

Layer: 2 of 2

Asbestos Present: **NO**

Fiberglass - 10%

Asbestos Present: NO

No Asbestos Observed

Fiberglass - 10%

Other - 90%

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: 2200 Riordan St.

Report To:

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

ARI Report # 16-64872

Date Collected: 05/14/16

Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 80%

Other - 20%

Lab ID #: 64872 - 11

Cust. #: ST-HM-06A

Material: White 1x1 Ceiling Tile

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 80%

Other - 20%

Lab ID #: 64872 - 12 Cust. #: ST-HM-06B

Material: White 1x1 Ceiling Tile

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 1

No Asbestos Observed

Asbestos Present: NO

Cellulose - 20% Fiberglass - 5%

Other - 75%

Cust. #: ST-HM-07A

Material: Drywall

Lab ID #: 64872 - 13

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: 2200 Riordan St.

Report To:

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

ARI Report # 16-64872 Date Collected: 05/14/16

Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64872 - 13a

Cust. #: ST-HM-07A

Material: Mud Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 20% Fiberglass - 5%

Other - 75%

Cust. #: ST-HM-07B

Material: Drywall

Lab ID #: 64872 - 14

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Cellulose - 1% Other - 99%

Lab ID #: 64872 - 15 Cust. #: ST-HM-08A

Material: Glazing

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

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Test Method, Polarized Light Microscopy (PLM)

Project: 2200 Riordan St.

Report To:

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

ARI Report #

16-64872

Date Collected: 05/14/16

Date Received: 05/17/16

Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Other - 100%

Other - 100%

Lab ID #: 64872 - 16

Cust. #: ST-HM-08B

Material: Glazing

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 64872 - 17

Cust. #: ST-HM-09A

Material: Glazing

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 64872 - 18

Cust. #: ST-HM-09B

Material: Glazing

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO**

No Asbestos Observed

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: 2200 Riordan St.

Report To:

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

ARI Report #

16-64872

Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64872 - 19

Cust. #: ST-HS-01A

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 #: 64872 - 19a Cust. #: ST-HS-01A

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Lab ID #: 64872 - 20 Cust. #: ST-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: 2200 Riordan St.

Report To:

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

ARI Report # 16-64872

Date Collected: 05/14/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 2%

Other - 98%

Lab ID #: 64872 - 20a Cust. #: ST-HS-01B

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: **NO**

No Asbestos Observed

Other - 100%

Lab ID #: 64872 - 21 Cust. #: ST-HS-01C

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 64872 - 21a

Cust. #: ST-HS-01C

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

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 2200 Riordan St.

Report To:

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

ARI Report #

16-64872 Date Collected: 05/14/16

Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64872 - 22

Cust. #: ST-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%

Lab ID #: 64872 - 22a Cust. #: ST-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 #: 64872 - 23 Cust. #: ST-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: 2200 Riordan St.

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Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64872

Date Collected: 05/14/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64872 - 23a Cust. #: ST-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.

64872 APEX Research, Inc. 11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-44

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9-9991	

	Date:		Date:	WAY 1 7 2016		Date: 5-(7-16
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				OldLinoleur	520 MA 75	8
				5-	ST-HM-16A	5
			42	Cruy Lindeum	ST-Hon aug	8
			KA	Gray Lindean	ST-fm-o4A	7
				Beige Linleum	STAMOSS	5
			5	Beige Linetzur	ST-WM-03A	6
			incleur	white floral Linebrum	ST-HM-025	4
			inteum	white Flord Liv leum	ST-HVN-07A	W
				Shingle	STUMMIOUS	2
				Shingle	ST-HM-01A	
Results	Area	Volume	Material/Location	Material	Client ID#	Lab ID #
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Viable	Other	BioSIS	Tape		Troping to the second s	75 nom
	nt Soil_	Air Paint	Wipe	Lead: Bulk		
	PCM	Point Count	x Wipe	Asbestos: Bulk		
apaquet@redcedarconsulting.net with a detection of <5% ACM.	et@redcedarcdetection of	apaqu all samples with a c	EPA 600, PC	(Circle One) PLM	Around Times: (Circle One)	Turn Arou
	Paquet		Contact Perso:	X: (888) 448-8739	19-4566 Fax:	Phone: (888) 449-456
			Project #:		Lansing, MI 48901	City, St., Zip:
ST Report	Riorden	7200	Project :		PO Box 13216	Address:
Lab Use Only	14-16	a	Date of Survey:	ing	Red Cedar Consulting	Client Name: _
	1 11/1///1		т-шан, аремеренения	T)-1110		
	Fax: 734-449-9991		il. anevrecearch@charterr	H-ma		

Rev: 12/03 Work Forms: COC

FORM KENTARCY



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: 5-17-16	telinquished by:	B	2	20	15	HI.	A	16	, 15	7	13	12	Lab ID#)Iner:	Ĺ	& hour 72 hour	ush 24 hour	Turn Arou	hone: (888) 4.	City, St., Zip:	Address:	Client Name:
	Received by:	ST-88-01D	57-45-010	ST-145-018	N10-84-15	St-Hm-098	ST-HW-09A	S80-WH-15	STHMOSA	ST-HM-ONG	ST-Hon-07A	S120 wh-15	Client ID #	(IIP)All Samples Except				Around Times: (Circle One)	(888) 449-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
206					Hoster	<u> </u>			Coleraine	Drywell	Drywall	white we cailing Tile	Material/Location	xcept Plaster TEM: AHERA 7400_	Mold: Bulk	Lead: Bulk	Asbestos: Bulk	PLM EPA	X: (888) 448-8739			ing
Date:	Relinquished by:	77 77 77 77 77 77 77 77 77 77 77 77 77										Tike	Volu	Bulk/NOB	Tape BioSIS _	Wipe Air	Wipe Point Count	ã	Contact Person:	Project #:	Project: 2200	Date of Survey:
Date :	Received by:												me Area	EPA Level II	Other Viable	Paint Soil	PCM	paquet@r h a detec	Aaron Paquet		Riordanst.	5-14-6
													Results					lting.net ACM.			Report	Lab Use Only Log-In

Rev: 12/03 Work Forms: COC

APTX 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

AP		29
APMX	S	30F3

2/03	Date: 5176	Relinquished by:						23	Lab ID #		Other	48 hour 72 hour	Rush 24 hour			Phone: (888) 449-4566	City, St., Zip:	Address:	Client Name: _
	Date:	Received by:						ST-48-01E	Client ID#	TEM:	TTP all camples by				Time Around Times	49-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
								2) es for—	Material/Location	TEM: AHERA 7400	Mold: Bulk			os: P	DIM EDA ACO DO	(888) 448-8739			ng
	Date:	Relinquished by:							ation Vol	Bulk/NOB	_ lape BioSIS			20 F		Contact Person:	Project #:	Project: 2	Date of Survey:
	Date ·	Received by:						A The state of the	olume Area	EPA Level II	SISOther	Paint Soil)	apaquet@redcedarconsulting.net)N: Aaron Paquet		-	ey: 5-14-16
								en e	Results	I	Viable			OF ACM.	rconsulting.net			Location	Lab Use Only Log-In

Rev: 12/03 Work Forms: COC

Red Cedar Consulting

Tables

Table 1 - Summary of Hazardous Materials, 2200 Riordan St.., Muskegon Heights, Michigan

Hazardous Materials Description and Location							
Location	Material Description	Quantity					
SE Bedroom	Smoke Detector	1					

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2200 Riordan St.., Muskegon Heights, Michigan

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity	
ST-HM-01A	Asphalt Shingle	No	M	Category I	ND/ND/ND/ND	Exterior	NA	
ST-HM-01B	Asphalt Shingle	No	M	Category I	ND/ND/ND/ND	Exterior	NA	
ST-HM-02A	White Floral Linoleum	No	M	Category I	ND	Dining	NA	
ST-HM-02B	White Floral Linoleum	No	M	Category I	ND	Dining	NA	
ST-HM-03A	Beige Linoleum	No	M	Category I	ND	Kitchen	NA	
ST-HM-03B	Beige Linoleum	No	M	Category I	ND	Kitchen	NA	
ST-HM-04A	Gray Linoleum	No	M	Category I	ND	Bath	NA	
ST-HM-04B	Gray Linoleum	No	M	Category I	ND	Bath	NA	
ST-HM-05A	Old Linoleum	No	M	Category I	ND/ND	Rear Entry	NA	
ST-HM-05B	Old Linoleum	No	M	Category I	ND/ND	Rear Entry	NA	
ST-HM-06A	White 1'x1' Ceiling Tile	Yes	M	Category II	ND	Living	NA	
ST-HM-06B	White 1'x1' Ceiling Tile	Yes	M	Category II	ND	Living	NA	
ST-HM-07A	Drywall	No	M	Category II	ND/ND	Dining	NA	
ST-HM-07B	Drywall	No	M	Category II	ND	Dining	NA	
ST-HM-08A	Glazing	Yes	M	Category II	ND	Front Porch	NA	
ST-HM-08B	Glazing	Yes	M	Category II	ND	Front Porch	NA	
ST-HM-09A	Glazing	Yes	M	Category II	ND	E Bedroom	NA	
ST-HM-09B	Glazing	Yes	M	Category II	ND	Living	NA	
ST-HS-01A	Plaster	No	S	Category II	ND/ND	Living Wall	NA	
ST-HS-01B	Plaster	No	S	Category II	ND/ND	Kitchen Wall	NA	
ST-HS-01C	Plaster	No	S	Category II	ND/ND	SW Bedroom Wall	NA	
ST-HS-01D	Plaster	No	S	Category II	ND/ND	Kitchen Ceiling	NA	
ST-HS-01E	Plaster	No	S	Category II	ND/ND	SE Bedroom Ceiling	NA	

Notes:

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2200 Riordan St.., Muskegon Heights, Michigan

Mate	orial Types	<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					
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, 2200 Riordan St.., Muskegon Heights, Michigan

Asbestos Containing Material Description and Location										
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity					
Living-1 (1 register, 10 sq. ft.) Living-2 (1 register, 10 sq. ft.) Bathroom (1 register, 10 sq. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	30 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, 2200 Riordan St.., Muskegon Heights, Michigan

Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Living-1 (1 register, 10 sq. ft.) Living-2 (1 register, 10 sq. ft.) Bathroom (1 register, 10 sq. ft.)	HVAC Duct Wrap		Yes	30 sq. ft.
		Total		30 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 27, 2016

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

2225 Wood St., Muskegon Heights, MI 49444

Parcel ID: 61-26-185-063-0006-00

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 2225 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 .29 acre residential parcel which contains a 576 sq. ft. detached garage and approximate 1,020 square foot residential building (the Building) constructed in 1905. The Building was constructed on a concrete block crawl space with one aboveground floor. The exterior walls of the Building were finished with aluminum lap over fiber lap while the roof was sealed with asphalt shingles. The Building can be further divided into a living room, dining room, kitchen, bathroom and three bedrooms.

VISUAL INSPECTION AND SAMPLING

Asbestos Containing Materials Inspection

Mr. Aaron Paquet of Red Cedar Consulting (Red Cedar), an accredited State Of Michigan/EPA Asbestos Building Inspector (Accreditation Number A30955) whom completed training per the Michigan Asbestos

Project No.: 16-1070 Muskegon County Land Bank Parcel ID: 61-26-185-063-0006-00

Workers Accreditation Act 440 completed an inspection of the Subject Property on May 24, 2016 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
- Fiber Lap Siding
- Linoleum
- 1'x1' Ceiling Tile
- Drywall
- Glazing

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: 61-26-185-063-0006-00

Hazardous Materials Inspection

On May 24, 2016 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.

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: 61-26-185-063-0006-00

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.

Project No.: 16-1070 Muskegon County Land Bank Parcel ID: 61-26-185-063-0006-00

- 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

MIOSHA-CSHD-Asbestos Program
State of Michigan

Phone: 517-284-6777 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: 2225 Wood St

Report To:

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

ARI Report # 16-65108

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/27/16

Date Reported: 05/27/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 30%

Other - 70%

Lab ID #: 65108 - 01

Cust. #: WS-HM-01A

Material: Asphalt Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: **NO**

Cellulose - 30% Other - 70% No Asbestos Observed

Cust. #: WS-HM-01B

Lab ID #: 65108 - 02

Material: Asphalt Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 65108 - 03

Asbestos Present: NO No Asbestos Observed

Cellulose - 30%

Other - 70%

Cust. #: WS-HM-02A

Material: Fiberlap Siding

Location:

Appearance: black,fibrous,homogenous

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: 2225 Wood St

Report To:

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

ARI Report #

16-65108

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/27/16

Date Reported: 05/27/16

Sample Information

Asbestos Type/Percent

No Asbestos Observed

Non-Asbestos

Lab ID #: 65108 - 04

Cust. #: WS-HM-02B

Material: Fiberlap Siding

Location:

Appearance: black,nonfibrous,homogenous

Layer: 1 of 1

Lab ID #: 65108 - 05

Cust. #: WS-HM-03A

Material: Asphalt Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 65108 - 06

Cust. #: WS-HM-03B

Material: Asphalt Shingle

Location:

Appearance: black,fibrous,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

Cellulose - 30%

Other - 70%

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: 2225 Wood St

Report To:

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

ARI Report # 16-65108

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/27/16

Date Reported: 05/27/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 80%

Other - 20%

Lab ID #: 65108 - 07

Cust. #: WS-HM-04A

Material: Fiberlap Siding

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 80%

Other - 20%

Cust. #: WS-HM-04B

Lab ID #: 65108 - 08

Material: Fiberlap Siding

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 65108 - 09

Cust. #: WS-HM-05A

Material: White Linoleum

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Cellulose - 10%

Fiberglass - 15%

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: 2225 Wood St

Report To:

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

ARI Report # 16-65108

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/27/16

Date Reported: 05/27/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65108 - 10

Cust. #: WS-HM-05B

Material: White Linoleum

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Fiberglass - 15%

Other - 75%

Lab ID #: 65108 - 11

Cust. #: WS-HM-06A

Material: White 1x1 Ceiling Tile

Location:

Appearance: grey, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 65108 - 12

Cust. #: WS-HM-06B

Material: White 1x1 Ceiling Tile

Location:

Appearance: grey,fibrous,homogenous

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

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Cellulose - 10%

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 30%

Other - 70%

Asbestos Present: NO Cellulose - 30% Other - 70% 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: 2225 Wood St

Report To:

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

ARI Report #

16-65108

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/27/16

Date Reported: 05/27/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65108 - 13

Cust. #: WS-HM-07A

Material: Drywall

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Lab ID #: 65108 - 14

Cust. #: WS-HM-07B

Material: Drywall

Location:

Appearance: grey, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 65108 - 15

Cust. #: WS-HM-08A

Material: Glazing

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: NO

Cellulose - 20%

No Asbestos Observed

Other - 80%

Asbestos Present: **NO**

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

Cellulose - 20%

Other - 80%

Cellulose - 2%

Other - 98%

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

Robert T. Letarte Jr., Laboratory Director

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



Test Method, Polarized Light Microscopy (PLM)

Project: 2225 Wood St

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Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-65108

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/27/16 Date Reported: 05/27/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 65108 - 16

Cust. #: WS-HM-08B

Material: Glazing

Location:

Appearance: grey,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.

65108

APEX 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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	D	Re													Volume	OB EPA Level II	BioSIS Other	Au Fallit	•	Point Count	apaquet@redcedarconsulting.net all samples with a detection of <5% ACM.	Aaron	#:	Project: 2235 Wood S	Date of Survey: 5.24.16
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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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2246	oy: UB			Ü	Glazina	Glazing	Daywall	Dywall	white Ix Ceiling Tile	Material/Location	TEM: AHERA 7400		Lead: Bulk	Asbestos: Bulk X	(Circle One) PLM EPA	Fax: (888) 448-8739			ing
Date:	Relinquished by:								É	ation	0Bulk/NOB_	Tape F	Wipe A	Wipe P	600, PC all samples	Contact Person:	Project #:	Project: 2225	Date of Survey
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Date: MAY 2 6	Received by:									Area	П	Other Viable	Soil	PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	aquet		Çı	۱۰16 ۱۰۱۵
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Red Cedar Consulting

Tables

Table 1 - Summary of Hazardous Materials, 2225 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, 2225 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	Asphalt Shingle	No	M	Category I	ND	Exterior	NA
WS-HM-01B	Asphalt Shingle	No	M	Category I	ND	Exterior	NA
WS-HM-02A	Fiber Lap Siding	Yes	M	Category II	ND	Exterior	NA
WS-HM-02B	Fiber Lap Siding	Yes	M	Category II	ND	Exterior	NA
WS-HM-03A	Asphalt Shingle	No	M	Category I	ND	Garage Exterior	NA
WS-HM-03B	Asphalt Shingle	No	M	Category I	ND	Garage Exterior	NA
WS-HM-04A	Fiber Lap Siding	Yes	M	Category II	ND	Garage Exterior	NA
WS-HM-04B	Fiber Lap Siding	Yes	M	Category II	ND	Garage Exterior	NA
WS-HM-05A	White Linoleum	No	M	Category I	ND	Bathroom	NA
WS-HM-05B	White Linoleum	No	M	Category I	ND	Bathroom	NA
WS-HM-06A	White 1'x1' Ceiling Tile	Yes	M	Category II	ND	SE Bedroom	NA
WS-HM-06B	White 1'x1' Ceiling Tile	Yes	M	Category II	ND	SE Bedroom	NA
WS-HM-07A	Drywall	No	M	Category II	ND	SE Bedroom Ceiling	NA
WS-HM-07B	Drywall	No	M	Category II	ND	Living Wall	NA
WS-HM-08A	Glazing	Yes	M	Category II	ND	SE Bedroom	NA
WS-HM-08B	Glazing	Yes	M	Category II	ND	Center Bedroom	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, 2225 Wood 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					

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, 2225 Wood 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 27, 2016

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

2232 Riordan St. Muskegon MI 49444 Parcel ID: 61-26-185-063-0016-00

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 2232 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 a 400 sq. ft. detached garage and approximate 1,788 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 living room, dining room, kitchen, bath, and rear entry on the first floor while the second floor contains two bedrooms.

VISUAL INSPECTION AND SAMPLING

Asbestos Containing Materials Inspection

Mr. Aaron Paquet of Red Cedar Consulting (Red Cedar), an accredited State Of Michigan/EPA Asbestos Building Inspector (Accreditation Number A30955) whom completed training per the Michigan Asbestos

Project No.: 16-1070 Muskegon County Land Bank Parcel ID: 61-26-185-063-0016-00

Workers Accreditation Act 440 completed an inspection of the Subject Property on May 14, 2016 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
- Rolled Roofing
- Fiber Lap Siding
- Linoleum
- 1'x1' Ceiling Tile
- 2'x4' Ceiling Tile
- 12"x12" Vinyl Tile
- 9"x9" Vinyl Tile
- 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: 61-26-185-063-0016-00

Hazardous Materials Inspection

On May 14, 2016 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: 61-26-185-063-0016-00

Friable ACM's

A window glazing sample collected from a window in the Rear Porch 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:

• Rear Porch (9 windows 28" wide x 48" 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:

- Front Entry (1 register, 10 sq. ft.)
- Living (1 register, 10 sq. ft.)
- Dining (1 register, 10 sq. ft.)
- Kitchen (1 register, 10 sq. ft.)
- N Bedroom (1 register, 10 sq. ft.)
- 2nd Fl. W Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- 2nd Fl. N Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- 2nd Fl. S Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- Basement (misc. HVAC wrap on Ductwork, 20 sq. ft.)

Category I ACM

Six types of resilient floor covering (White 12"x12" Vinyl Tile, Tan Linoleum, Beige 12"x12" Vinyl Tile, Stone Linoleum, Paisley Linoleum, Brown Linoleum) located within the Front Entry, Living Room, Kitchen, Bathroom, N Bedroom, Front Entry, 2nd Fl. W Bedroom and 2nd Fl. Closet were found to contain up to 30% Chrysotile asbestos. The assessment to quantify the extent of this material identified approximately 1,092 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.

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

Muskegon County Land Bank Parcel ID: 61-26-185-063-0016-00

- N Bedroom (1 register, 10 sq. ft.)
- 2nd Fl. W Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- 2nd Fl. N Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- 2nd Fl. S Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- Basement (misc. HVAC wrap on Ductwork, 20 sq. ft.)

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:

• Rear Porch (9 windows 28" wide x 48" 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 (White 12"x12" Vinyl Tile, Tan Linoleum, Beige 12"x12" Vinyl Tile, Stone Linoleum, Paisley Linoleum, Brown 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.

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) (3)
- 4' Fluorescent Bulb (6)
- Car (2)
- Automobile Tire (2)
- Thermostat (2)
- Television (3)
- 5 Gallon Container Misc. Paint (1)
- Gallon Container Misc. Paint (32)
- 5 Gallon Container Misc. Roof Cement (1)
- Quart Solvent (1)
- Car Battery (1)
- Spray Can Misc. Paint (14)
- Quart Container Oil (3)
- Propane Cylinder (1)
- Gallon Container Fuel (2)

Muskegon County Land Bank Parcel ID: 61-26-185-063-0016-00

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: 61-26-185-063-0016-00

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

(Laron Pogwet

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: 2232 Riordan St.

Report To:

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

ARI Report #

16-64888

Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/24/16

Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

No Asbestos Observed

Non-Asbestos

Lab ID #: 64888 - 01

Cust. #: RN-HM-01A

Material: Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 2

Lab ID #: 64888 - 01a

Cust. #: RN-HM-01A

Material: Tarp Paper

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 2

Lab ID #: 64888 - 02

Cust. #: RN-HM-01B

Material: Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 2

Asbestos Present: **NO**

Cellulose - 40%

Other - 60%

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 50%

Other - 50%

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: 2232 Riordan St.

Report To:

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

ARI Report # 16-64888

Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/24/16

Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 50%

Other - 50%

Lab ID #: 64888 - 02a

Cust. #: RN-HM-01B

Material: Tarp Paper

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 2

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 40%

Other - 60%

Material: Rolled Roofing

Lab ID #: 64888 - 03

Cust. #: RN-HM-02A

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 4

Lab ID #: 64888 - 03a

Cust. #: RN-HM-02A

Material: Black Roofing

Location:

Appearance: black,fibrous,homogenous

Layer: 2 of 4

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: 2232 Riordan St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64888

Date Collected: 05/14/16 Date Received: 05/17/16 Date Analyzed: 05/24/16

Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 40%

Other - 60%

Lab ID #: 64888 - 03b

Cust. #: RN-HM-02A

Material: Green Roofing

Location:

Appearance: black, fibrous, homogenous

Layer: 3 of 4

Lab ID #: 64888 - 03c

Cust. #: RN-HM-02A

Material: Red Roofing

Asbestos Present: NO

in. 110

Cellulose - 40%

No Asbestos Observed

Other - 60%

Location:

Location.

Appearance: black, fibrous, homogenous

Layer: 4 of 4

Lab ID #: 64888 - 04

Cust. #: RN-HM-02B

Material: Rolled Roofing

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 4

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: 2232 Riordan St.

Report To:

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

ARI Report # 16-64888

Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/24/16

Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 40%

Other - 60%

Lab ID #: 64888 - 04a

Cust. #: RN-HM-02B

Material: Black Roofing

Location:

Appearance: black,fibrous,homogenous

Layer: 2 of 4

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 40%

Other - 60%

Material: Green Roofing

Lab ID #: 64888 - 04b

Cust. #: RN-HM-02B

Location:

Appearance: black, fibrous, homogenous

Layer: 3 of 4

Asbestos Present: NO

No Asbestos Observed

Cellulose - 40%

Other - 60%

Cust. #: RN-HM-02B

Material: Red Roofing

Lab ID #: 64888 - 04c

Location:

Appearance: black,fibrous,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: 2232 Riordan St.

Report To:

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

ARI Report # 16-64888

Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/24/16

Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Asbestos Present: YES

Asbestos Present: YES

Chrysotile - 5%

Non-Asbestos

Other - 95%

Other - 95%

Lab ID #: 64888 - 05

Cust. #: RN-HM-03A

Material: White 12x12 Ceiling Tile/Floor Tile

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 2

Lab ID #: 64888 - 05a

Cust. #: RN-HM-03A

Material: Mastic

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 64888 - 06

Asbestos Present:

Chrysotile - 5%

Cust. #: RN-HM-03B

Material: White 12x12 CT/Floor Tile/Mastic

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

Location:

NOT ANALYZED

Appearance:

Layer: of

Robert T. Letarte Jr., Laboratory Director

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Test Method, Polarized Light Microscopy (PLM)

Project: 2232 Riordan St.

Report To:

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

ARI Report # 16-64888

Date Collected: 05/14/16 Date Received: 05/17/16 Date Analyzed: 05/24/16

Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 40%

Other - 60%

Lab ID #: 64888 - 07

Cust. #: RN-HM-04A

Material: Tan Linoleum

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 3

Asbestos Present: YES Chrysotile - 30%

Other - 70%

Lab ID #: 64888 - 07a Cust. #: RN-HM-04A

Material: Beige Linoleum

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 3

Lab ID #: 64888 - 07b

Cust. #: RN-HM-04A

Material: Tar Paper

Location:

Appearance: black,fibrous,homogenous

Layer: 3 of 3

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: 2232 Riordan St.

Report To:

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

ARI Report #

16-64888

Date Collected: 05/14/16

Date Received: 05/17/16

Date Analyzed: 05/24/16

Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 40%

Other - 60%

Lab ID #: 64888 - 08

Cust. #: RN-HM-04B

Material: Tan Linoleum

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 3

Lab ID #: 64888 - 08a

Cust. #: RN-HM-04B Material: Beige Linoleum

Location:

Appearance:

Layer: 2 of 3

Asbestos Present:

NOT ANALYZED

Lab ID #: 64888 - 08b

Cust. #: RN-HM-04B

Material: Tar Paper

Location:

Appearance: black,fibrous,homogenous

Layer: 3 of 3

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: 2232 Riordan St.

Report To:

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

ARI Report # 16-64888

Date Collected: 05/14/16 Date Received: 05/17/16 Date Analyzed: 05/24/16

Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Asbestos Present: YES

Chrysotile - 5%

Non-Asbestos

Other - 95%

Lab ID #: 64888 - 09

Cust. #: RN-HM-05A

Material: Beige 12x12 Vinyl Tile

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 2

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Lab ID #: 64888 - 09a Cust. #: RN-HM-05A

Material: Glue

Location:

Appearance: yellow,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 64888 - 10

Asbestos Present:

Cust. #: RN-HM-05B

Material: Beige 12x12 Vinyl Tile

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

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Test Method, Polarized Light Microscopy (PLM)

Project: 2232 Riordan St.

Report To:

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

ARI Report #

16-64888

Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/24/16

Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64888 - 10a

Cust. #: RN-HM-05B

Material: Glue

Location:

Appearance: yellow,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 64888 - 11

Cust. #: RN-HM-06A

Material: Stone Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 2

Lab ID #: 64888 - 11a

Cust. #: RN-HM-06A

Material: Grey Sheet Flooring

Location:

Appearance: grey,fibrous,nonhomogenous

Layer: 2 of 2

Asbestos Present: **NO**

Other - 100%

Cellulose - 5%

Other - 85%

Fiberglass - 10%

Cellulose - 40%

Other - 60%

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: 2232 Riordan St.

Report To:

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

ARI Report #

16-64888

Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/24/16 Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 5%

Fiberglass - 10% Other - 85%

Lab ID #: 64888 - 12

Cust. #: RN-HM-06B

Material: Stone Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 2

Cellulose - 40%

Cust. #: RN-HM-06B

Lab ID #: 64888 - 12a

Material: Grey Sheet Flooring

Location:

Appearance: grey,fibrous,nonhomogenous

Layer: 2 of 2

Lab ID #: 64888 - 13

Cust. #: RN-HM-07A

Material: Paisley Linoleum

Location:

Appearance: grey,fibrous,nonhomogenous

Layer: 1 of 1

Asbestos Present: **NO**

No Asbestos Observed

Other - 60%

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: 2232 Riordan St.

Report To:

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

ARI Report # 16-64888

Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/24/16 Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

Asbestos Present: YES

Chrysotile - 30%

No Asbestos Observed

Non-Asbestos

Cellulose - 50%

Other - 50%

Other - 70%

Lab ID #: 64888 - 14

Cust. #: RN-HM-07B

Material: Paisley Linoleum

Location:

Appearance: grey,fibrous,nonhomogenous

Layer: 1 of 1

Lab ID #: 64888 - 15

Cust. #: RN-HM-08A

Material: Brown Linoleum

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 64888 - 16

Asbestos Present:

Cust. #: RN-HM-08B

Material: Brown Linoleum Location:

Appearance:

NOT ANALYZED

Layer: of

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: 2232 Riordan St.

Report To:

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

ARI Report #

16-64888

Date Collected: 05/14/16

Date Received: 05/17/16 Date Analyzed: 05/24/16

Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

No Asbestos Observed

Non-Asbestos

Lab ID #: 64888 - 17

Cust. #: RN-HM-09A

Material: Fiberlap Siding

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64888 - 18

Cust. #: RN-HM-09B

Material: Fiberlap Siding

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64888 - 19

Cust. #: RN-HM-10A

Material: White 2x4 Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO**

Cellulose - 70%

Other - 30%

Asbestos Present: **NO** No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Cellulose - 70%

Cellulose - 80%

Other - 20%

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: 2232 Riordan St.

Report To:

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

ARI Report #

16-64888

Date Collected: 05/14/16 Date Received: 05/17/16

Date Reported: 05/24/16

Date Analyzed: 05/24/16

Sample Information

Asbestos Type/Percent

No Asbestos Observed

Non-Asbestos

Lab ID #: 64888 - 20

Cust. #: RN-HM-10B

Material: White 2x4 Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64888 - 21

Cust. #: RN-HM-11A

Material: Glazing

Location:

Appearance: beige, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 64888 - 22

Cust. #: RN-HM-11B

Material: Glazing

Location:

Appearance: beige, nonfibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

Cellulose - 80%

Other - 20%

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 1%

Other - 99%

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: 2232 Riordan St.

Report To:

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

Lansing, MI 48901

ARI Report # 16-64888

Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/24/16 Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Asbestos Present: YES

Non-Asbestos

Other - 95%

Lab ID #: 64888 - 23

Cust. #: RN-HM-12A

Material: Glazing

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64888 - 24

Cust. #: RN-HM-12B Material: Glazing

Location:

Appearance:

Layer:

Asbestos Present:

Chrysotile - 5%

NOT ANALYZED

Asbestos Present: YES

Chrysotile - 30%

Lab ID #: 64888 - 25

Cust. #: RN-HM-13A

Material: Brown 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

Other - 70%

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Test Method, Polarized Light Microscopy (PLM)

Project: 2232 Riordan St.

Report To:

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

Lansing, MI 48901

ARI Report # 16-64888

Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/24/16

Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Other - 70%

Lab ID #: 64888 - 26

Cust. #: RN-HM-13B

Material: Brown Linoleum

Location:

NOT ANALYZED

Asbestos Present: YES

Asbestos Present:

Appearance: Layer: of

Lab ID #: 64888 - 27

Cust. #: RN-HM-14A

Material: Stone Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 64888 - 28

Asbestos Present:

Chrysotile - 30%

Cust. #: RN-HM-14B

Material: Stone Linoleum Location:

Appearance:

NOT ANALYZED

Layer: of

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: 2232 Riordan St.

Report To:

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

ARI Report # 16-64888

Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/24/16 Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Lab ID #: 64888 - 29

Cust. #: RN-HM-15A

Material: Red/Beige Linoleum

Location:

Appearance: red,fibrous,nonhomogenous

Layer: 1 of 1

Lab ID #: 64888 - 30

Cust. #: RN-HM-15B

Material: Red/Beige Linoleum

Location:

Appearance: red,fibrous,nonhomogenous

Layer: 1 of 1

Lab ID #: 64888 - 31

Cust. #: RN-HM-16A

Material: Floral Linoleum

Location:

Appearance: brown, fibrous, nonhomogenous

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

Layer: 1 of 1

Non-Asbestos

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO**

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

Cellulose - 50%

Cellulose - 50% Other - 50%

Cellulose - 50%

Other - 50%

Other - 50%

Robert T. Letarte Jr., Laboratory Director

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Test Method, Polarized Light Microscopy (PLM)

Project: 2232 Riordan St.

Report To:

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

ARI Report #

16-64888

Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/24/16 Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64888 - 32

Cust. #: RN-HM-16B

Material: Floral Linoleum

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 64888 - 33

Cust. #: RN-HM-17A

Material: White 1x1 Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64888 - 34

Cust. #: RN-HM-17B

Material: White 1x1 Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

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 - 70%

Cellulose - 80%

Other - 20%

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: 2232 Riordan St.

Report To:

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ARI Report # 16-64888

Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/24/16 Date Reported: 05/24/16

Sample Information

Non-Asbestos

Other - 100%

Lab ID #: 64888 - 35

Cust. #: RN-HS-01A

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 64888 - 35a

Cust. #: RN-HS-01A

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Lab ID #: 64888 - 36

Cust. #: RN-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

Asbestos Present: NO

No Asbestos Observed

Hair - 5%

Other - 95%

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: 2232 Riordan St.

Report To:

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

ARI Report #

16-64888

Date Collected: 05/14/16

Date Received: 05/17/16

Date Analyzed: 05/24/16

Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64888 - 36a

Cust. #: RN-HS-01B

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Lab ID #: 64888 - 37

Cust. #: RN-HS-01C

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 64888 - 37a

Cust. #: RN-HS-01C

Material: Plaster Base Coat

Location:

Appearance: grey, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

Hair - 5%

No Asbestos Observed

Other - 95%

Other - 100%

Asbestos Present: **NO**

No Asbestos Observed

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

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Test Method, Polarized Light Microscopy (PLM)

Project: 2232 Riordan St.

Report To:

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

ARI Report # 16-64888

Date Collected: 05/14/16 Date Received: 05/17/16 Date Analyzed: 05/24/16

Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Other - 100%

Lab ID #: 64888 - 38

Cust. #: RN-HS-01AD

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 64888 - 38a

Cust. #: RN-HS-01D

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Lab ID #: 64888 - 39

Cust. #: RN-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

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: 2232 Riordan St.

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

ARI Report # 16-64888

Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/24/16 Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64888 - 39a Cust. #: RN-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:

Layer:

Appearance:

of

No Asbestos Observed

Asbestos Present: NO

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

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64888

AFEX 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	1 of 4

	Date:		5-17-16 MAY 1 7 Date 16	Date: 322pm 5-17	Date : 3:	Date: 5-17-16
	Received by:		Reinfulshed by:	Received by: KLAK	Received	Relinquished by:
			Lineleum		RU-42-664	(1)
			12×12 VinylTile	Baine 12	RU HM 05B	ıo
			Beige 17×12 Ging/ Tike	Baine 120	Ru Hm-05A	-0
			when	Tan Lindeum	EHO-MA-OHB	O)
			leur	Tan Lind eur	RD-1+m-04A	7
			white 12x12 Cedling the	white 12	Pu-Hm-asis	6
			white 12×12 coiling Tibe	White 12	RU-HM-03A	S
			Restur	Rolling Roafin	Rugernoth US	
			agling.	Polled Roafin	アルーハナーロスト	w
				Shingle	RU-MM-OLB	N
				Shinsle	RU-HM-OLA	
Results	Area	Volume	Material/Location	M	Client ID#	Lab ID #
	vel II	IOB EPA Level II	AHERA 7400 Bulk/NOB	Except Plaster TEM:	(IIP)All Samples Except	Other: Y D
ile	Other Viable	BioSIS	BulkTape	Mold:		_
ļ	t Soil	Air Paint	Bulk Wipe	Lead:		Ĕ
	PCM	_ Point Count	os: Bulk X Wipe	Asbestos: Bulk		Rush 24 hour
sulting.net	etection of <5	apaquet@redcedarconsulting.net all samples with a detection of <5% ACM.	PLM EPA 600, PC all s	(Circle One)	Around Times: (Circle One)	Turn Arou
	Paquet	Contact Person: Aaron	-8739	Fax: (888) 448	6	Phone: (888) 449-456
		•	Project # :	1	Lansing, MI 48901	City, St., Zip:
Report	Riordanst.	1	Project		PO Box 13216	Address:
Lab Use Only Log-In	5-14-16	Date of Survey:\$_/	Date of	ing	Red Cedar Consulting	Client Name: _R

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

Date: 5-17-16	Relinquished by:	46	5	9	5	05	ニ	2	5	- 2	ل	12	Lab ID #			48 hour 72 hour	Rush 24 hour	Turn Arou	Phone: (888) 44	City, St., Zip:	Address: _	Client Name:
Date:	Received by:	RU-HM-113	All-my MA	BN-Hm-1015	Ru-Hm-10A	RN-Hm-09B	RW WM-09A	12W/Jun-08B	#80. WH-MJ	PW/HM-075	RU-1/11-07A	RN-HM-06B	Client ID#	Except				Around Times: (Circle One)	(888) 449-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
MAY 1 7 2016 Date	minte	Clazin	3	white gry coding tile	white 2x4 caling Tik	Fibertas Sisting	fibertas Sodin	Brown Lindreum	11	Parsley Lindeum	Paisley Lindeum	Stone Linoleum	Material/Location	xcept Plaster TEM: AHERA 7400	Mold: Bulk	Lead: Bulk W	i	PLM EPA	X: (888) 448-8739			ing
Ċ.	Relinquished by:			the									n Volume	Bulk/NOB EPA Level II	Tape BioSIS	Wipe Air Paint	Wipe Point Count	C all samples	Contact Person: Aaron	1	18	Date of Survey: 5-1
Date:	Received by:												Area	evel II	Other Viable	nt Soil	PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	Paquet		Rips an St.	5-14-6
													Results			•		llting.net ACM.			Report	Lab Use Only Log-In

Rev: 12/03 Work Forms: COC

ASEX RESEMBLES



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: Relinq		33 RU-HM-17A	32 Proffung	30 RW -1158	13-my-43	20 RW-148	27 RUNNINA	25 720-11m-15 A	21-m-128	23 RU THU-124	Lab ID # Client ID #		Other: (TTP) All Sa	48 hour 72 hour	Rush 24 hour			Phone: (888) 449-4566	City, St., Zip: Lansing, MI	Address: PO Box 13216	Client Name: Red Cedar Consulting
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	Received by:										Volume Area	Bulk/NOB EPA Level II	BioSIS Other Viable	Air Paint Soil	Four Count FCM	Doint Count BCM Point Count BCM	apaquet@redcedarconsulting.net	Contact Person: Aaron Paquet		j.	Date of Survey: 5-14-6
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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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	-	_

Client Name: Red Cedar Consulting Address: PO Box 13216 Project: 2732 Plansing, MI 48901 Project: 3732 Contact Person: Aaxon Baquet Ashor: (B88) 449-4566 FAX: (B88) 449-8739 Contact Person: Aaxon Baquet Asheros: Bulk Wipe Point Count PCM Asheros: Bulk Wipe Air Paint Scill Asheros: Bulk Wipe BioSIS Other Viable Other: 4 Day (TTP) All Samples Except Plaster TEM: AHERA 7400 Bulk NOB EPA Level II Lab ID # Client ID # Material/Location Volume Area Results 37 Ran-175 White Lat Calling Tile 38 Ran-145-26 Approved Approved Area Results PCM Approved Area Results
Survey: 5-14-16 2732 Profile Person: Aaron Paquet apaquet@redce amples with a detectior Point Count Paint BioSIS Other B EPA Level II Volume Area Volume Area

Rev: 12/03 Work Forms: COC

POR PROBABLE

Red Cedar Consulting

Tables

Table 1 - Summary of Hazardous Materials, 2232 Riordan St., Muskegon Heights, Michigan

	Hazardous Materials Description and Location	
Location	Material Description	Quantity
Garage	4' Fluorescent Bulb (Fixture and Ballast Only)	2
Garage	4' Fluorescent Bulb	4
Garage	Car	2
Garage	Automobile Tire	2
Living Room	Thermostat	1
Front Entry	Thermostat	1
Bathroom	4' Fluorescent Bulb (Fixture and Ballast Only)	1
Bathroom	4' Fluorescent Bulb	2
Dining	Television	1
Front Porch	5 Gallon Container Misc. Paint	1
Rear Entry	Gallon Container Misc. Paint	2
Stairwell	Television	2
Rear Entry	5-Gallon Container Misc. Roof Cement	1
Basement	Quart Container Misc. Solvent	1
Basement	Car Battery	1
Basement	Spray Can Misc. Paint	14
Basement	Quart Container Misc. Oil	3
Basement	Gallon Container Misc. Paint	3
Basement	Propane Cylinder	1
Basement	Gallon Container Misc. Paint	27
Basement	Gallon Container Fuel	2

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2232 Riordan St., Muskegon Heights, Michigan

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
RN-HM-01A	Asphalt Shingle	No	M	Category I	ND/ND	Exterior	NA
RN-HM-01B	Asphalt Shingle	No	M	Category I	ND/ND	Exterior	NA
RN-HM-02A	Rolled Roofing	Yes	M	Category II	ND/ND/ND/ND	Exterior	NA
RN-HM-02B	Rolled Roofing	Yes	M	Category II	ND/ND/ND/ND	Exterior	NA
RN-HM-03A	White 12x12 Vinyl Tile	No	M	Category I	5%/5%	Front Entry	216 sq. ft.
RN-HM-03B	White 12x12 Vinyl Tile	No	M	Category I	NA	Front Entry	NA
RN-HM-04A	Tan Linoleum	No	M	Category I	ND/30%/ND	Living	360 sq. ft.
RN-HM-04B	Tan Linoleum	No	M	Category I	NA	Living	NA
RN-HM-05A	Beige 12x12 Vinyl Tile	No	M	Category I	5%/ND	Kitchen	204 sq. ft.
RN-HM-05B	Beige 12x12 Vinyl Tile	No	M	Category I	NA	Kitchen	NA
RN-HM-06A	Stone Linoleum	No	M	Category I	ND/ND	Bathroom	NA
RN-HM-06B	Stone Linoleum	No	M	Category I	ND/ND	Bathroom	NA
RN-HM-07A	Paisley Linoleum	No	M	Category I	ND	1st Fl. North Bedroom	NA
RN-HM-07B	Paisley Linoleum	No	M	Category I	ND	1st Fl. North Bedroom	NA
RN-HM-08A	Brown Linoleum	No	M	Category I	30%	Front Entry	99 sq. ft.
.RN-HM-08B	Brown Linoleum	No	M	Category I	NA	Front Entry	NA
RN-HM-09A	Fiber Lap Siding	Yes	M	Category II	ND	Exterior	NA
RN-HM-09B	Fiber Lap Siding	Yes	M	Category II	ND	Exterior	NA
RN-HM-10A	White 2'x4' Ceiling Tile	Yes	M	Category II	ND	Bathroom	NA
RN-HM-10B	White 2'x4' Ceiling Tile	Yes	M	Category II	ND	Bathroom	NA
RN-HM-11A	Glazing	Yes	M	Category II	ND	Bedroom Window	NA
RN-HM-11B	Glazing	Yes	M	Category II	ND	Bedroom Window	NA
RN-HM-12A	Glazing	Yes	M	Category II	5%	Rear Porch	9 Windows
RN-HM-12B	Glazing	Yes	M	Category II	NA	Rear Porch	NA
RN-HM-13A	Brown Linoleum	No	M	Category I	30%	2 nd Fl. West Bedroom	108 sq. ft.
RN-HM-13B	Brown Linoleum	No	M	Category I	NA	2 nd Fl. West Bedroom	NA
RN-HM-14A	Stone Linoleum	No	M	Category I	30%	2 nd Fl. N Bedroom	105 sq. ft.
RN-HM-14B	Stone Linoleum	No	M	Category I	NA	2 nd Fl. N Bedroom	NA

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2232 Riordan St., Muskegon Heights, Michigan

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
RN-HM-15A	Red/Beige Linoleum	No	M	Category I	ND	2 nd Fl. S Bedroom	NA
RN-HM-15B	Red/Beige Linoleum	No	M	Category I	ND	2 nd Fl. S Bedroom	NA
RN-HM-16A	Floral Linoleum	No	M	Category I	ND	Attic	NA
RN-HM-16B	Floral Linoleum	No	M	Category I	ND	Attic	NA
RN-HM-17A	White 1'x1' Ceiling Tile	Yes	M	Category II	ND	2 nd Fl. Hall	NA
RN-HM-17B	White 1'x1' Ceiling Tile	Yes	M	Category II	ND	2 nd Fl. Hall	NA
RN-HS-01A	Plaster	No	S	Category II	ND/ND	Living Room Wall	NA
RN-HS-01B	Plaster	No	S	Category II	ND/ND	Bedroom Wall	NA
RN-HS-01C	Plaster	No	S	Category II	ND/ND	Dining Room	NA
RN-HS-01D	Plaster	No	S	Category II	ND/ND	2 nd Fl. South Bedroom Wall	NA
RN-HS-01E	Plaster	No	S	Category II	ND/ND	2 nd Fl. North Bedroom Ceiling	NA

Notes:

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, 2232 Riordan St., Muskegon Heights, Michigan

	Asbestos Containing Material Description a	nd Location			
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity
Front Entry (1 register, 10 sq. ft.) Living (1 register, 10 sq. ft.) Dining (1 register, 10 sq. ft.) Kitchen (1 register, 10 sq. ft.) N Bedroom (1 register, 10 sq. ft.) 2 nd Fl. W Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) 2 nd Fl. N Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) 2 nd Fl. S Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) 2 nd Fl. S Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) Basement (misc. HVAC wrap on Ductwork, 20 sq. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	175 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, 2232 Riordan St., Muskegon Heights, Michigan

Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Front Entry	White 12"x12" Vinyl Tile		No	216 sq. ft.
Living	Tan Linoleum		No	180 sq. ft.
Dining	Tan Linoleum		No	180 sq. ft.
Kitchen	Beige 12"x12" Vinyl Tile		No	204 sq. ft.
Front Entry	Brown Linoleum		No	99 sq. ft.
2 nd Fl. W Bedroom	Brown Linoleum		No	108 sq. ft.
2 nd Fl. N Bedroom Closet	Stone Linoleum		No	35 sq. ft.
Bathroom	Stone Linoleum		No	70 sq. ft.
		Total		1,092 sq. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Front Entry (1 register, 10 sq. ft.) Living (1 register, 10 sq. ft.) Dining (1 register, 10 sq. ft.) Kitchen (1 register, 10 sq. ft.) N Bedroom (1 register, 10 sq. ft.) 2nd Fl. W Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) 2nd Fl. N Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) 2nd Fl. S Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) 2nd Fl. S Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) Basement (misc. HVAC wrap on Ductwork, 20 sq. ft.)	HVAC Duct Wrap		Yes	175 sq. ft.
		Total		175 sq. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Rear Porch (9 windows 28" wide x 48" tall)	Glazing		Yes	9 Windows
		Total		9 Windows

Notes:
Abbreviations

Table 4 - Summary of All Asbestos Containing Materials, 2232 Riordan 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 27, 2016

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 2305 Baker St., Muskegon Heights, MI 49444

Parcel ID: 61-26-185-096-0002-00

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 2305 Baker 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 1,378 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 and stucco while the roof was sealed with asphalt shingles. The Building can be further divided into a living room, dining room, kitchen, bath, and front entry on the first floor while the second floor contains two bedrooms.

VISUAL INSPECTION AND SAMPLING

Asbestos Containing Materials Inspection

Mr. Aaron Paquet of Red Cedar Consulting (Red Cedar), an accredited State Of Michigan/EPA Asbestos Building Inspector (Accreditation Number A30955) whom completed training per the Michigan Asbestos

Muskegon County Land Bank Parcel ID: *61-26-185-096-0002-00*

Workers Accreditation Act 440 completed an inspection of the Subject Property on May 22, 2016 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
- Linoleum
- 12"x12" Vinyl Tile
- 9"x9" Vinyl Tile
- Glazing
- Plaster
- Stucco

Red Cedar staff collected twenty-two 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-two samples is included as Attachment A.

Muskegon County Land Bank Parcel ID: 61-26-185-096-0002-00

Hazardous Materials Inspection

On May 22, 2016 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.

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: 61-26-185-096-0002-00

Friable ACM's

A window glazing sample collected from a window in the Front Entry was found to contain up to 1.25% asbestos following analysis. The assessment to quantify the extent of this material identified nineteen windows at the following locations that would fall into the same homogenous group. The locations of the windows are listed below:

- Front Entry (5 windows 20" wide x 44" tall)
- Living (6 windows 20" wide x 44" tall)
- Bedroom (2 windows 32" wide x 60" tall)
- Rear Entry (2 windows 24" wide x 36" tall)
- 2nd Fl. E Bedroom (2 windows 16" wide x 56" tall)
- 2nd Fl. E Bedroom (1 window 30" wide x 56" tall)
- 2nd Fl. Bathroom (1 window 28" wide x 28" 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:

• Basement (misc. HVAC Tape on Cold Air Ductwork, 15 sq. ft.)

Category I ACM

Two types of resilient floor covering (Red/Blue Linoleum and 9"x9" Tan Vinyl Floor Tile) located within the dining room and 2^{nd} floor were found to contain up to 30% Chrysotile asbestos. The assessment to quantify the extent of this material identified approximately 644 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 Tape on Cold Air Ductwork, 15 sq. ft.)

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

- Front Entry (5 windows 20" wide x 44" tall)
- Living (6 windows 20" wide x 44" tall)

Muskegon County Land Bank Parcel ID: 61-26-185-096-0002-00

- Bedroom (2 windows 32" wide x 60" tall)
- Rear Entry (2 windows 24" wide x 36" tall)
- 2nd Fl. E Bedroom (2 windows 16" wide x 56" tall)
- 2nd Fl. E Bedroom (1 window 30" wide x 56" tall)
- 2nd Fl. Bathroom (1 window 28" wide x 28" 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 (Red/Blue Linoleum and 9"x9" Tan 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 (4)
- Automobile Tire (3)
- 4' Fluorescent Light (Fixture and Ballast Only) (1)
- 4' Fluorescent Bulb (1)

REGULATORY REQUIREMENTS

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

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

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

- Friable asbestos material.
- Category I non-friable ACM that has become friable.

Muskegon County Land Bank Parcel ID: *61-26-185-096-0002-00*

- 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

Rain 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: 2305 Baker St.

Report To:

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

ARI Report # 16-65033 Date Collected: 05/22/16

Date Received: 05/23/16 Date Analyzed: 05/24/16

Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 30%

Other - 70%

Lab ID #: 65033 - 01

Cust. #: BS-HM-01A

Material: Asphalt Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 1

Lab ID #: 65033 - 02

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 30%

Other - 70%

Other - 100%

Cust. #: BS-HM-01B

Material: Asphalt Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Lab ID #: 65033 - 03 Cust. #: BS-HM-02A

Material: Unknown 12x12 Vinyl Tile

Location:

Appearance: yellow,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: 2305 Baker St.

Report To:

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

ARI Report # 16-65033

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/24/16 Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Other - 100%

Other - 100%

Lab ID #: 65033 - 04

Cust. #: BS-HM-02B

Material: Unknown 12x12 Vinyl Tile

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 1 of 1

Asbestos Present: NO

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

Lab ID #: 65033 - 05

Cust. #: BS-HM-03A

Material: Brown 12x12 Vinyl Tile

Location:

Appearance: beige, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 65033 - 06

Cust. #: BS-HM-03B

Material: Brown 12x12 Vinyl Tile

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 1 of 1

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: 2305 Baker St.

Report To:

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

ARI Report # 16-65033

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/24/16 Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Asbestos Present: YES

Chrysotile - 30%

Non-Asbestos

Other - 70%

Lab ID #: 65033 - 07

Cust. #: BS-HM-04A

Material: Red/Blue Linoleum

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Lab ID #: 65033 - 08

Cust. #: BS-HM-04B

Material: Red/Blue Linoleum

of

Location:

Appearance:

Layer:

NOT ANALYZED

Asbestos Present: NO

No Asbestos Observed

Asbestos Present:

Lab ID #: 65033 - 09

Cust. #: BS-HM-05A

Material: Beige Linoleum 2 Layer/Tile

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: 2305 Baker St.

Report To:

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

ARI Report #

16-65033

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/24/16 Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65033 - 09a

Cust. #: BS-HM-05A

Material: Beige Linoleum 2 Layer

Location:

Appearance: beige, nonfibrous, homogenous

Layer: 2 of 2

Asbestos Present: **NO**

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Other - 100%

Lab ID #: 65033 - 10

Cust. #: BS-HM-05B

Material: Beige Linoleum 2 Layer/Tile

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 65033 - 10a

Cust. #: BS-HM-05B

Material: Beige Linoleum 2 Layer

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Cellulose - 20%

Other - 80%

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

Robert T. Letarte Jr., Laboratory Director

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



Test Method, Polarized Light Microscopy (PLM)

Project: 2305 Baker St.

Report To:

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

ARI Report #

16-65033 Date Collected: 05/22/16

Date Received: 05/23/16

Date Analyzed: 05/24/16

Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Other - 98.75%

Lab ID #: 65033 - 11

Cust. #: BS-HM-06A

Material: Glazing

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 65033 - 12

Cust. #: BS-HM-06B Material: Glazing

Location:

Appearance:

Layer:

Asbestos Present: YES

Chrysotile - 1.25%

POINT COUNT RESULT

Asbestos Present:

NOT ANALYZED

Asbestos Present: YES

Chrysotile - 5%

Lab ID #: 65033 - 13

Cust. #: BS-HM-07A

Material: Tan 9x9 Vinyl 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

Other - 95%

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Test Method, Polarized Light Microscopy (PLM)

Project: 2305 Baker St.

Report To:

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

Lansing, MI 48901

ARI Report # 16-65033

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/24/16

Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65033 - 14

Cust. #: BS-HM-07B

Material: Tan 9x9 Vinyl Tile

Location:

Appearance:

Layer:

of

NOT ANALYZED

Asbestos Present:

Lab ID #: 65033 - 15

Cust. #: BS-HS-01A

Material: Plaster/Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 65033 - 15a

Cust. #: BS-HS-01A

Material: Plaster

Location:

Appearance: white, fibrous, homogenous

Asbestos Present: NO

Asbestos Present: **NO**

No Asbestos Observed

No Asbestos Observed

Cellulose - 2%

Other - 100%

Other - 98%

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: 2305 Baker St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-65033

Date Collected: 05/22/16 Date Received: 05/23/16 Date Analyzed: 05/24/16

Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 65033 - 16

Cust. #: BS-HS-01B

Material: Plaster

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: **NO**No Asbestos Observed

Other - 100%

Other - 100%

Lab ID #: 65033 - 16a Cust. #: BS-HS-01B

Material: Mortar

Location:

Location.

Appearance: grey,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 65033 - 17

Cust. #: BS-HS-01C

Material: Plaster

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: 2305 Baker St.

Report To:

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

Lansing, MI 48901

ARI Report # 16-65033

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/24/16

Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 65033 - 17a

Cust. #: BS-HS-01C

Material: Mortar

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 2 of 2

Asbestos Present: **NO**

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Other - 100%

Lab ID #: 65033 - 18 Cust. #: BS-HS-01D

Material: Plaster

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 65033 - 18a

Cust. #: BS-HS-01D

Material: Mortar

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: 2305 Baker St.

Report To:

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

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%

Cellulose - 2%

Other - 98%

Other - 100%

ARI Report #

Date Collected: 05/22/16

Date Received: 05/23/16

Date Analyzed: 05/24/16

Date Reported: 05/24/16

16-65033

Lab ID #: 65033 - 19

Cust. #: BS-HS-01E

Material: Plaster

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 65033 - 19a

Cust. #: BS-HS-01E

Material: Mortar

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Lab ID #: 65033 - 20

Cust. #: BS-HS-02A

Material: Plaster/Stucco

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: 2305 Baker St.

Report To:

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

ARI Report # 16-65033

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/24/16 Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65033 - 20a

Cust. #: BS-HS-02A

Material: Stucco

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 2 of 2

Asbestos Present: **NO** No Asbestos Observed

Asbestos Present: **NO**

No Asbestos Observed

Other - 100%

Other - 100%

Lab ID #: 65033 - 21

Cust. #: BS-HS-02B

Material: Plaster/Stucco

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 65033 - 21a

Cust. #: BS-HS-02B

Material: Mortar/Stucco

Location:

Appearance: grey,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

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 2305 Baker St.

Report To:

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

ARI Report # 16-65033 Date Collected: 05/22/16

Date Received: 05/23/16 Date Analyzed: 05/24/16 Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65033 - 22

Cust. #: BS-HS-02C

Asbestos Present: **NO** No Asbestos Observed

Asbestos Present: **NO**

No Asbestos Observed

Other - 100%

Other - 100%

Material: Plaster/Stucco

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 65033 - 22a

Cust. #: BS-HS-02C

Material: Mortar/Stucco

Location:

Appearance: grey,nonfibrous,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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65033

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

,	Contact Person: Aaron Paguet	$\mathbf{H}_{\mathbf{A}\mathbf{X}}$: (888) 448-8739
	Project #:	Lansing, MI 48901
Report	Project: 2305 Baker St.	PO Box 13216
Lab Use Only Log-In	Date of Survey: 5.22.16	Red Cedar Consulting

Phone:

(888)449-4566

City, St., Zip:

Address:

Client Name:

48 hour Rush Other: Turn Around Times: (Circle One) 72 hour (TTP) All Samples Except Plaster Asbestos: Bulk TEM: Mold: Lead: Bulk Bulk **AHERA 7400** PLM EPA 600, PC all samples with a detection of <5% ACM. × Wipe Wipe Tape Bulk/NOB BioSIS Air Point Count EPA Level II Paint Other **PCM** Soil Viable_

	Γ	Γ	1			T						
)		0	0	8	١	6	ر ا	~	w	73		Lab ID#
	BS-HM-06A	BS-4M-05B	BS- HM-05A	BS-HM-04B	BS-HM-04A	BS- HM-03B	BS-HM-03A	BS-+11-02B	B5-4m-02A	35-HM-013	BS-HM-OIA	Client ID#
The second secon	Glazina	Beige Linoleum 2 Loyer	Beige Linoleum 2 Layer	Red/Blue Lineleum	Red/Blue Linoleum	Brown 13x12 Viny Tire	Brown 12 x12 Yingl Tile	Undown 18x18 Vingl Tile	Untrouch 13x10 Viny1 THE	Asohalt Shingle	Asonalt Shinale	Material/Location
												Volume
												Area
												Results

Relinquished by

とい

Date:

Date:

Relinquished by:

Received by:

Date:

APRY RESEARCH

Received by:

Work Forms: COC Rev: 12/03

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: 48 hour Relinquished by: Phone: (888) 449-4566 City, St., Zip: Address: Client Name: Turn Around Times: (Circle One) Lab ID# g څ CR 0 5 5 _ Ś 24 how 72 hour Red Cedar Consulting Lansing, MI 48901 PO Box 13216 BS-HM-07A BS HS-01A 35-HM-073 BS-4M-06B BS- HS-01B 35. HS-02B BS- HS- 03A BS-HS-01E BS-45-01D BS- HS-02C B5-HS-01C TTP All Samples Except Plaster
TEM: Client ID# Fax: (888) 448-8739 Plaster Plaster Shocco Plaster Tan 9x9 Vinyl Tike Plaster Shock Tan axa vinylTik Plaster Mold: Asbestos: Bulk Lead: Material/Location Bulk Bulk AHERA 7400 apaquet@redcedarconsulting.net PLM EPA 600, PC all samples with a detection of <5% ACM. × Wipe Wipe Tape Contact Person: Aaron Paquet Date of Survey: 5.22.16 Project #: Project: 2305 Baker St. Bulk/NOB Air BioSIS Point Count Volume EPA Level II Paint Other Area PCM. Soil Viable Results Lab Use Only
Log-In ____ Report_

Rev: 12/03 Work Forms: COC

Date: APEX HESEARCH

Received by Ay 2

2016

Relinquished by:

Received by:

Red Cedar Consulting

Tables

Table 1 - Summary of Hazardous Materials, 2305 Baker St., Muskegon Heights, Michigan

	Hazardous Materials Description and Location	
Location	Material Description	Quantity
Exterior	Automobile Tires	3
Bedroom	Smoke Detector	1
2 nd Floor East Bedroom	Smoke Detector	1
2 nd Floor South Bedroom	Smoke Detector	1
Basement	Smoke Detector	1
Basement	4' Fluorescent Light (Fixture and Ballast Only)	1
Basement	4' Fluorescent Bulb	1

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2305 Baker St., Muskegon Heights, Michigan

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
BS-HM-01A	Asphalt Shingle	No	M	Category I	ND	Exterior	NA
BS-HM-01B	Asphalt Shingle	No	M	Category I	ND	Exterior	NA
BS-HM-02A	Unknown 12x12 Vinyl Tile	No	M	Category I	ND	Front Entry	NA
BS-HM-02B	Unknown 12x12 Vinyl Tile	No	M	Category I	ND	Front Entry	NA
BS-HM-03A	Brown 12x12 Vinyl Tile	No	M	Category I	ND	Living Room	NA
BS-HM-03B	Brown 12x12 Vinyl Tile	No	M	Category I	ND	Living Room	NA
BS-HM-04A	Red/Blue Linoleum	No	M	Category I	30% CH	Dining Room	168 sq. ft.
BS-HM-04B	Red/Blue Linoleum	No	M	Category I	NA	Dining Room	NA
BS-HM-05A	Beige Linoleum 2 layer	No	M	Category I	ND/ND	Kitchen	NA
BS-HM-05B	Beige Linoleum 2 layer	No	M	Category I	ND/ND	Kitchen	NA
BS-HM-06A	Glazing	Yes	M	Category II	1.25% CH	Front Entry	19 Windows
BS-HM-06B	Glazing	Yes	M	Category II	NA	Living Room	NA
BS-HM-07A	Tan 9"x9" Vinyl Tile	No	M	Category I	5% CH	2 nd Fl. Landing	476 sq. ft
BS-HM-07B	Tan 9"x9" Vinyl Tile	No	M	Category I	NA	East Bedroom	NA
BS-HS-01A	Plaster	No	S	Category II	ND/ND	Living Room Wall	NA
BS-HS-01B	Plaster	No	S	Category II	ND/ND	Dining Room Wall	NA
BS-HS-01C	Plaster	No	S	Category II	ND/ND	Living Room Ceiling	NA
BS-HS-01D	Plaster	No	S	Category II	ND/ND	2 nd Fl. East Bedroom Wall	NA
BS-HS-01E	Plaster	No	S	Category II	ND/ND	2 nd Fl. East Bedroom Ceiling	NA
BS-HS-02A	Stucco	No	S	Category II	ND/ND	North Exterior	NA
BS-HS-02B	Stucco	No	S	Category II	ND/ND	East Exterior	NA
BS-HS-02C	Stucco	No	S	Category II	ND/ND	South Exterior	NA

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2305 Baker St., Muskegon Heights, Michigan

Notes:

N	Material Types	Abbrev	riations
M T S		NQ NA ND lin. ft. sq. ft.	
	,	1	1

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, 2305 Baker St., Muskegon Heights, Michigan

A	Asbestos Containing Material Description a	nd Location			
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity
Basement (misc. HVAC Tape on Cold Air Ductwork, 15 sq. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	15 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, 2305 Baker St., Muskegon Heights, Michigan

Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Dining	Red/Blue Linoleum		No	168 sq. ft.
2 nd Fl. Landing	Tan 9"x9" Vinyl Tile		No	156 sq. ft.
2 nd Fl. Bath	Tan 9"x9" Vinyl Tile		No	35 sq. ft.
2 nd Fl. E Bedroom	Tan 9"x9" Vinyl Tile		No	142 sq. ft.
2 nd Fl. S Bedroom	Tan 9"x9" Vinyl Tile		No	143 sq. ft.
		Total		644 sq. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Basement (misc. HVAC Tape on Cold Air Ductwork, 15 sq. ft.)	HVAC Duct Wrap		Yes	15 sq. ft.
		Total		15 sq. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Front Entry (5 windows 20" wide x 44" tall)	Glazing		Yes	5 Windows
Living (6 windows 20" wide x 44" tall)	Glazing		Yes	6 Windows
Bedroom (2 windows 32" wide x 60" tall)	Glazing		Yes	2 Windows
Rear Entry (2 windows 24" wide x 36" tall)	Glazing		Yes	2 Windows
2 nd Fl. E Bedroom (2 windows 16" wide x 56" tall)	Glazing		Yes	2 Windows
2 nd Fl. E Bedroom (1 window 30" wide x 56" tall)	Glazing		Yes	1 Window
2 nd Fl. Bathroom (1 window 28" wide x 28" tall)	Glazing		Yes	1 Window
		Total		19 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, 2305 Baker 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 27, 2016

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 Leahy St., Muskegon Heights, MI 49444

Parcel ID: 26-185-097-006-00

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 2321 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 .143 acre residential parcel which contains a 216 sq. ft. detached garage and approximate 1,100 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 living room, dining room, kitchen, bath, rear entry and three bedrooms.

VISUAL INSPECTION AND SAMPLING

Asbestos Containing Materials Inspection

Mr. Aaron Paquet of Red Cedar Consulting (Red Cedar), an accredited State Of Michigan/EPA Asbestos Building Inspector (Accreditation Number A30955) whom completed training per the Michigan Asbestos

Muskegon County Land Bank Parcel ID: 26-185-097-0006-00

Workers Accreditation Act 440 completed an inspection of the Subject Property on May 24, 2016 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
- Rolled Roofing
- Linoleum
- 9"x9" Vinyl Tile
- Drywall
- Glazing
- Plaster

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: 26-185-097-0006-00

Hazardous Materials Inspection

On May 24, 2016 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: 26-185-097-0006-00

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 twenty one windows at the following locations that would fall into the same homogenous group. The locations of the windows are listed below:

- Living (4 windows 32" wide x 58" tall)
- NE Bedroom (1 window 32" wide x 54" tall)
- Center Bedroom (1 window 32" wide x 54" tall)
- Dining (2 windows 28" wide x 54" tall)
- Kitchen (1 window 28" wide x 38" tall)
- Bath (1 window 20" wide x 30" tall)
- Rear Entry (10 windows 28" 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 (1 register, 10 sq. ft.)
- Dining (1 register, 10 sq. ft.)
- Old Kitchen (1 register, 10 sq. ft.)
- Center Bedroom (1 register, 10 sq. ft.)
- Basement (Misc. HVAC Debris in Crawlspace, 35 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.)
- Old Kitchen (1 register, 10 sq. ft.)
- Center Bedroom (1 register, 10 sq. ft.)
- Basement (Misc. HVAC Debris in Crawlspace, 35 sq. ft.)

Muskegon County Land Bank Parcel ID: 26-185-097-0006-00

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

- Living (4 windows 32" wide x 58" tall)
- NE Bedroom (1 window 32" wide x 54" tall)
- Center Bedroom (1 window 32" wide x 54" tall)
- Dining (2 windows 28" wide x 54" tall)
- Kitchen (1 window 28" wide x 38" tall)
- Bath (1 window 20" wide x 30" tall)
- Rear Entry (10 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.

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)
- Thermostat (1)
- Automobile Tire (5)

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.

Muskegon County Land Bank Parcel ID: 26-185-097-0006-00

- 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

Rann 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: 2321 Leahy St

Report To:

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

ARI Report #

16-65109

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/27/16 Date Reported: 05/27/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65109 - 01

Cust. #: ST-HM-01A

Material: Asphalt Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 1

Lab ID #: 65109 - 02

Cust. #: ST-HM-01B

Material: Asphalt Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 65109 - 03

Cust. #: ST-HM-02A

Material: Rolled Roofing/Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: **NO**

No Asbestos Observed

Fiberglass - 15%

Other - 85%

Asbestos Present: **NO**

No Asbestos Observed

Fiberglass - 15%

Other - 85%

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: 2321 Leahy St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-65109

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/27/16 Date Reported: 05/27/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 20%

Other - 80%

Lab ID #: 65109 - 04

Cust. #: ST-HM-02B

Material: Rolled Roofing/Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 65109 - 05

Cust. #: ST-HM-03A

Material: White Linoleum

Asbestos Present: NO

No Asbestos Observed

Cellulose - 20%

Fiberglass - 2%

Other - 78%

Location:

Location.

Appearance: white, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 65109 - 06 Cust. #: ST-HM-03B

Material: White Linoleum

Asbestos Present: NO

Cellulose - 20%

No Asbestos Observed

Fiberglass - 2%

Other - 78%

Location:

Appearance: white, 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: 2321 Leahy St

Report To:

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

ARI Report #

16-65109 Date Collected: 05/24/16

Date Received: 05/26/16

Date Analyzed: 05/27/16

Date Reported: 05/27/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65109 - 07

Cust. #: ST-HM-04A

Material: Beige Linoleum

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 65109 - 08

Cust. #: ST-HM-04B

Material: Beige Linoleum

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 65109 - 09

Cust. #: ST-HM-05A

Material: Speckled 9x9 Vinyl Tile/Flooring

Location:

Appearance: grey,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 - 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: 2321 Leahy St

Report To:

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

ARI Report #

16-65109

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/27/16

Date Reported: 05/27/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65109 - 10

Cust. #: ST-HM-05B

Material: Speckled 9x9 Vinyl Tile/Flooring

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Lab ID #: 65109 - 11

Cust. #: ST-HM-06A

Material: Old Linoleum

Location:

Appearance: red,fibrous,homogenous

Layer: 1 of 1

Lab ID #: 65109 - 12

Cust. #: ST-HM-06B

Material: Old Linoleum

Location:

Appearance: red,fibrous,homogenous

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 - 60%

Cellulose - 60%

Other - 40%

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: 2321 Leahy St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-65109

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/27/16 Date Reported: 05/27/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 20%

Other - 80%

Lab ID #: 65109 - 13

Cust. #: ST-HM-07A

Material: Drywall

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 2

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: NO

Other - 100%

Cellulose - 20% Other - 80%

Lab ID #: 65109 - 13a Cust. #: ST-HM-07A

Material: Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Lab ID #: 65109 - 14

Cust. #: ST-HM-07B

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: 2321 Leahy St

Report To:

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

ARI Report # 16-65109

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/27/16

Date Reported: 05/27/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 65109 - 14a

Cust. #: ST-HM-07B

Material: Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Chrysotile - 5%

Asbestos Present: YES

Other - 95%

Lab ID #: 65109 - 15 Cust. #: ST-HM-08A

Material: Glazing

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 65109 - 16

Cust. #: ST-HM-08B

Material: Glazing

Location:

NOT ANALYZED

Asbestos Present:

Appearance: Layer: of

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: 2321 Leahy St

Report To:

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

ARI Report # 16-65109

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/27/16 Date Reported: 05/27/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 65109 - 17

Cust. #: ST-HS-01A

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 #: 65109 - 17a Cust. #: ST-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 #: 65109 - 18 Cust. #: ST-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

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 2321 Leahy St

Report To:

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

ARI Report # Date Collected: 05/24/16

16-65109

Date Received: 05/26/16

Date Analyzed: 05/27/16

Date Reported: 05/27/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65109 - 18a

Cust. #: ST-HS-01B

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 65109 - 19

Cust. #: ST-HS-01C

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 2

Lab ID #: 65109 - 19a

Cust. #: ST-HS-01C

Material: Drywall

Appearance: beige, fibrous, nonhomogenous

Asbestos Present: NO

No Asbestos Observed

Hair - 2%

Other - 98%

Asbestos Present: **NO**

Hair - 2%

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 98%

Cellulose - 20%

Other - 80%

Location:

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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65109

MILA NESCARCH, Inc. 11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

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

Î	Relinquished by: Received by:	11 ST-HM-DUA	10 ST-HM-05B	9 ST-HM-05A	& ST-HM-OUB	ST-HM-OUA	6 St-HM-03B	ST-HM-03A	4 ST-HM-02B	N ST-4m-00A	ST-HM-OIB	ST-HM-DIA	Lab ID# Client ID#	The manufacture management of the management of	Other:	48 hour 72 hour	Rush / 24Kour		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: PAIN Date:	Relinquished by:	Old Linoleum	Spackled and Vinul Tile	Speckled 9x9 Vinyl Tile	Basil Linoleum	Beige Linoleum	white Linoleum	White Linoleum	Polled Roofing	Polled Roofing	Asphalt Shingle	Asphalt Shingle	Material/Location	TEM: AHERA 7400 Bulk/NOB			Lead: Bulk Wine	Asbestos: Bulk X Wipe	PLM EPA 600, PC all	: (888) 448-8739 Contact Person	Project # :	Project : <u>33</u>	Date of Survey
MAY: MAY	Received by:												Volume Area)B EPA Level II	BioSIS Other		Air Paint	Point Count PCM	apaquet@redce samples with a detection	Person: Aaron Paquet		23301 Leahy 5+.	Survey: 5-24-16
(N) (T)	ved by: Paul 10.20												a Results		Viable		Soil		apaquet@redcedarconsulting.net with a detection of <5% ACM.				Lab Use Only Log-In

Rev: 12/03 Work Forms: COC

APEX RESEARCH

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: 5-24-1	Relinquished by:		la	16	<i>Î</i> 7	6	2	74	13	グ	Lab ID#		Other:	48 hour 72 hour	Rush 24 hour	Turn Around	Phone: (888) 449-456	City, St., Zip:	Address: _	Client Name:
	Date:	Received by:		ST-HD-DIC	ST-HS-01B	ST-HS-OIA	ST-HM-08B	ST-HM-08A	ST-1m-0713	ST-HM-07A	51-HM-06B	Client ID#	- All Samples Except	יון פייים			ind Times: (Circle One)	9-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
	5-24-16	8		Plaster	Plasto	Plaster	Glazina	Glazina	Daywall	Drywall	old Linoleum	Material/Location	TEM: AHERA 7400		Lead: Bulk	s:	PLM E	(888) 448-8739			ng
	Date:	Relinquished by:										cation Vol	00Bulk/NOB	Tape BioSIS	Wipe Air _	Wipe Point Count	.600, PC all samples	Contact Person	Project #:	Project : 233	Date of Survey
řei	Date:	Received by:										lume Area	EPA Level II	S Other	Paint Soil	Count PCM_	apaquet@redcedarconsulting.net with a detection of <5% ACM.	N: Aaron Paquet		Le	A: 2:94:16
APEX RESEARCH	MAY 2 5 2016	D COM										Results		Viable	oil		arconsulting.net of <5% ACM.	- The second sec		Report	Lab Use Only Log-In

Rev: 12/03 Work Forms: COC

Red Cedar Consulting

Tables

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

	Hazardous Materials Description and Location	
Location	Material Description	Quantity
Garage	Automobile Tire	1
Kitchen	Smoke Detector	1
Dining	Thermostat	1
Living	Automobile Tire	4

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2321 Leahy St., Muskegon Heights, Michigan

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
ST-HM-01A	Asphalt Shingle	No	M	Category I	ND	Exterior	NA
ST-HM-01B	Asphalt Shingle	No	M	Category I	ND	Exterior	NA
ST-HM-02A	Rolled Roofing	No	M	Category I	ND	Garage	NA
ST-HM-02B	Rolled Roofing	No	M	Category I	ND	Garage	NA
ST-HM-03A	White Linoleum	No	M	Category I	ND	Bathroom	NA
ST-HM-03B	White Linoleum	No	M	Category I	ND	Bathroom	NA
ST-HM-04A	Beige Linoleum	No	M	Category I	ND	NE Bedroom	NA
ST-HM-04B	Beige Linoleum	No	M	Category I	ND	NE Bedroom	NA
ST-HM-05A	Speckled 9"x9" Vinyl Tile	No	M	Category I	ND	NW Bedroom	NA
ST-HM-05B	Speckled 9"x9" Vinyl Tile	No	M	Category I	ND	NW Bedroom	NA
ST-HM-06A	Old Linoleum	No	M	Category I	ND	Rear Entry	NA
ST-HM-06B	Old Linoleum	No	M	Category I	ND	Rear Entry	NA
ST-HM-07A	Drywall	No	M	Category II	ND/ND	Dining Ceiling	NA
ST-HM-07B	Drywall	No	M	Category II	ND/ND	Dining Wall	NA
ST-HM-08A	Glazing	Yes	M	Category II	5% CH	Living	21 Windows
ST-HM-08B	Glazing	Yes	M	Category II	NA	Dining	NA
ST-HS-01A	Plaster	No	S	Category II	ND/ND	Living Wall	NA
ST-HS-01B	Plaster	No	S	Category II	ND/ND	Living Wall	NA
ST-HS-01C	Plaster	No	S	Category II	ND/ND	Living Ceiling	NA

Notes:

Material Types

= Miscellaneous building material

TSI = Thermal System Insulation

= Surfacing Material S = Point Count Analysis PC = Chrysotile Asbestos

Abbreviations

= Not quantified NQ

= Not applicable NA

= 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, 2321 Leahy St., Muskegon Heights, Michigan

Asbestos Containing Material Description and Location					
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity
Living (1 register, 10 sq. ft.) Dining (1 register, 10 sq. ft.) Old Kitchen (1 register, 10 sq. ft.) Center Bedroom (1 register, 10 sq. ft.) Basement (Misc. HVAC Debris in Crawlspace, 35 sq. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	75 sq. 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, 2321 Leahy St., Muskegon Heights, Michigan

Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Living (1 register, 10 sq. ft.) Dining (1 register, 10 sq. ft.) Old Kitchen (1 register, 10 sq. ft.) Center Bedroom (1 register, 10 sq. ft.) Basement (Misc. HVAC Debris in Crawlspace, 35 sq. ft.)	HVAC Duct Wrap		Yes	75 sq. ft.
		Total		75 sq. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Living (A windows 22" wido v 50" tall)	Glazing		Yes	4 Windows
Living (4 windows 32" wide x 58" tall)	Giazilig		1 63	4 Willdows
NE Bedroom (1 window 32" wide x 54" tall)	Glazing		Yes	1 Windows
· · · · · · · · · · · · · · · · · · ·				
NE Bedroom (1 window 32" wide x 54" tall)	Glazing		Yes	1 Window
NE Bedroom (1 window 32" wide x 54" tall) Center Bedroom (1 window 32" wide x 54" tall)	Glazing Glazing		Yes Yes	1 Window 1 Window
NE Bedroom (1 window 32" wide x 54" tall) Center Bedroom (1 window 32" wide x 54" tall) Dining (2 windows 28" wide x 54" tall)	Glazing Glazing Glazing		Yes Yes Yes	1 Window 1 Window 2 Windows
NE Bedroom (1 window 32" wide x 54" tall) Center Bedroom (1 window 32" wide x 54" tall) Dining (2 windows 28" wide x 54" tall) Kitchen (1 window 28" wide x 38" tall)	Glazing Glazing Glazing Glazing		Yes Yes Yes Yes	1 Window1 Window2 Windows1 Window

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 27, 2016

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

2325 Wood St., Muskegon Heights, MI 49444

Parcel ID: 61-26-185-102-0007-00

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 2325 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 .14 acre residential parcel which contains an approximate 900 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 wood lap while the roof was sealed with asphalt shingles. The Building can be further divided into a living room, dining room, kitchen, bath, bedroom and rear entry on the first floor while the second floor contains two bedrooms.

VISUAL INSPECTION AND SAMPLING

Asbestos Containing Materials Inspection

Mr. Aaron Paquet of Red Cedar Consulting (Red Cedar), an accredited State Of Michigan/EPA Asbestos Building Inspector (Accreditation Number A30955) whom completed training per the Michigan Asbestos Project No.: 16-1070 Muskegon County Land Bank Parcel ID: 61-26-185-102-0007-00

Workers Accreditation Act 440 completed an inspection of the Subject Property on May 8, 2016 for suspected asbestos containing building materials.

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

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

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

- Asphalt Shingle
- Linoleum
- 1'x1' Ceiling Tile
- Glazing
- Plaster

Red Cedar staff collected thirteen 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 thirteen samples is included as Attachment A.

Muskegon County Land Bank Parcel ID: 61-26-185-102-0007-00

Hazardous Materials Inspection

On May 8, 2016 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, thirteen 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" chimney pipe located in 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: 61-26-185-102-0007-00

Friable ACM's

Duct Wrap and Transite Chimney Pipe 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.)
- Rear Entry (partial wall chase, 20 sq. ft.)
- 2nd Floor (vertical chase to basement, 20 sq. ft.)
- Basement (6 in. dia. Transite Chimney pipe, 20 lin. ft.)

Category I ACM

One type of resilient floor covering (Red Linoleum) located within the rear entry was found to contain up to 30% Chrysotile asbestos. The assessment to quantify the extent of this material identified approximately 25 sq. ft. of this material within the Building.

Category II ACM

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

RECOMMENDATIONS

Asbestos Containing Materials

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

- Living (1 register, 10 sq. ft.)
- Kitchen (1 register, 10 sq. ft.)
- Rear Entry (partial wall chase, 20 sq. ft.)
- 2nd Floor (vertical chase to basement, 20 sq. ft.)
- Basement (6 in. dia. Transite Chimney pipe, 20 lin. ft.)

The Category I resilient floor covering (Red 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: 61-26-185-102-0007-00

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:

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.
- 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: 61-26-185-102-0007-00

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

(Laron Pogwet

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: 2325 Wood St.

Report To:

Mr. Aarton Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64720

Date Collected: 05/08/16 Date Received: 05/11/16 Date Analyzed: 05/16/16

Date Reported: 05/16/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 40%

Other - 60%

Lab ID #: 64720 - 01

Cust. #: ST-HM-01A

Material: Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 3

Asbestos Present: **NO**No Asbestos Observed

Cellulose - 40% Other - 60%

Lab ID #: 64720 - 01a Cust. #: ST-HM-01A

Material: Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 3

Asbestos Present: NO

No Asbestos Observed

Cellulose - 50%

Other - 50%

Lab ID #: 64720 - 01b Cust. #: ST-HM-01A

Material: Tar

Location:

Appearance: black, fibrous, homogenous

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

Layer: 3 of 3

1/ent

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 2325 Wood St.

Report To:

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

ARI Report #

16-64720

Date Collected: 05/08/16

Date Received: 05/11/16 Date Analyzed: 05/16/16

Date Reported: 05/16/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 40%

Other - 60%

Lab ID #: 64720 - 02

Cust. #: ST-HM-01B

Material: Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 3

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 40%

Other - 60%

Lab ID #: 64720 - 02a Cust. #: ST-HM-01B

Material: Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 3

Asbestos Present: NO

Cellulose - 50%

No Asbestos Observed

Other - 50%

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

Lab ID #: 64720 - 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: 2325 Wood St.

Report To:

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

ARI Report # 16-64720

Date Collected: 05/08/16 Date Received: 05/11/16

Date Analyzed: 05/16/16 Date Reported: 05/16/16

Sample Information

Asbestos Type/Percent

Asbestos Present: YES

Chrysotile - 30%

Non-Asbestos

Other - 70%

Lab ID #: 64720 - 03

Cust. #: ST-HM-02A

Material: Red Linoleum

Location:

Appearance: red,fibrous,nonhomogenous

Layer: 1 of 1

Lab ID #: 64720 - 04

Cust. #: ST-HM-02B

Material: Red Linoleum

Location: Appearance:

Layer:

NOT ANALYZED

Asbestos Present: NO

No Asbestos Observed

Asbestos Present:

Lab ID #: 64720 - 05

Cust. #: ST-HM-03A

Material: White 1x1 Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

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

Layer: 1 of 2

Robert T. Letarte Jr., Laboratory Director

Cellulose - 70% Other - 30%

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 2325 Wood St.

Report To:

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

ARI Report # 16-64720

Date Collected: 05/08/16 Date Received: 05/11/16

Date Analyzed: 05/16/16 Date Reported: 05/16/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Wollastonite - 1%

Other - 99%

Lab ID #: 64720 - 05a

Cust. #: ST-HM-03A

Material: Glue Pod

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 2 of 2

No Asbestos Observed

Asbestos Present: **NO**

Cellulose - 80%

Other - 20%

Lab ID #: 64720 - 06 Cust. #: ST-HM-03B

Material: White 1x1 Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 2

Asbestos Present: NO

Wollastonite - 1%

No Asbestos Observed

Other - 99%

Material: Glue Pod

Location:

Lab ID #: 64720 - 06a Cust. #: ST-HM-03B

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: 2325 Wood St.

Report To:

Mr. Aarton Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64720

Date Collected: 05/08/16 Date Received: 05/11/16

Date Analyzed: 05/16/16 Date Reported: 05/16/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Wollastonite - 1%

Other - 99%

Lab ID #: 64720 - 07

Cust. #: ST-HM-04A

Material: Glazing

Location:

Appearance: beige, nonfibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO**No Asbestos Observed

No Asbestos Observed

Wollastonite - 1%

Other - 99%

Other - 100%

Cust. #: ST-HM-04B

Material: Glazing

Lab ID #: 64720 - 08

Location:

Appearance: beige, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 64720 - 09 Asbestos Present: **NO**

Cust. #: ST-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

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 2325 Wood St.

Report To:

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

ARI Report #

16-64720

Date Collected: 05/08/16 Date Received: 05/11/16

Date Analyzed: 05/16/16

Date Reported: 05/16/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Cellulose - 2%

Lab ID #: 64720 - 09a

Cust. #: ST-HS-01A

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO**

No Asbestos Observed

Hair - 2%

Other - 96%

Other - 100%

Lab ID #: 64720 - 10

Cust. #: ST-HS-01B

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 64720 - 10a

Asbestos Present: NO

Cellulose - 2%

Cust. #: ST-HS-01B

Material: Plaster Base Coat

No Asbestos Observed

Hair - 2% Other - 96%

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: 2325 Wood St.

Report To:

Mr. Aarton Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64720

Date Collected: 05/08/16 Date Received: 05/11/16 Date Analyzed: 05/16/16

Date Reported: 05/16/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

Asbestos Present: **NO**

No Asbestos Observed

No Asbestos Observed

No Asbestos Observed

Non-Asbestos

Other - 100%

Cellulose - 1%

Hair - 2%

Other - 97%

Other - 100%

Lab ID #: 64720 - 11

Cust. #: ST-HS-01C

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 64720 - 11a

Cust. #: ST-HS-01C

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 64720 - 12 Asbestos Present: **NO**

Cust. #: ST-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

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 2325 Wood St.

Report To:

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

ARI Report # 16-64720

Date Collected: 05/08/16 Date Received: 05/11/16

Date Analyzed: 05/16/16 Date Reported: 05/16/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 1%

Hair - 2%

Other - 97%

Lab ID #: 64720 - 12a

Cust. #: ST-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 #: 64720 - 13 Cust. #: ST-HS-01E

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 64720 - 13a

Cust. #: ST-HS-01E

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

Cellulose - 2% Hair - 2%

No Asbestos Observed

Other - 96%

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

Robert T. Letarte Jr., Laboratory Director

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

Apex # 64720

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 Other: Rush Phone: (888) 449-4566 Relinquished by: City, St., Zip: Address: Client Name: Turn Around Times: (Circle One) 120 1 5-10-16, 6 00 24 hour # eni Lansing, MI 48901 Red Cedar Consulting PO Box 13216 ST-45-orc 57-15-018 ST-HM-JUB ST-HM-JPA Sto-waters ST-HM-0313 ST-AM-023 ST-46-01A SIV FEC-03A STURMIOR KURR-OLA TTP) All Samples Except Plaster
TEM: Client ID# Carrol Received by: Fax: (888) 448-8739 Clazing Plaster Shingle white be coding Tile Come Pos whitely coilingtile Glue la Shingle 762 RedLindeun 4 MAY Mold: Lead: Asbestos: Bulk indleum Material/Location 7 206 Bulk **AHERA 7400** PLM EPA 600, PC all samples with a detection of <5% ACM. × Relinquished by: Wipe Wipe Tape Contact Person: Aaron Paquet Project #: Date of Survey: 5-8-16 Project: 2325 Ward St Bulk/NOB Air Point Count BioSIS Volume EPA Level II Other Received by: Date: Area PCM Soil Viable Results Report_ Log-In Lab Use Only

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:	Relinquished by:					E	12	Lab ID#			Ĕ,	Rush 24 hour	Turn Arou	Phone: (888) 449-4566	City, St., Zip:	Address:	Client Name:
	Date :	Received byz					ST-48-01E	ST-HS-OID	Client ID#		(TTP) All Samples Except		,	Turn Around Times: (Circle One)	19-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
		MAY Relinquished by:					Plaster-	Pasto	Material/Location	TEM: AHERA 7400 Bulk/NOB	Mold: Bulk Tape	Lead: Bulk Wipe	os: Bulk x	PLM EPA 600,	48-8739	Project #:	Project	
									Volume	DB EPA Level II	BioSIS	Air Paint			Aaron	1	ואל	Date of Survey: ベータール
	Date :	Received by:							Area	1 II	Other Viable	Soil	PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM	Paquet		St. Good St.	16
									Results			1		llting.net		report	Den G-In	Lab Use Only

Red Cedar Consulting

Tables

Table 1 - Summary of Hazardous Materials, 2325 Wood St., Muskegon Heights, Michigan

Hazardous Materials Description and Location						
Location	Material Description	Quantity				
No Hazardous Material Identified						

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2325 Wood St., Muskegon Heights, Michigan

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
ST-HM-01A	Asphalt Shingle	No	M	Category I	ND/ND/ND	Exterior	NA
ST-HM-01B	Asphalt Shingle	No	M	Category I	ND/ND	Exterior	NA
ST-HM-02A	Red Linoleum	No	M	Category I	30% CH	Rear Entry	25 sq. ft.
ST-HM-02B	Red Linoleum	No	M	Category I	NA	Rear Entry	NA
ST-HM-03A	White 1x1 Ceiling Tile/Glue Pod	Yes	M	Category II	ND/ND	Living	NA
ST-HM-03B	White 1x1 Ceiling Tile/Glue Pod	Yes	M	Category II	ND/ND	Living	NA
ST-HM-04A	Glazing	Yes	M	Category II	ND	Living	NA
ST-HM-04B	Glazing	Yes	M	Category II	ND	Bath	NA
ST-HS-01A	Plaster	No	S	Category II	ND/ND	SE Bedroom Wall	NA
ST-HS-01B	Plaster	No	S	Category II	ND/ND	Kitchen Wall	NA
ST-HS-01C	Plaster	No	S	Category II	ND/ND	Living Ceiling	NA
ST-HS-01D	Plaster	No	S	Category II	ND/ND	2 nd Fl. N Bedroom Wall	NA
ST-HS-01E	Plaster	No	S	Category II	ND/ND	2 nd Fl. S Bedroom Ceiling	NA

Abbreviations

Notes:

Material Types

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

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

= 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, 2325 Wood St., Muskegon Heights, Michigan

Asbestos Containing Material Description and Location								
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity			
Basement (6 in. dia. Transite Chimney pipe, 20 lin. ft.)	Transite Chimney Pipe	No	Fair	M	20 lin. ft.			
Living (1 register, 10 sq. ft.) Kitchen (1 register, 10 sq. ft.) Rear Entry (partial wall chase, 20 sq. ft.) 2 nd Floor Landing (vertical chase to basement, 20 sq. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	60 sq. 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, 2325 Wood St., Muskegon Heights, Michigan

Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Rear Entry	Red Linoleum		No	25 sq. ft.
		Total		25 sq. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Living (1 register, 10 sq. ft.) Kitchen (1 register, 10 sq. ft.) Rear Entry (partial wall chase, 20 sq. ft.) 2 nd Floor Landing (vertical chase to basement, 20 sq. ft.)	HVAC Duct Wrap		Yes	60 sq. ft.
3(1111111111111111111111111111111111111		Total		60 sq. ft.
Exterior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Basement (6 in. dia. Transite Chimney pipe, 20 lin. ft.)	Transite Chimney Pipe		No	20 lin. ft.
		Total		20 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 27, 2016

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 2328 Maffett St., Muskegon Heights, MI 49444 Parcel ID: 26-185-096-0017-00

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 2328 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 residential parcel which contains an approximate 1,180 square foot residential building (the Building) constructed in the early 1900's. The Building was constructed on a concrete block basement with two aboveground floors. The exterior walls of the Building were finished with wood shake 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 bedroom on the first floor while the second floor contains three bedrooms.

VISUAL INSPECTION AND SAMPLING

Asbestos Containing Materials Inspection

Mr. Aaron Paquet of Red Cedar Consulting (Red Cedar), an accredited State Of Michigan/EPA Asbestos Building Inspector (Accreditation Number A30955) whom completed training per the Michigan Asbestos

Muskegon County Land Bank Parcel ID: 26-185-096-0017-00

Workers Accreditation Act 440 completed an inspection of the Subject Property on May 22, 2016 for suspected asbestos containing building materials.

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

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

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

- Asphalt Shingle
- Linoleum
- 1'x1' Ceiling Tile
- 2'x4' Ceiling 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: 26-185-096-0017-00

Hazardous Materials Inspection

On May 22, 2016 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: 26-185-096-0017-00

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:

- Living (3 windows 34" wide x 60" tall)
- Bedroom (2 windows 34" wide x 60" tall)
- Bathroom (1 window 34" wide x 24" tall)
- Kitchen (1 window 34" wide x 34" tall)
- 2nd Fl. Stairwell (1 window 32" wide x 24" tall)
- 2nd Fl. N Bedroom (1 window 39" wide x 44" tall)
- 2nd Fl. E Bedroom (1 window 30" wide x 44" tall)
- 2nd Fl. S Bedroom (1 window 30" wide x 44" 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:

- Kitchen (1 register, 10 sq. ft.)
- Bedroom (1 register, 10 sq. ft.)
- 2nd Fl. S Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)

Category I ACM

Two types of resilient floor covering (Beige Linoleum and Brown 9"x9" Vinyl Tile) located within the basement stairwell and front entry, respectively, were found to contain up to 10% Chrysotile asbestos. The assessment to quantify the extent of this material identified approximately 165 sq. ft. of this material within the Building.

Category II ACM

Plaster samples, collected from the Living Room, Bedroom, and Bath were each found to contain up to 5% asbestos following analysis. The assessment to quantify the extent of this material identified approximately 4,975 sq. ft. of plaster within the Building.

RECOMMENDATIONS

Asbestos Containing Materials

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

- Kitchen (1 register, 10 sq. ft.)
- Bedroom (1 register, 10 sq. ft.)
- 2nd Fl. S Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)

Muskegon County Land Bank Parcel ID: 26-185-096-0017-00

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

- Living (3 windows 34" wide x 60" tall)
- Bedroom (2 windows 34" wide x 60" tall)
- Bathroom (1 window 34" wide x 24" tall)
- Kitchen (1 window 34" wide x 34" tall)
- 2nd Fl. Stairwell (1 window 32" wide x 24" tall)
- 2nd Fl. N Bedroom (1 window 39" wide x 44" tall)
- 2nd Fl. E Bedroom (1 window 30" wide x 44" tall)
- 2nd Fl. S Bedroom (1 window 30" wide x 44" 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.

The Category I resilient floor coverings (Beige Linoleum and Brown 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:

- Smoke Detector (2)
- Thermostat (1)
- Television (4)
- 5 Gallon Container Misc. Paint (1)
- Gallon Container Misc. Paint (2)
- Container Kerosene (1)

Muskegon County Land Bank Parcel ID: 26-185-096-0017-00

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: 26-185-096-0017-00

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

(Laron Pogwet

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: 2328 Maffett St

Report To:

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

ARI Report # 16-65040

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/25/16 Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65040 - 01

Cust. #: TS-HM-01A

Material: Asphalt Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 3

Lab ID #: 65040 - 01a

Cust. #: TS-HM-01A

Material: Black Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 3

Lab ID #: 65040 - 01b

Cust. #: TS-HM-01A

Material: Tar Paper

Location:

Appearance: black,fibrous,homogenous

Layer: 3 of 3

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 - 50%

Other - 50%

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: 2328 Maffett St

Report To:

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

ARI Report #

16-65040 Date Collected: 05/22/16

Date Received: 05/23/16

Date Analyzed: 05/25/16 Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 40%

Other - 60%

Lab ID #: 65040 - 02

Cust. #: TS-HM-01B

Material: Asphalt Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 5

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 40%

Other - 60%

Cust. #: TS-HM-01B

Lab ID #: 65040 - 02a

Material: Black Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 5

Asbestos Present: NO

No Asbestos Observed

Cellulose - 40%

Other - 60%

Lab ID #: 65040 - 02b Cust. #: TS-HM-01B

Material: White 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

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Test Method, Polarized Light Microscopy (PLM)

Project: 2328 Maffett St

Report To:

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

ARI Report # 16-65040

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/25/16 Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 40%

Other - 60%

Lab ID #: 65040 - 02c

Cust. #: TS-HM-01B

Material: Green Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 4 of 5

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 50%

Other - 50%

Material: Tar Paper

Lab ID #: 65040 - 02d

Cust. #: TS-HM-01B

Location:

Appearance: black, fibrous, homogenous

Layer: 5 of 5

Asbestos Present: NO

No Asbestos Observed

Cellulose - 1% Other - 99%

Lab ID #: 65040 - 03 Cust. #: TS-HM-02A

Material: Grey 9x9 Vinyl Tile

Appearance: grey,nonfibrous,homogenous

Layer: 1 of 2

Location:

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: 2328 Maffett St

Report To:

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

ARI Report # 16-65040

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/25/16 Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65040 - 03a

Cust. #: TS-HM-02A

Material: Glue Location:

Appearance: yellow,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 65040 - 04

Cust. #: TS-HM-02B

Material: Grey 9x9 Vinyl Tile

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 1 of 2

Lab ID #: 65040 - 04a

Cust. #: TS-HM-02B

Material: Glue

Location:

Appearance: yellow,nonfibrous,homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 1%

Other - 99%

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: 2328 Maffett St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-65040

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/25/16 Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

Asbestos Present: YES

Chrysotile - 10%

Non-Asbestos

Other - 90%

Lab ID #: 65040 - 05

Cust. #: TS-HM-03A

Material: Brown 9x9 Vinyl Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 2

No Asbestos Observed

Asbestos Present: NO

Other - 100%

Lab ID #: 65040 - 05a Cust. #: TS-HM-03A

Material: Mastic

Location:

A

Appearance: black,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 65040 - 06

Asbestos Present:

Cust. #: TS-HM-03B

Material: Brown 9x9 Vinyl Tile

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

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Test Method, Polarized Light Microscopy (PLM)

Project: 2328 Maffett St

Report To:

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ARI Report # 16-65040

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/25/16 Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 65040 - 06a

Cust. #: TS-HM-03B

Material: Mastic

Location:

Appearance: black,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 65040 - 07

Cust. #: TS-HM-04A

Asbestos Present: **NO**

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Other - 100%

Material: Beige 12x12 Vinyl Tile

Location:

Appearance: beige, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 65040 - 07a

Cust. #: TS-HM-04A

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: 2328 Maffett St

Report To:

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

ARI Report # 16-65040

Date Collected: 05/22/16

Date Received: 05/23/16 Date Analyzed: 05/25/16

Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65040 - 08

Cust. #: TS-HM-04B

Material: Beige 12x12 Vinyl Tile

Location:

Appearance: beige,nonfibrous,homogenous Layer: 1 of 2

No Asbestos Observed

Asbestos Present: **NO**

No Asbestos Observed

Other - 100%

Other - 100%

Lab ID #: 65040 - 08a

Cust. #: TS-HM-04B

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 65040 - 09

Cust. #: TS-HM-05A

Material: Tan 12x12 Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

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: 2328 Maffett St

Report To:

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

ARI Report # 16-65040

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/25/16 Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 80%

Other - 20%

Lab ID #: 65040 - 10

Cust. #: TS-HM-05B

Material: Tan 12x12 Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 65040 - 11

Cust. #: TS-HM-06A

Material: White 2x4 Ceiling Tile

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 40%

Mineral Wool - 40%

Other - 20%

Location:

Appearance: grey, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 65040 - 12 Cust. #: TS-HM-06B Asbestos Present: NO

Cellulose - 40%

No Asbestos Observed

Mineral Wool - 40%

Other - 20%

Location:

Appearance: grey,fibrous,homogenous

Material: White 2x4 Ceiling Tile

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: 2328 Maffett St

Report To:

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

ARI Report # 16-65040

Date Collected: 05/22/16 Date Received: 05/23/16 Date Analyzed: 05/25/16

Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 20%

Fiberglass - 5%

Other - 75%

Lab ID #: 65040 - 13

Cust. #: TS-HM-07A

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 65040 - 14

Cust. #: TS-HM-07B

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 20%

Fiberglass - 5%

Other - 75%

Other - 95%

Location:

Material: Drywall

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 65040 - 15

Cust. #: TS-HM-08A

Material: Glazing

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

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: 2328 Maffett St

Report To:

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

Lansing, MI 48901

ARI Report # 16-65040

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/25/16 Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65040 - 16

Cust. #: TS-HM-08B Material: Glazing

Location:

NOT ANALYZED

Asbestos Present:

Appearance: Layer: of

Lab ID #: 65040 - 17

Cust. #: TS-HM-09A

Material: White 1x1 Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 65040 - 18

Cust. #: TS-HM-09B

Material: White 1x1 Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Asbestos Present: **NO** No Asbestos Observed

Asbestos Present: NO

Cellulose - 80%

Other - 20%

No Asbestos Observed

Cellulose - 80%

Other - 20%

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: 2328 Maffett St

Report To:

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

ARI Report # 16-65040

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/25/16 Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 65040 - 19

Cust. #: TS-HM-10A

Material: Beige Linoleum

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 3

Asbestos Present: YES Chrysotile - 10%

Asbestos Present: NO

No Asbestos Observed

Other - 90%

Cellulose - 50%

Other - 50%

Lab ID #: 65040 - 19a Cust. #: TS-HM-10A

Material: Floor Tile

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 3

Lab ID #: 65040 - 19b

Cust. #: TS-HM-10A

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

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Test Method, Polarized Light Microscopy (PLM)

Project: 2328 Maffett St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-65040

Date Collected: 05/22/16 Date Received: 05/23/16 Date Analyzed: 05/25/16

Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 65040 - 20

Cust. #: TS-HM-10B

Material: Beige Linoleum

Location:

Appearance: beige, nonfibrous, homogenous

Layer: 1 of 3

Lab ID #: 65040 - 20a

Cust. #: TS-HM-10B Material: Floor Tile

Material. F100

Location: Appearance:

Layer: 2 of 3

Asbestos Present:

NOT ANALYZED

Asbestos Present: NO

No Asbestos Observed

Lab ID #: 65040 - 20b

Cust. #: TS-HM-10B

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

Cellulose - 50%

Other - 50%

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Test Method, Polarized Light Microscopy (PLM)

Project: 2328 Maffett St

Report To:

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

ARI Report # 16-65040

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/25/16

Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 50%

Other - 50%

Lab ID #: 65040 - 21

Cust. #: TS-HM-11A

Material: Old Linoleum

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 50%

Lab ID #: 65040 - 22 Cust. #: TS-HM-11B

Material: Old Linoleum

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Other - 50%

Lab ID #: 65040 - 23 Cust. #: TS-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: 2328 Maffett St

Report To:

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

ARI Report # 16-65040

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/25/16

Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

Asbestos Present: YES

Chrysotile - 5%

Non-Asbestos

Hair - 2%

Other - 93%

Lab ID #: 65040 - 23a

Cust. #: TS-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 #: 65040 - 24 Cust. #: TS-HS-01B

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 65040 - 24a

Cust. #: TS-HS-01B

Material: Plaster Base Coat

Location:

Appearance: grey, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: YES

Hair - 5%

Chrysotile - 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: 2328 Maffett St

Report To:

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

ARI Report # 16-65040

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/25/16

Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

Other - 100%

Lab ID #: 65040 - 25

Cust. #: TS-HS-01C

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 65040 - 25a

Cust. #: TS-HS-01C

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Lab ID #: 65040 - 26

Cust. #: TS-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: YES

Chrysotile - 5%

Hair - 2%

Other - 93%

Other - 100%

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

Asbestos Present: NO

No Asbestos Observed

Robert T. Letarte Jr., Laboratory Director

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Test Method, Polarized Light Microscopy (PLM)

Project: 2328 Maffett St

Report To:

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Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/25/16

Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65040 - 26a Cust. #: TS-HS-01D

Material: Plaster Base Coat

Location:

Appearance: grey, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: **NO**No Asbestos Observed

Cellulose - 2%

Other - 98%

Other - 100%

Lab ID #: 65040 - 27

Cust. #: TS-HS-01E

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 65040 - 27a

Cust. #: TS-HS-01E

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Asbestos Present: **NO**

No Asbestos Observed

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

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65040

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48 hou Other: Rush Date: Relinquished by Phone: City, St., Zip: Address: Client Name: Turn Around Times: (Circle One) Lab ID 8/3/8 Ō Ω O() 9 N (i) (888)449-4566 24 hour 72 hour # Red Cedar Consulting Lansing, PO Box 13216 TS-4m-018 TS-4M-01A 15- m-04A TS-4m-02A TS-HM-06A TS-305A JS-4m-04B 15-4m-05P TS-4M-03B TS-HM-03A 75-HM-02B TTP) All Samples Except Plaster Client ID# MI 48901 Received by: NAT 2 3 2016 1455 Fax: Boige Brown 9x9 Viny Tile Brown 9x9 Vinyl Tile Beige 12x12 Viny Tile Tan 13×12 Calling The Tan laxia Ceiling Tike Asphalt Shingle Gray 9x9 Viryl Tive Asphalt Shingle Gray 9x9 Vinu white ax4 Ceiling Tire (888) 448-8739 Mold: Asbestos: Bulk TEM: Lead: BYID VINITIE Material/Location Bulk Bulk AHERA 7400 PLM EPA 600, PC all samples with a detection of <5% ACM. × ナラ Date: Relinquished by: Wipe Wipe Tape Contact Person: Aaron Paquet Date of Survey: 5-22-16 Project #: Project: 2328 maffett St. Bulk/NOB Air Point Count BioSIS Volume EPA Level II Paint Other Received by: Date: Area PCM Soil Viable Results Lab Use Only
Log-In____ Report __

Work Forms: COC

PEX PERSONANCE

Pg. 2.83

Address:

Client Name:

Red Cedar Consulting

Date of Survey: 5.22.11

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 :		Date :	NAY 2 3 2016		5-73-10	Date:_
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	Aaron Paquet	1	Contact Person:	(888) 448-873	4566 Fax:	ne: (888)449-456	Phone:
			Project #:		Lansing, MI 48901	City, St., Zip: Lie	City
Report	Maffett St.	Ø	Project : <u>232</u>	A CONTRACTOR OF THE CONTRACTOR	PO Box 13216	ı	Address:

Rev: 12/03 Work Forms: COC

APEX RESEARCE

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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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										Results			1		<pre>1lting.net ACM.</pre>		, rodes	Report	Lab Use Only

Red Cedar Consulting

Tables

Table 1 - Summary of Hazardous Materials, 2328 Maffett St., Muskegon Heights, Michigan

	Hazardous Materials Description and Location	
Location	Material Description	Quantity
Exterior	Television	1
Living	Thermostat	1
Bedroom	Television	1
2 nd Fl. E Bedroom	Smoke Detector	1
2 nd Fl. N Bedroom	Television	1
Basement	Smoke Detector	1
Basement	5 Gallon Container Misc. Paint	1
Basement	Gallon Container Misc. Paint	2
Basement	Container Kerosene	1
Basement	Television	1

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2328 Maffett St., Muskegon Heights, Michigan

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
ST-HM-01A	Asphalt Shingle	No	M	Category I	ND/ND/ND	Exterior	NA
ST-HM-01B	Asphalt Shingle	No	М	Category I	ND/ND/ND/ ND/ND	Exterior	NA
ST-HM-02A	Gray 9"x9" Vinyl Tile	No	M	Category I	ND/ND	Exterior	NA
ST-HM-02B	Gray 9"x9" Vinyl Tile	No	M	Category I	ND/ND	Exterior	NA
ST-HM-03A	Brown 9"x9" Vinyl Tile	No	M	Category I	CH 10%/ND	Front Entry	117 sq. ft.
ST-HM-03B	Brown 9"x9" Vinyl Tile	No	M	Category I	NA/ND	Front Entry	NA
ST-HM-04A	Beige 12x12 Vinyl Tile	No	M	Category I	ND/ND	Kitchen	NA
ST-HM-04B	Beige 12x12 Vinyl Tile	No	M	Category I	ND/ND	Kitchen	NA
ST-HM-05A	Tan 12x12 Vinyl Tile	No	M	Category I	ND	Kitchen	NA
ST-HM-05B	Tan 12x12 Vinyl Tile	No	M	Category I	ND	Kitchen	NA
ST-HM-06A	White 2'x4' Ceiling Tile	Yes	M	Category II	ND	Kitchen	NA
ST-HM-06B	White 2'x4' Ceiling Tile	Yes	M	Category II	ND	Kitchen	NA
ST-HM-07A	Drywall	Yes	M	Category II	ND	Kitchen Wall	NA
ST-HM-07B	Drywall	Yes	M	Category II	ND	Kitchen Wall	NA
ST-HM-08A	Glazing	Yes	M	Category II	5% CH	Living	11 Windows
ST-HM-08B	Glazing	Yes	M	Category II	NA	Bedroom	NA
ST-HM-09A	White 1'x1' Ceiling Tile	Yes	M	Category II	ND	2 nd Fl. Hall	NA
ST-HM-09B	White 1'x1' Ceiling Tile	Yes	M	Category II	ND	2 nd Fl. Hall	NA
ST-HM-10A	Beige Linoleum	No	M	Category I	ND/10%CH/ ND	Basement Stairwell	48 sq. ft.
ST-HM-10B	Beige Linoleum	No	M	Category I	ND/NA/ND	Basement Stairwell	NA
ST-HM-11A	Old Linoleum	No	M	Category I	ND	Basement	NA
ST-HM-11B	Old Linoleum	No	M	Category I	ND	Basement	NA
ST-HS-01A	Plaster	No	S	Category II	ND/5% CH	Living Wall	4,975 sq. ft.
ST-HS-01B	Plaster	No	S	Category II	ND/5% CH	Bath Wall	NA
ST-HS-01C	Plaster	No	S	Category II	ND/5% CH	Bedroom Ceiling	NA
ST-HS-01D	Plaster	No	S	Category II	ND/ND	2 nd Fl. S Bedroom Wall	NA

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2328 Maffett St., Muskegon Heights, Michigan

Samp Numb	1 3	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
ST-HS-0	1E Plaster		No	S	Category II	ND/ND	2 nd Fl. S Bedroom Ceiling	NA

Notes:

<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 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, 2328 Maffett St., Muskegon Heights, Michigan

A	Asbestos Containing Material Description a	nd Location			
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity
Kitchen (1 register, 10 sq. ft.) Bedroom (1 register, 10 sq. ft.) 2 nd Fl. S Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 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, 2328 Maffett St., Muskegon Heights, Michigan

Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Basement Stairwell	Beige Linoleum		No	48 sq. ft.
Front Entry	Brown 9"x9" Vinyl Tile		No	117 sq. ft.
		Total		165 sq. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Kitchen (1 register, 10 sq. ft.) Bedroom (1 register, 10 sq. ft.)	WACD AW		X7.	55 0
2 nd Fl. S Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)	HVAC Duct Wrap		Yes	55 sq. ft.
		Total		55 sq. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Living (3 windows 34" wide x 60" tall)	Glazing		Yes	3 Windows
Bedroom (2 windows 34" wide x 60" tall)	Glazing		Yes	2 Windows
Bathroom (1 window 34" wide x 24" tall)	Glazing		Yes	1 Window
Kitchen (1 window 34" wide x 34" tall)	Glazing		Yes	1 Window
2 nd Fl. Stairwell (1 window 32" wide x 24" tall)	Glazing		Yes	1 Window
2 nd Fl. N Bedroom (1 window 39" wide x 44" tall)	Glazing		Yes	1 Window
2 nd Fl. E Bedroom (1 window 30" wide x 44" tall)	Glazing		Yes	1 Window
2 nd Fl. S Bedroom (1 window 30" wide x 44" tall)	Glazing		Yes	1 Window
		Total		11 Windows
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
1st Floor	Wall Plaster		No	2,574 sq. ft.
1st Floor	Ceiling Plaster		No	736 sq. ft.
2 nd Floor	Wall Plaster		No	1,330 sq. ft.
2 nd Floor	Ceiling Plaster		No	446 sq. ft.
		Total		4,975 sq. ft.

Table 4 - Summary of All Asbestos Containing Materials, 2328 Maffett 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 27, 2016

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 2408 Baker St., Muskegon Heights, MI 49444

Parcel ID: 61-26-185-118-0022-00

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 2408 Baker 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 1,365 square foot residential building (the Building) constructed in 1955. The Building was constructed on a concrete block basement with one aboveground floor. The exterior walls of the Building were finished with aluminum lap 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, three bedrooms and furnace room on the first floor.

VISUAL INSPECTION AND SAMPLING

Asbestos Containing Materials Inspection

Mr. Aaron Paquet of Red Cedar Consulting (Red Cedar), an accredited State Of Michigan/EPA Asbestos Building Inspector (Accreditation Number A30955) whom completed training per the Michigan Asbestos

Project No.: 16-1070 Muskegon County Land Bank Parcel ID: 61-26-185-118-0022-00

Workers Accreditation Act 440 completed an inspection of the Subject Property on May 14, 2016 for suspected asbestos containing building materials.

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

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

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

- Asphalt Shingle
- Linoleum
- 1'x1' Ceiling Tile
- 12"x12" Vinyl Tile
- Drywall
- 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.

Muskegon County Land Bank Parcel ID: 61-26-185-118-0022-00

Hazardous Materials Inspection

On May 14, 2016 the Subject Property was also inspected for the presence of hazardous materials which include but are not limited to polychlorinated biphenyls (PCBs) and potential mercury containing equipment and any items or containers that may contain or be classified as a hazardous or regulated material. Each material, if identified, was documented along with the approximate location. Any materials identified as hazardous are included in Table 1

INSPECTION RESULTS AND RECOMMENDATIONS

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

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

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

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

Presumed Asbestos Containing Material

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

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

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

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

Muskegon County Land Bank Parcel ID: 61-26-185-118-0022-00

Friable ACM's

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

Category I ACM

One type of resilient floor covering (Tan Linoleum) located within the kitchen was found to contain up to 20% Chrysotile asbestos. The assessment to quantify the extent of this material identified approximately 165 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 (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.

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 (2)
- Air Conditioning Unit (1)
- Pint Container Misc. Solvent (1)
- Gallon Container Misc. Paint (1)
- Television (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: 61-26-185-118-0022-00

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: 61-26-185-118-0022-00

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

Rain 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: 2408 Baker St

Report To:

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

ARI Report # 16-64870

Date Collected: 05/14/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64870 - 01

Cust. #: BS-HM-01A

Material: Asphalt Shingle/Roofing

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 3

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 20% Fiberglass - 1%

Other - 79%

Lab ID #: 64870 - 01a

Cust. #: BS-HM-01A

Asbestos Present: **NO**

Cellulose - 20%

No Asbestos Observed

Other - 80%

Material: Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 3

Asbestos Present: NO

Cellulose - 20%

No Asbestos Observed

Other - 80%

Material: Shingle

Lab ID #: 64870 - 01b Cust. #: BS-HM-01A

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.

NVLAP Lab Code 102118-0

APEX Research Inc., 11054 Hi Tech Drive, Whitmore Lake, MI 48189 (734) 449-9990, Fax (734) 449-9991



Test Method, Polarized Light Microscopy (PLM)

Project: 2408 Baker St

Report To:

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

ARI Report # 16-64870

Date Collected: 05/14/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 20%

Fiberglass - 2%

Other - 78%

Lab ID #: 64870 - 02 Cust. #: BS-HM-01B

Material: Asphalt Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 2

Cellulose - 20%

Lab ID #: 64870 - 02a Cust. #: BS-HM-01B

Material: Shingle

Location:

Layer: 2 of 2

Asbestos Present: **NO** No Asbestos Observed

Other - 80%

Appearance: black, fibrous, homogenous

Lab ID #: 64870 - 03

Cust. #: BS-HM-02A

Asbestos Present: NO No Asbestos Observed

Cellulose - 60%

Other - 40%

Material: Beige 12x12 Vinyl Tile/Flooring

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

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 2408 Baker St

Report To:

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

ARI Report # 16-64870

Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64870 - 04

Cust. #: BS-HM-02B

Material: Beige 12x12 Vinyl Tile/Flooring

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64870 - 05 Cust. #: BS-HM-03A

Material: Tan Linoleum

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64870 - 06

Location:

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 60%

Other - 40%

Asbestos Present: YES Chrysotile - 20%

Other - 80%

Asbestos Present:

Cust. #: BS-HM-03B Material: Tan Linoleum

NOT ANALYZED

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.



Test Method, Polarized Light Microscopy (PLM)

Project: 2408 Baker St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64870

Date Collected: 05/14/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64870 - 07

Cust. #: BS-HM-04A

Material: Black Linoleum

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Cellulose - 15%

Fiberglass - 5% Other - 80%

Cellulose - 15%

Fiberglass - 5%

Other - 80%

Lab ID #: 64870 - 08

Cust. #: BS-HM-04B

Material: Black Linoleum

Location:

A

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64870 - 09 Cust. #: BS-HM-05A

Material: Beige Linoleum

Asbestos Present: **NO**No Asbestos Observed

Cellulose - 10%

Fiberglass - 5%

Other - 85%

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: 2408 Baker St

Report To:

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

ARI Report # 16-64870 Date Collected: 05/14/16

Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 10%

Fiberglass - 5%

Other - 85%

Lab ID #: 64870 - 10

Cust. #: BS-HM-05B

Material: Beige Linoleum

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

No Asbestos Observed

Asbestos Present: NO

Cellulose - 1% Other - 99%

Lab ID #: 64870 - 11 Cust. #: BS-HM-06A

Material: White 12x12 Vinyl Tile

Location:

Appearance: white, fibrous, homogenous

Layer: 1 of 3

Asbestos Present: NO No Asbestos Observed

Other - 100%

Lab ID #: 64870 - 11a Cust. #: BS-HM-06A

Material: Glue

Location:

Appearance: clear,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: 2408 Baker St

Report To:

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

ARI Report # 16-64870

Date Collected: 05/14/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Lab ID #: 64870 - 11b

Cust. #: BS-HM-06A Material: Linoleum

Location:

Appearance: beige, fibrous, homogenous

Layer: 3 of 3

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 15%

Lab ID #: 64870 - 12

Cust. #: BS-HM-06B

Material: White 12x12 Vinyl Tile

Location:

Appearance: white, fibrous, homogenous

Layer: 1 of 3

Lab ID #: 64870 - 12a

Cust. #: BS-HM-06B

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 3

Non-Asbestos

Fiberglass - 5%

Other - 80%

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: 2408 Baker St

Report To:

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

ARI Report # 16-64870

Date Collected: 05/14/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64870 - 12b

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

Location:

Appearance: beige, fibrous, homogenous

No Asbestos Observed

Cellulose - 15%

Other - 80%

Layer: 3 of 3

Lab ID #: 64870 - 13

Cust. #: BS-HM-07A

Material: White 1x1 Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64870 - 14

Cust. #: BS-HM-07B

Material: White 1x1 Ceiling Tile

Location:

Appearance: brown,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: **NO**

Fiberglass - 5%

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: 2408 Baker St

Report To:

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

ARI Report # 16-64870

Date Collected: 05/14/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64870 - 15

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

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 2

Lab ID #: 64870 - 15a

Cust. #: BS-HM-08A

Material: Joint Compound/Texture Material

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 64870 - 16

Cust. #: BS-HM-08B

Material: Drywall

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 15%

Fiberglass - 5%

Other - 80%

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 1%

Other - 99%

No Asbestos Observed

Asbestos Present: NO

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: 2408 Baker St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64870

Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64870 - 17

Cust. #: BS-HM-09A

Material: Glazing

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO**Chrysotile - 0.75%

POINT COUNT RESULT

Wollastonite - 1%

Other - 98.25%

Lab ID #: 64870 - 18

Cust. #: BS-HM-09B

Material: Glazing

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO**

Chrysotile - 0.50%

POINT COUNT RESULT

Wollastonite - 1%

Other - 98.50%

Other - 100%

Lab ID #: 64870 - 19

Cust. #: BS-HS-01A

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: 2408 Baker St

Report To:

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

ARI Report # 16-64870

Date Collected: 05/14/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64870 - 19a Cust. #: BS-HS-01A

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 1%

Vermiculite - 5%

Other - 94%

Lab ID #: 64870 - 20

Cust. #: BS-HS-01B

Material: Texture

Location:

Appearance: white, fibrous, homogenous

Layer: 1 of 3

Asbestos Present: **NO** No Asbestos Observed

Wollastonite - 5%

Other - 95%

Lab ID #: 64870 - 20a

Cust. #: BS-HS-01B

Material: Plaster Finish Coat Location:

Appearance: green, nonfibrous, homogenous

Layer: 2 of 3

Asbestos Present: NO No Asbestos Observed

Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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



Test Method, Polarized Light Microscopy (PLM)

Project: 2408 Baker St

Report To:

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

ARI Report # 16-64870 Date Collected: 05/14/16

Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64870 - 20b Cust. #: BS-HS-01B

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

Layer: 3 of 3

No Asbestos Observed

Cellulose - 2%

Other - 100%

Lab ID #: 64870 - 21

Cust. #: BS-HS-01C

Material: Plaster Finish Coat

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 1 of 2

Lab ID #: 64870 - 21a

Cust. #: BS-HS-01C

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: **NO**

Vermiculite - 5%

Other - 93%

Asbestos Present: **NO** No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Cellulose - 1%

Vermiculite - 5% Other - 94%

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

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 2408 Baker St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64870

Date Collected: 05/14/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64870 - 22 Cust. #: BS-HS-1D

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 64870 - 22a

Cust. #: BS-HS-1D

Material: Plaster Base Coat

Asbestos Present: NO

ال در سده ما

Cellulose - 1%

No Asbestos Observed

Vermiculite - 5%

Other - 94%

Other - 100%

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 64870 - 23

Asbestos Present: NO

No Asbestos Observed

Cust. #: BS-HS-1E

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: 2408 Baker St

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

ARI Report # 16-64870

Date Collected: 05/14/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64870 - 23a Cust. #: BS-HS-1E

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 1%

Vermiculite - 5% Other - 94%

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.

64870

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 AS hour City, St., Zip: Address: Phone: Client Name: Relinquished by: 6 Turn Around Times: (Circle One) Lab ID (888) 449-4566 24 hour 72 hour # 9 Lansing, MI 48901 Red Cedar Consulting PO Box 13216 SSAMOR 88/78-01A B5 742-06A 135/4m-03/ BS Jun 01 A 85-Amo3B 35-14m-023 85-1/m-053 BS-14m-04A Rs fm-05A Sto-WH-SS TTP All Samples Except Plaster Client ID# _ Received by: ___ Fax: (888) 448-8739 white 12x12 vingtile Baige 1 Beige Black - harleur Block Liveleum Tan Lindren Two Loweleum Berige 1242 Dury Beige Lindleum Asphalt Shingle Asphat Shine Asbestos: Bulk Mold: Lead: TEM: Material/Location Lindeway 12×12 Jungl Tile 2016 Bulk Bulk AHERA 7400 PLM EPA 600, PC all samples with a detection of <5% ACM. × Relinquished by: Wipe Wipe Date of Survey: 514-6 Contact Person: Project: Project #: Bulk/NOB Air Point Count BioSIS 2408 Volume Aaron Paquet EPA Level II Paint Bater St, Other Received by: Area Viable Results Lab Use Only
Log-In ____ Report_

Rev: 12/03 Work Forms: COC

FORVER'S XILVED

ST.

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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Lab Use Only	APEX	2 af 3

Date: アイレース	Relinquished by:	22	と	\mathcal{E}	Z,	26	7	16	15	14	6)	D	Lab ID#	Other:		48 hoer 72 hour	Rush 24 hour			Phone: (888)449-4566	City, St., Zip:	Address:	Client Name: _F
Date:	Received by		BS-48-015	85 745 DIS	85-745-014	B5-4m-098	BS-ymort	BS -4m -0813	35-4m-08A	BS Mm-07B	135 Apr 27A	290-wy S9	Client ID#	_ (TTP) All Samples Except Plaster TEM:)			Around Limes: (Circle One)	•	9-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
Date:					Master	Colorins	Columns	Drywod	Dry Well	which we Ceiling Tile	white lat eating tile	whok were ofultile	Material/Location	xcept Plaster TEM: AHERA 7400	Mold: Bulk Tape	Lead: Bulk Wipe	Asbestos: Bulk Wipe	PLM EPA 60		(888) 448-8739	H		
Ţ	Relinquished by:Re									le	((6)	Volume ,	Bulk/NOB EPA Level II	e BioSIS Other	Air Paint	Point Count	all samples	apaquet@r	Contact Person: Aaron Paquet	Project #:	Project: 2408 Bale	Date of Survey: 5-14-16
Date :	Received by:												Area Results		er Viable	Soil	PCM	with a detection of <5% ACM.	edcedarconsulting.ne	luet.		St.	Lab Use Only
													, 1						cT				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

Date: 5-17-6	Relinquished by:						23	Lab ID #	Other:		Fi .	Rush 24 hour	Turn Arou	Phone: (888) 449-4566	City, St., Zip:	l	Client Name: _
Date :	Received by:						BS-118-011E	Client ID#	(IIP)All Samples Except Plaster TEM:				Turn Around Times: (Circle One)	9-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
MAY 1 7 2016 Date:							Plasto-	Material/Location	AHERA 7400	Mold: Bulk Tape	Lead: Bulk Wipe _	Asbestos: Bulk Wipe _	1 WTd	(888) 448-8739	Pro	Pro	
Date:	sed by:Received by:							Volume Area	Bulk/NOB EPA Level II	BioSISOther	Air Paint	Point Count PCM		Contact Person: Aaron Paquet	Project #:	Project: 24 08 Bake St.	Date of Survey: 5-14-6
	by:							a Results		Viable	Soil		apaquet@redcedarconsulting.net with a detection of <5% ACM.				Lab Use Only Log-In

Rev: 12/03 Work Forms: COC

STATISTARY

Red Cedar Consulting

Tables

Table 1 - Summary of Hazardous Materials 2408 Baker St., Muskegon Heights, Michigan

Hazardous Materials Description and Location								
Location	Material Description	Quantity						
Exterior	Automobile Tire	2						
Dining	Air Conditioning Unit	1						
Dining	Pint Container Misc. Solvent	1						
NW Bedroom	Gallon Container Misc. Paint	1						
NE Bedroom	Television	1						
NW Bedroom	Television	3						

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2408 Baker St., Muskegon Heights, Michigan

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
BS-HM-01A	Asphalt Shingle	No	M	Category I	ND/ND/ND	Exterior	NA
BS-HM-01B	Asphalt Shingle	No	M	Category I	ND/ND	Exterior	NA
BS-HM-02A	Beige 12x12 Vinyl Tile	No	M	Category I	ND	Front Entry	NA
BS-HM-02B	Beige 12x12 Vinyl Tile	No	М	Category I	ND	Front Entry	NA
BS-HM-03A	Tan Linoleum	No	М	Category I	20% CH	Living	165 sq. ft.
BS-HM-03B	Tan Linoleum	No	М	Category I	NA	Living	NA
BS-HM-04A	Black Linoleum	No	М	Category I	ND	Kitchen	NA
BS-HM-04B	Black Linoleum	No	М	Category I	ND	Kitchen	NA
BS-HM-05A	Beige Linoleum	No	М	Category I	ND	Bath	NA
BS-HM-05B	Beige Linoleum	No	М	Category I	ND	Bath	NA
BS-HM-06A	White 12x12 Vinyl Tile	No	M	Category I	ND/ND/ND	Furnace Room	NA
BS-HM-06B	White 12x12 Vinyl Tile	No	M	Category I	ND/ND/ND	Furnace Room	NA
BS-HM-07A	White 1'x1' Ceiling Tile	Yes	M	Category II	ND	NE Bedroom	NA
BS-HM-07B	White 1'x1' Ceiling Tile	Yes	M	Category II	ND	NE Bedroom	NA
BS-HM-08A	Drywall	No	M	Category II	ND/ND	Living Ceiling	NA
BS-HM-08B	Drywall	No	М	Category II	ND	NW Bedroom Wall	NA
BS-HM-09A	Glazing	Yes	M	Category II	0.75%CH	NE Bedroom	NA
BS-HM-09B	Glazing	Yes	M	Category II	0.5%CH	N Bedroom	NA
BS-HS-01A	Plaster	No	S	Category II	ND/ND	Kitchen Wall	NA
BS-HS-01B	Plaster	No	S	Category II	ND/ND/ND	Living Wall	NA
BS-HS-01C	Plaster	No	S	Category II	ND/ND	NW Bedroom Wall	NA
BS-HS-01D	Plaster	No	S	Category II	ND/ND	Living Ceiling	NA
BS-HS-01E	Plaster	No	S	Category II	ND/ND	Central Bedroom Ceiling	NA

Notes:

Material Types

M = Miscellaneous building material

TSI = Thermal System Insulation

S = Surfacing Material

Abbreviations

NQ = Not quantified NA = Not applicable

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

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2408 Baker 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, 2408 Baker 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

S = Surfacing Material

Abbreviations

lin. ft. = linear feet

sq. ft. = square feet

Table 4 - Summary of All Asbestos Containing Materials, 2408 Baker St., Muskegon Heights, Michigan

Interior - Asbestos Containing Materia	ıls			
Location	Material Description		Friable	Approx. Quantity
Living Room	Tan Linoleum		No	165 sq. ft.
		Total		165 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 27, 2016

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 2428 Reynolds St., Muskegon Heights, MI 49444 Parcel ID: 61-26-185-115-0017-00

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 2428 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 660 sq. ft. detached garage and approximate 1,248 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 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 bedroom on the first floor while the second floor contains a living room, dining room, kitchen, bathroom and one bedroom.

VISUAL INSPECTION AND SAMPLING

Asbestos Containing Materials Inspection

Mr. Aaron Paquet of Red Cedar Consulting (Red Cedar), an accredited State Of Michigan/EPA Asbestos Building Inspector (Accreditation Number A30955) whom completed training per the Michigan Asbestos

Project No.: 16-1070 Muskegon County Land Bank Parcel ID: 61-26-185-115-0017-00

Workers Accreditation Act 440 completed an inspection of the Subject Property on May 14, 2016 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
- Rolled Roofing
- Linoleum
- 1'x1' Ceiling Tile
- Glue Pod
- 2'x2' Ceiling Tile
- 12"x12" Vinyl Tile
- Felt Paper
- 9"x9" Vinyl Tile
- Drywall
- Glazing
- Plaster

Red Cedar staff collected thirty five 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

Muskegon County Land Bank Parcel ID: 61-26-185-115-0017-00

measures defined by AHERA. The laboratory analytical report prepared by APEX for the thirty five samples is included as Attachment A.

Hazardous Materials Inspection

On May 14, 2016 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 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: 61-26-185-115-0017-00

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.)
- NW Bedroom (1 register, 10 sq. ft.)
- 2nd Fl. Living (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- 2nd Fl. Dining (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.)
- Basement (misc. HVAC wrap on Ductwork, 25 sq. ft.)

Category I ACM

Three types of resilient floor covering (Green Linoleum, Green 9"x9" Vinyl Tile and Dark Green Linoleum) located within the 2nd floor kitchen, basement, rear entry and 2nd floor bath, respectively, were found to contain up to 30% Chrysotile asbestos. The assessment to quantify the extent of this material identified approximately 507 sq. ft. of this material within the Building.

Category II ACM

Glue Pod samples, collected from the Basement were each found to contain up to 5% asbestos following analysis. The assessment to quantify the extent of this material identified approximately 504 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, 10 sq. ft.)
- Dining (1 register, 10 sq. ft.)
- NW Bedroom (1 register, 10 sq. ft.)
- 2nd Fl. Living (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- 2nd Fl. Dining (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.)
- Basement (misc. HVAC wrap on Ductwork, 25 sq. ft.)

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.

Muskegon County Land Bank Parcel ID: 61-26-185-115-0017-00

The Category I resilient floor coverings (Green Linoleum, Felt Paper/Green 9"x9" Vinyl Tile and Dark Green 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.

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)
- Thermostat (1)
- Television (1)
- Gallon Container Misc. Paint (11)

REGULATORY REQUIREMENTS

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

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

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

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

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

Muskegon County Land Bank Parcel ID: 61-26-185-115-0017-00

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: 2428 Reynolds St.

Report To:

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

ARI Report # 16-64882

Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Fiberglass - 30%

Other - 70%

Lab ID #: 64882 - 01

Cust. #: RS-HM-01A

Material: Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 1

No Asbestos Observed

Asbestos Present: **NO**

Fiberglass - 30%

Other - 70%

Lab ID #: 64882 - 02 Cust. #: RS-HM-01B

Material: Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64882 - 03

Cust. #: RS-HM-02A

Material: Rolled Roofing/Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 2

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: 2428 Reynolds St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64882

Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 30%

Other - 70%

Lab ID #: 64882 - 03a

Cust. #: RS-HM-02A

Material: Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 64882 - 04

Cust. #: RS-HM-02B

Asbestos Present: NO

. 110

Fiberglass - 30%

No Asbestos Observed

Other - 70%

Material: Rolled Roofing/Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 2

Asbestos Present: NO

No Asbestos Observed

Cellulose - 40%

Other - 60%

Material: Shingle

Lab ID #: 64882 - 04a Cust. #: RS-HM-02B

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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NVLAP Lab Code 102118-0

APEX Research Inc., 11054 Hi Tech Drive, Whitmore Lake, MI 48189 (734) 449-9990, Fax (734) 449-9991



Test Method, Polarized Light Microscopy (PLM)

Project: 2428 Reynolds St.

Report To:

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

ARI Report # 16-64882

Date Collected: 05/14/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 40%

Other - 60%

Lab ID #: 64882 - 05

Cust. #: RS-HM-03A

Material: Green Linoleum

Location:

Appearance: green, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

Asbestos Present: NO

No Asbestos Observed

Cellulose - 40% No Asbestos Observed Other - 60%

Cust. #: RS-HM-03B

Lab ID #: 64882 - 06

Material: Green Linoleum

Location:

Appearance: green, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64882 - 07

Cust. #: RS-HM-04A

Material: Green 12x12 Vinyl Tile

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

Location:

Appearance: green,nonfibrous,homogenous

Layer: 1 of 2

Robert T. Letarte Jr., Laboratory Director

Other - 100%

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Test Method, Polarized Light Microscopy (PLM)

Project: 2428 Reynolds St.

Report To:

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

ARI Report # 16-64882

Date Collected: 05/14/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Other - 100%

Other - 100%

Lab ID #: 64882 - 07a

Cust. #: RS-HM-04A

Material: Glue Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

Lab ID #: 64882 - 08

Cust. #: RS-HM-04B

Material: Green 12x12 Vinyl Tile

Location:

Appearance: green,nonfibrous,homogenous

Layer: 1 of 2

Lab ID #: 64882 - 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 2

Asbestos Present: **NO**

Other - 100%

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: 2428 Reynolds St.

Report To:

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

ARI Report # 16-64882

Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64882 - 09

Cust. #: RS-HM-05A

Material: Beige Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 10%

Fiberglass - 10% Other - 80%

Layer: 1 of 1

Lab ID #: 64882 - 10

Asbestos Present: NO

Cellulose - 10%

Cust. #: RS-HM-05B

Material: Beige Linoleum

No Asbestos Observed

Fiberglass - 10%

Other - 80%

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 64882 - 11

Cust. #: RS-HM-06A

Asbestos Present: NO

Cellulose - 80%

Material: White 1x1 Smooth Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 2

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: 2428 Reynolds St.

Report To:

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

ARI Report # 16-64882

Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: YES

Chrysotile - 5%

Non-Asbestos

Other - 95%

Lab ID #: 64882 - 11a

Cust. #: RS-HM-06A

Material: Glue Pod

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

Cellulose - 80%

Lab ID #: 64882 - 12 Cust. #: RS-HM-06B

No Asbestos Observed

Other - 20%

Material: White 1x1 Smooth Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 2

Lab ID #: 64882 - 12a

Cust. #: RS-HM-06B

Material: Glue Pod

Location:

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

NOT ANALYZED

Asbestos Present:

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: 2428 Reynolds St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64882 Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

Asbestos Present: **NO**

Asbestos Present: YES

Chrysotile - 30%

No Asbestos Observed

No Asbestos Observed

Non-Asbestos

Cellulose - 1%

Other - 99%

Other - 100%

Other - 70%

Lab ID #: 64882 - 13

Cust. #: RS-HM-07A

Material: Glazing

Location:

Appearance: beige, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 64882 - 14

Cust. #: RS-HM-07B

Material: Glazing

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 64882 - 15

Cust. #: RS-HM-08A

Material: Green Linoleum

Location:

Appearance: green, 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: 2428 Reynolds St.

Report To:

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

Lansing, MI 48901

ARI Report # 16-64882

Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Other - 70%

Lab ID #: 64882 - 16

Cust. #: RS-HM-08B

Location:

Material: Green Linoleum

NOT ANALYZED

Asbestos Present: YES

Chrysotile - 30%

Asbestos Present:

Appearance: Layer: of

Lab ID #: 64882 - 17

Cust. #: RS-HM-09A

Material: Dark Green Linoleum

Location:

Appearance: green, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 64882 - 18

Asbestos Present:

Cust. #: RS-HM-09B

Material: Dark Green Linoleum

Location:

NOT ANALYZED

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.



Test Method, Polarized Light Microscopy (PLM)

Project: 2428 Reynolds St.

Report To:

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

ARI Report # 16-64882

Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64882 - 19

Cust. #: RS-HM-10A

Material: Tan Linoleum/Felt

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

No Asbestos Observed

Cellulose - 50%

Fiberglass - 10%

Lab ID #: 64882 - 20

Cust. #: RS-HM-10B

Material: Tan Linoleum/Felt

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 64882 - 21

Cust. #: RS-HM-11A

Material: Old Linoleum

Layer: 1 of 1

Asbestos Present: **NO**

Other - 40%

Asbestos Present: **NO**

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Cellulose - 30%

Fiberglass - 10%

Other - 60%

Location:

Appearance: grey, fibrous, nonhomogenous

Cellulose - 50% Other - 50%

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

Robert T. Letarte Jr., Laboratory Director

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



Test Method, Polarized Light Microscopy (PLM)

Project: 2428 Reynolds St.

Report To:

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

ARI Report # 16-64882 Date Collected: 05/14/16

Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 50%

Other - 50%

Lab ID #: 64882 - 22

Cust. #: RS-HM-11B Material: Old Linoleum

Location:

Appearance: grey, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 64882 - 23

Cust. #: RS-HM-12A

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 50%

Other - 50%

Other - 90%

Material: Felt Paper

Location:

Appearance: black, fibrous, nonhomogenous

Layer: 1 of 3

Lab ID #: 64882 - 23a

Cust. #: RS-HM-12A Material: Green 9x9 Vinyl Tile

Location:

Appearance: green, fibrous, homogenous

Layer: 2 of 3

Chrysotile - 10%

Asbestos Present: YES

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: 2428 Reynolds St.

Report To:

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

ARI Report # 16-64882

Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64882 - 23b

Cust. #: RS-HM-12A

Material: Mastic

Location:

Appearance: black,nonfibrous,homogenous

Layer: 3 of 3

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 50% Other - 50%

Lab ID #: 64882 - 24 Cust. #: RS-HM-12B

Material: Felt Paper

Location:

Appearance: black, fibrous, nonhomogenous

Layer: 1 of 3

Lab ID #: 64882 - 24a

Cust. #: RS-HM-12B

Material: Green 9x9 Vinyl Tile

Location:

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

NOT ANALYZED

Asbestos Present:

Appearance:

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: 2428 Reynolds St.

Report To:

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

ARI Report #

16-64882 Date Collected: 05/14/16

Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Other - 100%

Cellulose - 80%

Other - 98.75%

Other - 20%

Lab ID #: 64882 - 24b

Cust. #: RS-HM-12B

Material: Mastic

Location:

Appearance: black,nonfibrous,homogenous

Layer: 3 of 3

Asbestos Present: **NO**

No Asbestos Observed

Lab ID #: 64882 - 25

Cust. #: RS-HM-13A

Material: White Potted 1x1 Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 2

Asbestos Present: YES

Chrysotile - 1.25%

POINT COUNT RESULT

Lab ID #: 64882 - 25a Cust. #: RS-HM-13A

Material: Glue Pod

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

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Test Method, Polarized Light Microscopy (PLM)

Project: 2428 Reynolds St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64882

Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 80%

Other - 20%

Lab ID #: 64882 - 26

Cust. #: RS-HM-13B

Material: White Potted 1x1 Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 2

Lab ID #: 64882 - 26a

Cust. #: RS-HM-13B

Material: Glue Pod

Location: Appearance:

Layer: 2 of 2

Asbestos Present:

NOT ANALYZED

Lab ID #: 64882 - 27

Cust. #: RS-HM-14A

#: KS-HM-14A

Material: White 2x2 Ceiling Tile

Location:

Appearance: brown, fibrous, nonhomogenous

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.



Test Method, Polarized Light Microscopy (PLM)

Project: 2428 Reynolds St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64882

Date Collected: 05/14/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 80%

Other - 20%

Lab ID #: 64882 - 28

Cust. #: RS-HM-14B

Material: White 2x2 Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

No Asbestos Observed

Asbestos Present: **NO**

Cellulose - 20%

Other - 80%

Cust. #: RS-HM-15A

Material: Drywall

Lab ID #: 64882 - 29

Location:

Location

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 64882 - 30

Cust. #: RS-HM-15B

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 1

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: 2428 Reynolds St.

Report To:

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

ARI Report # 16-64882

Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Other - 100%

Lab ID #: 64882 - 31

Cust. #: RS-HS-01A

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 64882 - 31a

Cust. #: RS-HS-01A

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 64882 - 32

Cust. #: RS-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 - 1%

Other - 98%

Other - 100%

Cellulose - 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: 2428 Reynolds St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64882

Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64882 - 32a Cust. #: RS-HS-01B

ust. #: RS-HS-01B (aterial: Plaster Base Co.

Material: Plaster Base Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Lab ID #: 64882 - 33 Cust. #: RS-HS-01C

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: NO

Cellulose - 1%

Lab ID #: 64882 - 33a Cust. #: RS-HS-01C

Material: Plaster Base Coat

No Asbestos Observed

Hair - 2% Other - 97%

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

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Test Method, Polarized Light Microscopy (PLM)

Project: 2428 Reynolds St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64882

Date Collected: 05/14/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64882 - 34

Cust. #: RS-HS-01D

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: NO

No Asbestos Observed

Cellulose - 2%

Other - 100%

Hair - 2% Other - 96%

Material: Plaster Base Coat

Lab ID #: 64882 - 34a

Cust. #: RS-HS-01D

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Lab ID #: 64882 - 35 Cust. #: RS-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: 2428 Reynolds St.

Report To:

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

ARI Report # 16-64882

Date Collected: 05/14/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Cellulose - 2%

Lab ID #: 64882 - 35a Cust. #: RS-HS-01E

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 64882 - 53

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

Lab ID #: 64882 - 54

Cust. #: Material: Location: Appearance: Layer: of Asbestos Present: **NO**

No Asbestos Observed

Hair - 1%

Other - 97%

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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64882

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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)N: Aaron Paquet	Contact Person:	Fax: (888) 448-8739	449-4566	Phone:
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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



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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	Date:	Relinquished by: ${\cal C}_{{\cal V}}$												Lab II	Other:	2	48 hour	Rush		Phone: _	City, St., Zip:	Address:	Client Name:
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Relinquished by: Carl					43	25	Lab ID#	Outet .		Ĕ	Rush 24 hour	Turn Arol	Phone: (888) 449-4566	City, St., Zip: Lansing, MI	Address:	Client Name:
Received by:						Q10-84-88	Client ID#	All Samples Except				Turn Around Times: (Circle One)	49-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
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by: Received by:							Volume Area	Bulk/NOB EPA Level II	BioSIS Other	Air S	Point Count PCM		Contact Person: Aaron Paquet		~	Date of Survey: 5-14-16
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Rev: 12/03 Work Forms: COC

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Red Cedar Consulting

Tables

Table 1 - Summary of Hazardous Materials, 2428 Reynolds St., Muskegon Heights, Michigan

	Hazardous Materials Description and Location								
Location	Material Description	Quantity							
Dining	Thermostat	1							
Kitchen	Smoke Detector	1							
Living	Television	1							
2 nd Fl. Dining	Smoke Detector	1							
2 nd Fl. Kitchen	Gallon Container Misc. Paint	5							
Basement	Smoke Detector	1							
Basement	Gallon Container Misc. Paint	6							

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2428 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	Asphalt Shingle	No	M	Category I	ND	Exterior	NA
RS-HM-01B	Asphalt Shingle	No	M	Category I	ND	Exterior	NA
RS-HM-02A	Rolled Roofing	No	M	Category I	ND/ND	Garage Exterior	NA
RS-HM-02B	Rolled Roofing	No	M	Category I	ND/ND	Garage Exterior	NA
RS-HM-03A	Old Green Linoleum	No	M	Category I	ND	Front Entry	NA
RS-HM-03B	Old Green Linoleum	No	M	Category I	ND	Front Entry	NA
RS-HM-04A	Green 12x12 Vinyl Tile	No	M	Category I	ND/ND	Kitchen	NA
RS-HM-04B	Green 12x12 Vinyl Tile	No	M	Category I	ND/ND	Kitchen	NA
RS-HM-05A	Beige Linoleum	No	M	Category I	ND	NW Bedroom	NA
RS-HM-05B	Beige Linoleum	No	M	Category I	ND	NW Bedroom	NA
RS-HM-06A	White 1'x1' Smooth Ceiling Tile/Glue Pod	Yes	M	Category II	ND/5% CH	Basement	184 sq. ft.
RS-HM-06B	White 1'x1' Smooth Ceiling Tile/Glue Pod	Yes	M	Category II	ND/NA	Basement	NA
RS-HM-07A	Glazing	Yes	M	Category II	ND	NW Bedroom	NA
RS-HM-07B	Glazing	Yes	M	Category II	ND	NW Bedroom	NA
RS-HM-08A	Green Linoleum	No	M	Category I	30% CH	2 nd Fl. Kitchen	88 sq. ft.
RS-HM-08B	Green Linoleum	No	M	Category I	NA	2 nd Fl. Kitchen	NA
RS-HM-09A	Dark Green Linoleum	No	M	Category I	30% CH	2 nd Fl. Bath	35 sq. ft.
RS-HM-09B	Dark Green Linoleum	No	M	Category I	NA	2 nd Fl. Bath	NA
RS-HM-10A	Tan Linoleum	No	M	Category I	ND	2 nd Fl. NW Bedroom	NA
RS-HM-10B	Tan Linoleum	No	M	Category I	ND	2 nd Fl. NW Bedroom	NA
RS-HM-11A	Old Linoleum	No	M	Category I	ND	2 nd Fl. Hall	NA
RS-HM-11B	Old Linoleum	No	M	Category I	ND	2 nd Fl. Hall	NA
RS-HM-12A	Felt Paper/Green 9"x9" Vinyl Tile	No	M	Category I	ND/10% CH/ND	Basement Rear Entry	384 sq. ft.
RS-HM-12B	Felt Paper/Green 9"x9" Vinyl Tile	No	M	Category I	ND/NA/ND	Basement Rear Entry	NA
RS-HM-13A	White 1'x1' Pitted Ceiling Tile/Glue Pod	Yes	M	Category II	ND/1.25% CH	Basement	320 sq. ft.

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2428 Reynolds St., Muskegon Heights, Michigan

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
RS-HM-13B	White 1'x1' Pitted Ceiling Tile/Glue Pod	Yes	М	Category II	ND/NA	Basement	NA
RS-HM-14A	White 2'x2' Ceiling Tile	Yes	M	Category II	ND	Basement	NA
RS-HM-14B	White 2'x2' Ceiling Tile	Yes	M	Category II	ND	Basement	NA
RS-HM-15A	Drywall	No	M	Category II	ND	Basement Wall	NA
RS-HM-15B	Drywall	No	M	Category II	ND	Basement Wall	NA
RS-HS-01A	Plaster	No	S	Category II	ND/ND	NW Bedroom Wall	NA
RS-HS-01B	Plaster	No	S	Category II	ND/ND	Dining Wall	NA
RS-HS-01C	Plaster	No	S	Category II	ND/ND	Kitchen Ceiling	NA
RS-HS-01D	Plaster	No	S	Category II	ND/ND	2 nd Fl. NW Bedroom Wall	NA
RS-HS-01E	Plaster	No	S	Category II	ND/ND	2 nd Fl. Dining Ceiling	NA

Abbreviations

= Not quantified

NQ

Notes:

Material Types

M = Miscellaneous building material
TSI = Thermal System Insulation

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, 2428 Reynolds St., Muskegon Heights, Michigan

A	Asbestos Containing Material Description	and Location			
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity
Living (1 register, 10 sq. ft.) Dining (1 register, 10 sq. ft.) NW Bedroom (1 register, 10 sq. ft.) 2 nd Fl. Living (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) 2 nd Fl. Dining (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) 2 nd Fl. NW Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) 2 nd Fl. NW Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) Basement (misc. HVAC wrap on Ductwork, 25 sq. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	135 sq. ft.

Notes:

Material Types

M = Miscellaneous building material

TSI = Thermal System Insulation S = Surfacing Material

Abbreviations

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

Table 4 - Summary of All Asbestos Containing Materials, 2428 Reynolds St., Muskegon Heights, Michigan

Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
2 nd Fl. Kitchen	Green Linoleum		No	88 sq. ft.
Basement Rear Entry	Felt Paper/Green 9"x9" Vinyl Tile		No	384 sq. ft.
2 nd Fl. Bath	Dark Green Linoleum		No	35 sq. ft.
		Total		507 sq. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Living (1 register, 10 sq. ft.) Dining (1 register, 10 sq. ft.) NW Bedroom (1 register, 10 sq. ft.) 2 nd Fl. Living (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) 2 nd Fl. Dining (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) 2 nd Fl. NW Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) 2 nd Fl. NW Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) Basement (misc. HVAC wrap on Ductwork, 25 sq. ft.)	HVAC Duct Wrap		Yes	135 sq. ft.
		Total		135 sq. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Basement	White 1'x1' Smooth Ceiling Tile/Glue Pod		Yes	64 sq. ft.
Living Room	White 1'x1' Smooth Ceiling Tile/Glue Pod		Yes	120 sq. ft.
Basement	White Pitted 1'x1' Ceiling Tile/Glue Pod		Yes	320 sq. ft.
		Total		504 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, 2428 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 27, 2016

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 2433 Elwood St., Muskegon Heights, MI 49444 Parcel ID: 61-26-185-108-0009-00

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 2433 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 .14 acre residential parcel which contains a 264 sq. ft. detached garage and approximate 1,304 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 aluminum lap over wood lap while the roof was sealed with asphalt shingles. The Building can be further divided into a front porch, living room/dining room, kitchen, bath, three bedrooms and rear entry on the first floor while the second floor contains two bedrooms.

VISUAL INSPECTION AND SAMPLING

Asbestos Containing Materials Inspection

Mr. Aaron Paquet of Red Cedar Consulting (Red Cedar), an accredited State Of Michigan/EPA Asbestos Building Inspector (Accreditation Number A30955) whom completed training per the Michigan Asbestos

Project No.: 16-1070 Muskegon County Land Bank Parcel ID: 61-26-185-108-0009-00

Workers Accreditation Act 440 completed an inspection of the Subject Property on May 14, 2016 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
- Fiber Lap Siding
- Linoleum
- 1'x1' Ceiling Tile
- Drywall
- 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: 61-26-185-108-0009-00

Hazardous Materials Inspection

On May 14, 2016 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: 61-26-185-108-0009-00

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.)
- SE Bedroom (1 register, 10 sq. ft.)
- Basement (misc. HVAC wrap on Cold Air Ductwork and Framing, 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.)
- SE Bedroom (1 register, 10 sq. ft.)
- Basement (misc. HVAC wrap on Cold Air Ductwork and Framing, 10 sq. ft.)

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

Hazardous Materials

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

- Car (1)
- Automobile Tire (2)
- Smoke Detector (3)
- Thermostat (1)
- Television (1)

Muskegon County Land Bank Parcel ID: 61-26-185-108-0009-00

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: 61-26-185-108-0009-00

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

Caron 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: 2433 Elwood St

Report To:

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

ARI Report #

16-64884

Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 30%

Other - 70%

Lab ID #: 64884 - 01

Cust. #: ES-HM-01A

Material: Asphalt Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 5

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 30%

Other - 70%

Cust. #: ES-HM-01A

Material: Shingle

Lab ID #: 64884 - 01a

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 5

Lab ID #: 64884 - 01b

Cust. #: ES-HM-01A

Material: Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 3 of 5

Asbestos Present: NO

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: 2433 Elwood St

Report To:

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

ARI Report # 16-64884

Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 30%

Other - 70%

Lab ID #: 64884 - 01c

Cust. #: ES-HM-01A

Material: Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 4 of 5

Asbestos Present: **NO**

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Cellulose - 35%

Cellulose - 30% Other - 70%

Other - 65%

Material: Tar Paper

Lab ID #: 64884 - 01d

Cust. #: ES-HM-01A

Location:

Appearance: black, fibrous, homogenous

Layer: 5 of 5

Lab ID #: 64884 - 02

Cust. #: ES-HM-01B

Material: Asphalt Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 1 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: 2433 Elwood St

Report To:

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

ARI Report # 16-64884

Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 30%

Other - 70%

Lab ID #: 64884 - 02a

Cust. #: ES-HM-01B

Material: Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 5

Lab ID #: 64884 - 02b

Cust. #: ES-HM-01B

Asbestos Present: **NO**

Cellulose - 30%

No Asbestos Observed

Other - 70%

Material: Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 3 of 5

Lab ID #: 64884 - 02c

Cust. #: ES-HM-01B

Material: Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 4 of 5

Asbestos Present: NO

No Asbestos Observed

Cellulose - 30%

Other - 70%

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

Robert T. Letarte Jr., Laboratory Director

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Test Method, Polarized Light Microscopy (PLM)

Project: 2433 Elwood St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64884

Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 35%

Other - 65%

Lab ID #: 64884 - 02d

Cust. #: ES-HM-01B

Material: Tar Paper

Location:

Appearance: black, fibrous, homogenous

Layer: 5 of 5

Asbestos Present: NO

No Asbestos Observed

Cellulose - 85%

Other - 15%

Cust. #: ES-HM-02A

Lab ID #: 64884 - 03

Material: Fiberlap Siding

Location:

Appearance: brown,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: **NO**No Asbestos Observed

Cellulose - 85%

Other - 15%

Cust. #: ES-HM-02B

Lab ID #: 64884 - 04

Material: Fiberlap Siding

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: 2433 Elwood St

Report To:

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

ARI Report # 16-64884

Date Collected: 05/14/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64884 - 05

Cust. #: ES-HM-03A

Material: White Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 64884 - 06

Cust. #: ES-HM-03B

Material: White Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 64884 - 07

Cust. #: ES-HM-04A

Material: Tan Linoleum

Appearance: beige, fibrous, nonhomogenous

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

Asbestos Present: **NO**

No Asbestos Observed

Asbestos Present: **NO**

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

Cellulose - 35%

Other - 65%

Cellulose - 35%

Cellulose - 35%

Other - 65%

Other - 65%

Location:

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: 2433 Elwood St

Report To:

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

ARI Report # 16-64884

Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 35%

Other - 65%

Lab ID #: 64884 - 08

Cust. #: ES-HM-04B

Material: Tan Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 64884 - 09

Cust. #: ES-HM-05A

Asbestos Present: **NO**

Asbestos Present: NO

No Asbestos Observed

Cellulose - 35%

Cellulose - 35%

Other - 65%

Other - 65% No Asbestos Observed

Material: Green Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 64884 - 10

Cust. #: ES-HM-05B

Material: Green Linoleum

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: 2433 Elwood St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64884

Date Collected: 05/14/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64884 - 11

Cust. #: ES-HM-06A

Material: White 1x1 Smooth Ceiling Tile

Location:

Appearance: brown,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: **NO**No Asbestos Observed

Cellulose - 95%

Other - 5%

Lab ID #: 64884 - 12

Cust. #: ES-HM-06B

Material: White 1x1 Smooth Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64884 - 13 Cust. #: ES-HM-07A

Madanial Wilde 1-1 Dald

Material: White 1x1 Pebbled Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO**No Asbestos Observed

Cellulose - 95%

Other - 5%

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

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 2433 Elwood St

Report To:

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

ARI Report # 16-64884

Date Collected: 05/14/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Cellulose - 95%

Lab ID #: 64884 - 14

Cust. #: ES-HM-07B

Material: White 1x1 Pebbled Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO** No Asbestos Observed

Other - 5%

Lab ID #: 64884 - 15

Cust. #: ES-HM-08A

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 64884 - 16

Cust. #: ES-HM-08B

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 1

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: 2433 Elwood St

Report To:

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

ARI Report # 16-64884

Date Collected: 05/14/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64884 - 17

Cust. #: ES-HM-09A

Material: Glazing

Location:

Appearance: beige, nonfibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO**

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Cellulose - 35%

Other - 65%

Cust. #: ES-HM-09B

Material: Glazing

Lab ID #: 64884 - 18

Location:

Appearance: beige, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 64884 - 19

Cust. #: ES-HM-10A

Material: Green Floral Linoleum

Location:

Appearance: green, 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: 2433 Elwood St

Report To:

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

ARI Report # 16-64884

Date Collected: 05/14/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 35%

Other - 65%

Lab ID #: 64884 - 20

Cust. #: ES-HM-10B

Material: Green Floral Linoleum

Location:

Appearance: green, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 64884 - 21

Cust. #: ES-HM-11A

Asbestos Present: **NO**

Cellulose - 35%

No Asbestos Observed

Other - 65%

Material: Beige Floral Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 64884 - 22

Cust. #: ES-HM-11B

Material: Beige Floral Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

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: 2433 Elwood St

Report To:

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

ARI Report # 16-64884

Date Collected: 05/14/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

POINT COUNT RESULT

Chrysotile - Trace

Non-Asbestos

Other - 100%

Other - 99.75%

Lab ID #: 64884 - 23

Cust. #: ES-HM-12A

Material: Glazing

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Lab ID #: 64884 - 24

Cust. #: ES-HM-12B

Asbestos Present: **NO**

Chrysotile - 0.25%

POINT COUNT RESULT

Location:

Appearance: grey, fibrous, homogenous

Layer: 1 of 1

Material: Glazing

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.

64884

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: 48 hour Rush Phone: (888)449-4566 Address: City, St., Zip: Client Name: Relinquished by: Turn Around Times: (Circle One) Lab IID 24 hour 72 hour # 4 6 0 O S \mathcal{U} Lansing, MI 48901 Red Cedar Consulting PO Box 13216 ES- HM- 01B ES- 4M-01A ES- HM-03B 460 -WE - 034 ES-HM-OLOA ES- HM- 03B ES-HM-04A ES-HM-03A ES-HM-05B ES-4M-05A ES-HM-04B TTP) All Samples Except Plaster
TEM: Client ID# Received by: Date: Hax: (888) 448-8739 Fiberlap Siding White Linoleum white lat smooth Ceiling Tike Green Linoleum fiberlap Siding Asphalt Shingle Tan Linolaum White Linoleum Green Lingleum Tan Linoleum Asphalt Shingle Mold: Asbestos: Bulk Lead: Material/Location 1523 Bulk Bulk **AHERA 7400** PLM EPA 600, PC all samples with a detection of <5% ACM. × Date: Relinquished by: Wipe Wipe Contact Person: Aaron Paquet Date of Survey: 5.14.16 Project #: Project: 2433 Elwood St. Bulk/NOB Air Point Count BioSIS Volume EPA Level II Paint Other Received by: PCM Area Soil Viable Results Report_ Lab Use Only Log-In

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

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Fax: 734-449-9991

Date: <u>S-17-16</u> Date:	Relinquished by Recei	1 52/4 W-1118		-	19 Es-4m-10A	880-mH-83 91	HO-WH-S3 EI	16 E5-4m 083	15 ES-4m 08A	1 52-42 ST	3 FS-4m-7A	D ES-Horroge	Lab ID # Client ID #	Other:(TTP)All Samples Except			Rush 24 hour	Turn Around Times: (Circle One)	449-4566	City, St., Zip: Lansing, MI 48	Address: PO Box 13216	Client Name: Red Cedar Consulting
APEX RESEARCH Date:	Received by: Relinquished by:	Beige Flore Umoleum	- i	Coxen floral	6 seen Floral Lindeum	Clazing		Dypon	Dry well	white las Public Coiling tike	white lat Pebblishealing tile	whole we smooth ceiling tile	# Material/Location	es Except Plaster TEM: AHERA 7400 Bulk/NOB	Mold: Bulk Tape	Lead: Bulk Wipe	Asbestos: Bulk X Wipe	PLM EPA 600, PC	Fax: (888) 448-8739 Contact	48901 Project #:	Project :	Date of Survey
Date :	Received by:												Volume Area Results	OB EPA Level II	BioSIS Other Viable	Air Paint Soil	Point Count PCM	apaquet@redcedarconsulting.net all samples with a detection of <5% ACM.	Contact Person: Aaron Paquet		3 Elwan St.	Survey: 5-14-6 Lab Use Only

Rev: 12/03 Work Forms: COC

J 4

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

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

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Lab ID#	Client Name: Red Ce Address: PO Box City, St., Zip: Lansin Phone: (888) 449-4566 Turn Around' Rush 24 how 48 how 24 how Other: TIP
Client ID # ES 44m- 92.4 ES 14m- 1215	Client Name: Red Cedar Consulting Address: PO Box 13216 City, St., Zip: Lansing, MI 48901 Phone: (888) 449-4566 Fax: (888) 449-4566 Turn Around Times: (Circle One) Asbeste Rush 24 hour 48 hour Lead: Other: TIP All Samples Except Plaster TEM:
Material/Loc	PLM EPA PLM EPA Sos: Bulk Bulk Bulk AHERA 740
	Date of St Project: Project # Contact Pt 600, PC all san wipe wipe Bulk/NOB
lume	IIVey: 5-14-6 2433 Elwow) St. CISON: Aaron Paquet apaquet@redceda uples with a detection Point Count PCM Air Paint So BioSIS Other EPA Level II
rea Results	Lab Use Only 133
	Client ID# Material/Location Volume Area 5

Rev: 12/03 Work Forms: COC

Red Cedar Consulting

Tables

Table 1 - Summary of Hazardous Materials, 2433 Elwood St., Muskegon Heights, Michigan

Hazardous Materials Description and Location							
Location	Material Description	Quantity					
Garage	Car	1					
Exterior	Automobile Tire	2					
Center Bedroom	Smoke Detector	1					
SW Bedroom	Smoke Detector	1					
Living	Thermostat	1					
Basement	Smoke Detector	1					
Basement	Television	1					

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2433 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	Asphalt Shingle	No	M	Category I	ND/ND/ND/ND/ ND	Exterior	NA
ES-HM-01B	Asphalt Shingle	No	M	Category I	ND/ND/ND/ND/ ND	Exterior	NA
ES-HM-02A	Fiber Lap Siding	Yes	M	Category II	ND	Exterior	NA
ES-HM-02B	Fiber Lap Siding	Yes	M	Category II	ND	Exterior	NA
ES-HM-03A	White Linoleum	No	M	Category I	ND	Front Porch	NA
ES-HM-03B	White Linoleum	No	M	Category I	ND	Front Porch	NA
ES-HM-04A	Tan Linoleum	No	M	Category I	ND	Living/Dining	NA
ES-HM-04B	Tan Linoleum	No	M	Category I	ND	Living/Dining	NA
ES-HM-05A	Green Linoleum	No	M	Category I	ND	Center Bedroom	NA
ES-HM-05B	Green Linoleum	No	M	Category I	ND	Center Bedroom	NA
ES-HM-06A	White 1'x1' Smooth Ceiling Tile	Yes	M	Category II	ND	Living/Dining	NA
ES-HM-06B	White 1'x1' Smooth Ceiling Tile	Yes	M	Category II	ND	Living/Dining	NA
ES-HM-07A	White 1'x1' Pebbled Ceiling Tile	Yes	M	Category II	ND	Bath	NA
ES-HM-07B	White 1'x1' Pebbled Ceiling Tile	Yes	M	Category II	ND	Bath	NA
ES-HM-08A	Drywall	Yes	M	Category II	ND	Kitchen Ceiling	NA
ES-HM-08B	Drywall	Yes	M	Category II	ND	Living Wall	NA
ES-HM-09A	Glazing	Yes	M	Category II	ND	Living	NA
ES-HM-09B	Glazing	Yes	M	Category II	ND	Kitchen	NA
ES-HM-10A	Green Floral Linoleum	No	M	Category I	ND	2 nd Fl. E Bedroom	NA
ES-HM-10B	Green Floral Linoleum	No	M	Category I	ND	2 nd Fl. E Bedroom	NA
ES-HM-11A	Beige Floral Linoleum	No	M	Category I	ND	2 nd Fl. W Bedroom	NA
ES-HM-11B	Beige Floral Linoleum	No	M	Category I	ND	2 nd Fl. W Bedroom	NA
ES-HM-12A	Glazing	Yes	M	Category II	Trace CH	Basement	NA
ES-HM-12B	Glazing	Yes	M	Category II	.25% CH	Basement	NA

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2433 Elwood St., Muskegon Heights, Michigan

Mater	<u>ial Types</u>	Abbrev:	iations
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 2433 Elwood St., Muskegon Heights, Michigan

Asbestos Containing Material Description and Location									
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity				
Living (1 register, 10 sq. ft.) SE Bedroom (1 register, 10 sq. ft.) Basement (misc. HVAC wrap on Cold Air Ductwork and Framing, 10 sq. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	30 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, 2433 Elwood St., Muskegon Heights, Michigan

Interior - Asbestos Containing Materials			
Location	Material Description	Friable	Approx. Quantity
Living (1 register, 10 sq. ft.) SE Bedroom (1 register, 10 sq. ft.) Basement (misc. HVAC wrap on Cold Air Ductwork and Framing, 10 sq. ft.)	HVAC Duct Wrap	Yes	30 sq. ft.
	Total		30 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 27, 2016

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

2440 Wood St., Muskegon Heights, MI 49444

Parcel ID: 61-26-185-112-0014-00

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 2440 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 .14 acre residential parcel which contains an approximate 1,004 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, pantry and three bedrooms on the first floor.

VISUAL INSPECTION AND SAMPLING

Asbestos Containing Materials Inspection

Mr. Aaron Paquet of Red Cedar Consulting (Red Cedar), an accredited State Of Michigan/EPA Asbestos Building Inspector (Accreditation Number A30955) whom completed training per the Michigan Asbestos Workers Accreditation Act 440 completed an inspection of the Subject Property on May 8, 2016 for suspected asbestos containing building materials.

Project No.: 16-1070 Muskegon County Land Bank Parcel ID: 61-26-185-112-0014-00

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
- Linoleum
- 2'x4' Ceiling Tile
- Drywall
- Glazing
- Plaster

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

Hazardous Materials Inspection

On May 8, 2016 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: 61-26-185-112-0014-00

INSPECTION RESULTS AND RECOMMENDATIONS

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

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

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

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

Presumed Asbestos Containing Material

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

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

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

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

Friable ACM's

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

- Living (1 window 28" wide x 60" tall)
- Living (1 window 44" wide x 60" tall)(window on floor)
- SW Bedroom (2 windows 28" wide x 60" tall) (windows on floor)
- Dining (1 window 44" wide x 60" tall) (window on floor)

Muskegon County Land Bank Parcel ID: 61-26-185-112-0014-00

- Center Bedroom (1 window 32" wide x 46" tall)
- SE Bedroom (1 window 32" wide x 46" tall)
- SE Bedroom (1 window 22" wide x 34" tall)
- Kitchen (1 window 42" wide x 36" tall)
- Bath (1 window 32" 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 ten windows throughout the Building. The locations of the window that should be abated prior to demolition/renovation activities are listed below:

- Living (1 window 28" wide x 60" tall)
- Living (1 window 44" wide x 60" tall)(window on floor)
- SW Bedroom (2 windows 28" wide x 60" tall) (windows on floor)
- Dining (1 window 44" wide x 60" tall) (window on floor)
- Center Bedroom (1 window 32" wide x 46" tall)
- SE Bedroom (1 window 32" wide x 46" tall)
- SE Bedroom (1 window 22" wide x 34" tall)
- Kitchen (1 window 42" wide x 36" tall)
- Bath (1 window 32" 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.

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: 61-26-185-112-0014-00

- Television (1)
- 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: 61-26-185-112-0014-00

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

Rain 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: 2440 Wood St

Report To:

Mr. WS-HS-ron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64725

Date Collected: 05/08/16 Date Received: 05/11/16

Date Analyzed: 05/17/16 Date Reported: 05/17/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Fiberglass - 30%

Other - 70%

Lab ID #: 64725 - 01

Cust. #: WS-HM-01A

Material: Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 2

Asbestos Present: NO

No Asbestos Observed

Cellulose - 60%

Other - 40%

Cust. #: WS-HM-01A Material: Tar Paper

Lab ID #: 64725 - 01a

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Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 64725 - 02

Cust. #: WS-HM-01B

Material: Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 2

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: 2440 Wood St

Report To:

Mr. WS-HS-ron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901

ARI Report # 16-64725

Date Collected: 05/08/16 Date Received: 05/11/16

Date Analyzed: 05/17/16 Date Reported: 05/17/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 60%

Other - 40%

Lab ID #: 64725 - 02a

Cust. #: WS-HM-01B

Material: Tar Paper

Location:

Appearance: black,fibrous,homogenous

Layer: 2 of 2

Lab ID #: 64725 - 03

Cust. #: WS-HM-02A

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 30%

Other - 70%

Material: White Linoleum

Location:

Appearance: grey, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64725 - 04

Cust. #: WS-HM-02B

Asbestos Present: NO

No Asbestos Observed

Cellulose - 30%

Other - 70%

Material: White Linoleum

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: 2440 Wood St

Report To:

Mr. WS-HS-ron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901

ARI Report #

16-64725

Date Collected: 05/08/16 Date Received: 05/11/16

Date Analyzed: 05/17/16

Date Reported: 05/17/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64725 - 05

Cust. #: WS-HM-03A

Material: Floral Linoleum

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64725 - 06

Cust. #: WS-HM-03B

Material: Floral Linoleum

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64725 - 07

Cust. #: WS-HM-04A

Material: White 2x4 Ceiling Tile

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Cellulose - 30%

Other - 70%

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 30%

Other - 70%

Asbestos Present: NO

No Asbestos Observed

Cellulose - 30%

Mineral Wool - 30%

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: 2440 Wood St

Report To:

Mr. WS-HS-ron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901

ARI Report # 16-64725

Date Collected: 05/08/16 Date Received: 05/11/16

Date Analyzed: 05/17/16 Date Reported: 05/17/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64725 - 08

Cust. #: WS-HM-04B

Material: White 2x4 Ceiling Tile

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 30%

Mineral Wool - 30%

Other - 40%

Lab ID #: 64725 - 09

Cust. #: WS-HM-05A

Material: Drywall

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Cellulose - 20% Other - 80%

Cellulose - 20%

Other - 80%

Cust. #: WS-HM-05B

Material: Drywall

Lab ID #: 64725 - 10

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: 2440 Wood St

Report To:

Mr. WS-HS-ron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64725

Date Collected: 05/08/16 Date Received: 05/11/16

Date Analyzed: 05/17/16 Date Reported: 05/17/16

Sample Information

Asbestos Type/Percent

Asbestos Present: YES

Non-Asbestos

Other - 95%

Lab ID #: 64725 - 11

Cust. #: WS-HM-06A

Material: Glazing

Location:

Appearance: grey, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64725 - 12

Cust. #: WS-HM-06B Material: Glazing

Location:

Layer:

Appearance:

Asbestos Present:

Chrysotile - 5%

NOT ANALYZED

Lab ID #: 64725 - 13

Cust. #: WS-HM-07A

Material: Glazing

T. ...

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

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: 2440 Wood St

Report To:

Mr. WS-HS-ron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64725

Date Collected: 05/08/16 Date Received: 05/11/16

Date Analyzed: 05/17/16 Date Reported: 05/17/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64725 - 14

Cust. #: WS-HM-07B

Material: Glazing

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO**No Asbestos Observed

Other - 100%

Lab ID #: 64725 - 15 Cust. #: WS-HS-01A

Material: Plaster

Location:

Location.

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 64725 - 16

Cust. #: WS-HS-01B

Material: Plaster

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Cellulose - 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: 2440 Wood St

Report To:

Mr. WS-HS-ron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901

ARI Report # 16-64725

Date Collected: 05/08/16 Date Received: 05/11/16

Date Analyzed: 05/17/16 Date Reported: 05/17/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 2%

Other - 98%

Lab ID #: 64725 - 17

Cust. #: WS-HS-01C

Material: Plaster

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 5%

Other - 95%

Material: Plaster

Lab ID #: 64725 - 18

Cust. #: WS-HS-01D

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Lab ID #: 64725 - 19

Cust. #: WS-HS-01E

Material: Plaster

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

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

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

pg 1 of 2

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

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Date: 5-10-16	Relinquished by	1	6	9	4	7	6	2	7	2	دو	grottomukan	Lab ID#		Other: 434	48 hour 72 hour	Rush 24 hour	Turn Around	Phone: (888) 449-456	City, St., Zip: _	Address:	Client Name:
Date :	Received by	WS-HM-06A	B30-my-36d	450-1441-05A	WS-HM-OHB	Mro-WH-SM	WS-Hm-0313	ws - 4m-03A	WS~#M-02B	WS-HM-02A	105-4m-018	WS-HM-OIA	Client ID#		(TTP) All Samples Except			ınd Times: (Circle One)	19-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
MAY 1 1 2016 Date:	Relinquished by:	Colazina	Dr. W.	Drywell	white 2x4 ceiling Tile	white 2x4 Ceiling tile	FloralLindleum	Floral Lindley	white Linoleym	white Lingleum	Shingle	Shirale	Material/Location	TEM: AHERA 7400		Lead: Bulk Wipe	Asbestos: Bulk Wipe	PLM EPA 600,	(888) 448-8739	Proje	Project:	
													Volume	Bulk/NOB EPA Level II	BioSISC	Air Paint	Point Count	apaquet. 1 samples with a de	Contact Person: Aaron Paquet	••	- 1	Date of Survey: 5-8-16
Date:	Received by:												Area	1 II	Other Viable_	Soil	PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	aquet		756	7/
													Results					lting.net ACM.		vebou	D G S III	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

Red Cedar Consulting Date of Survey : 5-8-6 Lab Use Only	
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Address:

Client Name:

City, St., Zip:

Co Wipe Wipe Tape	A TOTAL STREET,
PLM EPA 600. s: Bulk	f: AHERA 7400 Bulk/NOB
9739 PLM EPA 600, Bulk W	Bulk
PLM EPA 600,	Bulk
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8739	
	8739

Date: Date:	Relinquished by:		19 WS-145-01E	(10-5H-5M)	17, WS-185-OLC	1/6 NS- HS-OIR	15 WS-45-01A	14 WS-WM-OTB	12 WS-HM-07A	17 ws-ym-065 6 (azing	Lab ID # Client ID #
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											Volume
Date :	Received by:									The state of the s	Area
											Results

Rev: 12/03 Work Forms: COC

Red Cedar Consulting

Tables

Table 1 - Summary of Hazardous Materials, 2440 Wood St., Muskegon Heights, Michigan

	Hazardous Materials Description and Location							
Location	Material Description	Quantity						
Exterior	Television	1						
Exterior	Automobile Tire	2						
Basement	Smoke Detector	1						

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2440 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	Asphalt Shingle	No	M	Category I	ND/ND	Exterior	NA
WS-HM-01B	Asphalt Shingle	No	M	Category I	ND/ND	Exterior	NA
WS-HM-02A	White Linoleum	No	M	Category I	ND	Kitchen	NA
WS-HM-02B	White Linoleum	No	M	Category I	ND	Bathroom	NA
WS-HM-03A	Floral Linoleum	No	M	Category I	ND	Pantry	NA
WS-HM-03B	Floral Linoleum	No	M	Category I	ND	Pantry	NA
WS-HM-04A	White 2'x4' Ceiling Tile	Yes	M	Category II	ND	Kitchen	NA
WS-HM-04B	White 2'x4' Ceiling Tile	Yes	M	Category II	ND	Kitchen	NA
WS-HM-05A	Drywall	No	M	Category II	ND	Living Ceiling	NA
WS-HM-05B	Drywall	No	M	Category II	ND	Center Bedroom Wall	NA
WS-HM-06A	Glazing	Yes	M	Category II	5% CH	Kitchen	10 Windows
WS-HM-06B	Glazing	Yes	M	Category II	NA	Kitchen	NA
WS-HM-07A	Glazing	Yes	M	Category II	ND	Rear Entry	NA
WS-HM-07B	Glazing	Yes	M	Category II	ND	Rear Entry	NA
WS-HS-01A	Plaster	No	S	Category II	ND	SW Bedroom Wall	NA
WS-HS-01B	Plaster	No	S	Category II	ND	Center Bedroom Wall	NA
WS-HS-01C	Plaster	No	S	Category II	ND	Living Wall	NA
WS-HS-01D	Plaster	No	S	Category II	ND	Living Ceiling	NA
WS-HS-01E	Plaster	No	S	Category II	ND	Kitchen Ceiling	NA

Material Types

= Miscellaneous building material

TSI = Thermal System Insulation = Surfacing Material

S = Point Count Analysis PC = Chrysotile Asbestos

Abbreviations

= Not quantified NQ NA

= Not applicable

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

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, 2440 Wood 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

Abbreviations

lin. ft. = linear feet

sq. ft. = square feet

Table 4 - Summary of All Asbestos Containing Materials, 2440 Wood St., Muskegon Heights, Michigan

Interior - Asbestos Containing Materials			
Location	Material Description	Friable	Approx. Quantity
Living (1 window 28" wide x 60" tall)	Glazing	Yes	1 Window
Living (1 window 44" wide x 60" tall)(window on floor)	Glazing	Yes	1 Window
SW Bedroom (2 windows 28" wide x 60" tall) (windows on floor)	Glazing	Yes	2 Windows
Dining (1 window 44" wide x 60" tall) (window on floor)	Glazing	Yes	1 Window
Center Bedroom (1 window 32" wide x 46" tall)	Glazing	Yes	1 Window
SE Bedroom (1 window 32" wide x 46" tall)	Glazing	Yes	1 Window
SE Bedroom (1 window 22" wide x 34" tall)	Glazing	Yes	1 Window
Kitchen (1 window 42" wide x 36" tall)	Glazing	Yes	1 Window
Bath (1 window 32" wide x 24" tall)	Glazing	Yes	1 Window
		Total	10 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

June 1, 2016

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 2516 Jefferson St., Muskegon Heights, MI 49444
Parcel ID: 61-26-185-143-0020-00

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 2516 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 .14 acre residential parcel which contains a 288 sq. ft. attached garage and approximate 1,040 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 lap while the roof was sealed with asphalt shingles. The Building can be further divided into a living room, dining room, kitchen, bath, and bedroom on the first floor while the second floor contains three bedrooms.

VISUAL INSPECTION AND SAMPLING

Asbestos Containing Materials Inspection

Mr. Aaron Paquet of Red Cedar Consulting (Red Cedar), an accredited State Of Michigan/EPA Asbestos Building Inspector (Accreditation Number A30955) whom completed training per the Michigan Asbestos

Project No.: 16-1070 Muskegon County Land Bank Parcel ID: 61-26-185-143-0020-00

Workers Accreditation Act 440 completed an inspection of the Subject Property on May 7 and May 31, 2016 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
- 16"x16" Ceiling Tile
- 2'x4' Ceiling Tile
- 12"x12" Vinyl Tile
- 9"x9" Vinyl Tile
- Fiberboard
- 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: 61-26-185-143-0020-00

Hazardous Materials Inspection

On May 7, 2016 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: 61-26-185-143-0020-00

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:

• 2nd Fl. W/Central/E Bedroom (12 in. dia. HVAC Wrapped Ductwork, 20 lin. ft.)

Category I ACM

Two types of resilient floor covering (9"x9" Beige Vinyl Floor Tile and 9"x9" Brown Vinyl Floor Tile) located within the Living and 2nd Fl. Central Bedroom, respectively, were found to contain up to 5% Chrysotile asbestos. The assessment to quantify the extent of this material identified approximately 964 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.

• 2nd Fl. W/Central/E Bedroom (12 in. dia. HVAC Wrapped Ductwork, 20 lin. ft.)

The Category I resilient floor coverings (9"x9" Beige Vinyl Floor Tile 9"x9" and 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 Tire (approx.. 130)
- Smoke Detector (11)
- 4' Fluorescent Light (Fixture and Ballast Only) (1)
- 4' Fluorescent Bulb (2)

Muskegon County Land Bank Parcel ID: 61-26-185-143-0020-00

• 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: 61-26-185-143-0020-00

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

Rain 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: 2516 Jefferson St.

Report To:

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

ARI Report # 16-64730

Date Collected: 05/07/16 Date Received: 05/11/16 Date Analyzed: 05/16/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64730 - 01

Cust. #: JN-HM-01A

Material: Asphalt Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 2

Lab ID #: 64730 - 01a Asbestos Present: **NO**

Cust. #: JN-HM-01A

Material: Tar Paper

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 64730 - 02

Cust. #: JN-HM-01B

Material: Asphalt Shingle

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

Layer: 1 of 2

Asbestos Present: **NO**

No Asbestos Observed

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Fiberglass - 30%

Cellulose - 60%

Fiberglass - 30%

Other - 70%

Other - 40%

Other - 70%

Location:

Appearance: black,fibrous,homogenous

Robert T. Letarte Jr., Laboratory Director

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Project: 2516 Jefferson St.

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ARI Report # 16-64730 Date Collected: 05/07/16 Date Received: 05/11/16 Date Analyzed: 05/16/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: YES

Non-Asbestos

Lab ID #: 64730 - 02a

Cust. #: JN-HM-01B

Material: Tar Paper

Location:

Appearance: black,fibrous,homogenous

Layer: 2 of 2

Lab ID #: 64730 - 03

Cust. #: JN-HM-02A

Material: 9"x9" Beige Vinyl Tile

Location:

Appearance: grey, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64730 - 04

Cust. #: JN-HM-02B

Material: 9"x9" Beige Vinyl Tile

Location:

Appearance:

Layer: of

Asbestos Present: **NO** Cellulose - 60% No Asbestos Observed

Other - 40%

Other - 95%

Asbestos Present:

NOT ANALYZED

Chrysotile - 5%

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

Robert T. Letarte Jr., Laboratory Director

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Project: 2516 Jefferson St.

Report To:

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ARI Report # 16-64730

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/16/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 20%

Synthetic - 20% Other - 60%

Lab ID #: 64730 - 05

Cust. #: JN-HM-03A

Material: Green Linoleum

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: **NO**

Cellulose - 20%

Cust. #: JN-HM-03B

Lab ID #: 64730 - 06

Material: Green Linoleum

Location:

Appearance: green, fibrous, homogenous

Layer: 1 of 1

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Synthetic - 20%

Other - 60%

Other - 100%

Lab ID #: 64730 - 07

Cust. #: JN-HM-04A

Material: Peel & Stick Floor Tile

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: 2516 Jefferson St.

Report To:

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

ARI Report # 16-64730

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/16/16 Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64730 - 07a

Cust. #: JN-HM-04A

Material: White Linoleum

Location:

Appearance: black,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 64730 - 08

Cust. #: JN-HM-04B

Material: Peel & Stick Floor Tile

Location:

Appearance: black,nonfibrous,homogenous

Layer: 1 of 2

Lab ID #: 64730 - 08a

Cust. #: JN-HM-04B

Material: White Linoleum

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

Other - 100%

No Asbestos Observed

Asbestos Present: **NO**

Other - 100%

Other - 100%

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: 2516 Jefferson St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64730

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/16/16 Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 60%

Other - 40%

Lab ID #: 64730 - 09

Cust. #: JN-HM-05A

Material: 16"x16" White Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

No Asbestos Observed

Asbestos Present: **NO**

Cellulose - 60%

Other - 40%

Lab ID #: 64730 - 10 Cust. #: JN-HM-05B

cust. #. JIV-IIIVI-03D

Material: 16"x16" White Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

Cellulose - 30%

Lab ID #: 64730 - 11 Cust. #: JN-HM-06A

Material: 2'x4' White Ceiling Tile

No Asbestos Observed

Mineral Wool - 30%

Other - 40%

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: 2516 Jefferson St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64730

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/16/16 Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64730 - 12

Cust. #: JN-HM-06B

Material: 2'x4' White Ceiling Tile

Location:

Appearance: grey, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

Asbestos Present: **NO**

No Asbestos Observed

No Asbestos Observed

No Asbestos Observed

Cellulose - 30%

Mineral Wool - 30%

Other - 40%

Cellulose - 20%

Other - 80%

Other - 100%

Lab ID #: 64730 - 13

Cust. #: JN-HM-07A

Material: Drywall

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 2

Lab ID #: 64730 - 13a Asbestos Present: **NO**

Cust. #: JN-HM-07A

Material: Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

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

Layer: 2 of 2

1 Colly

Robert T. Letarte Jr., Laboratory Director

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Test Method, Polarized Light Microscopy (PLM)

Project: 2516 Jefferson St.

Report To:

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Date Received: 05/11/16 Date Analyzed: 05/16/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64730 - 14

Cust. #: JN-HM-07B

Material: Drywall

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: **NO**No Asbestos Observed

Cellulose - 20%

Lab ID #: 64730 - 14a Cust. #: JN-HM-07B

Material: Joint Compound

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Other - 80%

Lab ID #: 64730 - 15 Cust. #: JN-HM-08A

Material: 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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Project: 2516 Jefferson St.

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ARI Report # 16-64730

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/16/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64730 - 16

Cust. #: JN-HM-08B

Material: Glazing

Location:

Appearance: beige, nonfibrous, homogenous

Layer: 1 of 1

Asbestos Present: YES

Asbestos Present: NO

No Asbestos Observed

Chrysotile - 5%

Other - 95%

Other - 100%

Lab ID #: 64730 - 17 Cust. #: JN-HM-09A

Material: 9"x9" Brown Vinyl Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 2

Lab ID #: 64730 - 17a

Cust. #: JN-HM-09A

Material: Mastic

Location:

Appearance: black,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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Project: 2516 Jefferson St.

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ARI Report # 16-64730

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/16/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64730 - 18

Cust. #: JN-HM-09B

Material: 9"x9" Brown Vinyl Tile

Location:

Appearance: black,nonfibrous,homogenous

Layer: 1 of 1

Asbestos Present: **NO** No Asbestos Observed

Other - 100%

Other - 100%

Lab ID #: 64730 - 19 Cust. #: JN-HM-10A

Material: 12"x12" Blue Vinyl Peel & Stick FT

Location:

Appearance: blue,nonfibrous,homogenous

Layer: 1 of 1

Lab ID #: 64730 - 20

Cust. #: JN-HM-10B

Material: 12"x12" Blue Vinyl Peel & Stick FT

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

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

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Report To:

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ARI Report # 16-64730

Date Collected: 05/07/16 Date Received: 05/11/16 Date Analyzed: 05/16/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 80%

Other - 20%

Lab ID #: 64730 - 21

Cust. #: JN-HM-11A

Material: Fiberboard

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 80%

Other - 20%

Cust. #: JN-HM-11B

Lab ID #: 64730 - 22

Material: Fiberboard

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO No Asbestos Observed

Hair - 2% Other - 98%

Lab ID #: 64730 - 23 Cust. #: JN-HS-01A

Material: Plaster

Location:

Appearance: grey,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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Project: 2516 Jefferson St.

Report To:

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

ARI Report # 16-64730

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/16/16 Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Hair - 2%

Other - 98%

Lab ID #: 64730 - 24

Cust. #: JN-HS-01B

Material: Plaster

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: **NO** No Asbestos Observed

Other - 100%

Lab ID #: 64730 - 25 Cust. #: JN-HS-01C

Material: Plaster

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 64730 - 25a

Cust. #: JN-HS-01C

Material: Mortar

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

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Project: 2516 Jefferson St.

Report To:

Mr. Aaron Paquet

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

ARI Report # 16-64730

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/16/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64730 - 26

Cust. #: JN-HS-01D Material: Plaster

Location: Appearance: Layer: of Asbestos Present:

Asbestos Present:

NO SAMPLE RECEIVED

Lab ID #: 64730 - 27

Cust. #: JN-HS-01E Material: Plaster

Location:

NO SAMPLE RECEIVED

Appearance: Layer:

Lab ID #:

Asbestos Present:

Cust. #: Material:

Location: Appearance: Layer: of

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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

APEX		
	*	

Fax: 734-449-9991

Rev: 12/03 Work Forms: COC	Date: 5-10-16	Relinquished by:	//	00	0	0	7	6	4	T.	W	7		Lab ID#	September 1	Other: 5 pay	48 hour 72 hour	Rush 24 hour	Turn Around	Phone: (888) 4	City, St., Zip:	Address:	Client Name:
		Received by:	JN- HM-06A	JN- HM- 05B	DO0-WH-USA	コルーナーの一月	ALO-MA-04A	280-WH-M2	JU-WN-03A	JN-HM-02B	JN-WM-OZA	SIO-WH-UZ	410-WH-KZ	Client ID #		(TTP) All Samples Except			und Times: (Circle One)	(888) 449-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
	Date: 5-10-16	SS.	White D'X4' Q	white 16" x16" G	1,×1,0	hihite Linsleum	Ĭ.	1	Green Lingher	Beigo 9"x9" Viny	Being 9"x9" Viny	Asphalt Shingle	Asonall Shingle	Material/Location	TEM: AHERA 7400		Lead: Bulk	Asbestos: Bulk	H WIG	(888) 448-8739			ng
APEX RESE	Date:	Relinquished by	ailing Tike	Ceiling Tile	Gilling Tile)N	3	Winn.	3 ·	,	14/ Tile	T	عا		400 Bulk/NOB	Tape E	Wipe A	Wipe	PA 600, PC all samples	_ Contact Perso	••	Project:	Date of Survey:
SEARCH	2000	THE STATE OF THE S												Volume	EPA Level II	BioSISO	Air Paint -	Point Count		n: Aaron		Tes	Vev: 5-1-1
	Date:	Received by:												Area	Π	Other Viable	Soil	PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	Paquet		4 55.5	
													A feet to the state of the stat	Results					lting.net ACM.		100	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



Client Name: Red Con Address: Po Bo City, St., Zip: Lansi Phone: (888) 449-456 Turn Around Rush 24 hour 48 hour 72 hour Other: 50ay Ti	edar Consultii x 13216 x 13216 ng, MI 48901 6 Fax Times: (0	te of Su oject : oject # ntact Po all san Bulk/NOB	f Survey: 5-7-6 t: 756 Jeffers #: #: Person: Aaron Paq apaquet@r samples with a detec Point Count Paint Air Paint Othe OOB EPA Level II	Lab Use Log-In_ I. Aaron Paquet apaquet@redcedarconsulting.net with a detection of <5% ACM. Paint PCM Paint Soil Path Other Viable EPA Level II EPA Level Area	Lab Use Only Log-In Report sulting.net % ACM.
)III					I
50	Mold: Plaster TEM:	Tape	, 1		le
Lab ID#		ocation	Volume	Area	Results
12	HM-063 1	ing Tite			
14	JN-HM-07B DMWall				
23	JN-4m-08A Glazing				
17	JN-HM-09A DOWN Q'29" 1	Violitie			
8/	JN-HM-OGB Brown 9"x9" 1	Vinyl Tike			
26	AN 19" X 19"	Viaul Tib			
2	<u> </u>				
2	JN+HM-11B fiberboard				
Relinquished by:	Received by:	Relinquished by:	THU F	Received by:	
Date: 5-10-16	Date: 5-10-16	found.	2016	Date:	

Rev: 12/03 Work Forms: COC

Date:

APEX RESEARCH



64780
APEX Research, Inc. 11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

Rev: 12/03 Work Forms: COC	Date: 510-16	Relinquished by:				27	26	dS	20	23	Lab ID#	Ĭ	Other: 5 Day	48 hour 72 hour	Rush 24 hour	Turn Arou	Phone: (888) 449-	., Zip: _	1	Client Name: _F
	Date: 510-	Received by:				JU-B-OIE	JN-HS- 010	JN-45-01C	1N-HS-013	JN- HS-01A	Client ID#		TTP_All_Samples Except			Turn Around Times: (Circle One)	9-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
APIX	7	Relinquished by				Plaster	Playter	Plasto	Plaster	Plaster	Material/Location	TEM: AHERA 7400	Mold: Bulk Tape	Lead: Bulk Wipe	Asbestos: Bulk X Wipe	PLM EPA 600, PC	(888) 448-8739	Pro	Pro	
APEX RESEARCH		MANN									Volume	Bulk/NOB EPA Level II	BioSIS	Air Paint	Point Count	apaquet all samples with a de	rson: Aaron		2	Date of Survey: 5
	Date:	Received by:								en e	Area	el II	Other Viable	Soil	PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	Paquet		Tefferson St	5-7-16
											Results			•		lting.net ACM.		reput	De Grand	Lab Use Only



Test Method, Polarized Light Microscopy (PLM)

Project: 2516 Jefferson St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-65168

Date Collected: 05/31/16

Date Received: 06/01/16 Date Analyzed: 06/01/16

Date Reported: 06/01/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Other - 100%

Lab ID #: 65168 - 01

Cust. #: JN-HS-01D

Material: Texture

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 3

Asbestos Present: **NO**No Asbestos Observed

Asbestos Present: **NO**

No Asbestos Observed

Other - 100%

Lab ID #: 65168 - 01a

Cust. #: JN-HS-01D

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 3

Asbestos Present: **NO**No Asbestos Observed

Cellulose - 2%

Other - 98%

Lab ID #: 65168 - 01b Cust. #: JN-HS-01D

Material: Plaster Base Coat

Location:

Appearance: grey,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: 2516 Jefferson St

Report To:

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

ARI Report #

16-65168

Date Collected: 05/31/16

Date Received: 06/01/16 Date Analyzed: 06/01/16

Date Reported: 06/01/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65168 - 02

Cust. #: JN-HS-01E

Material: Texture

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 3

Lab ID #: 65168 - 02a

Cust. #: JN-HS-01E

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 3

Lab ID #: 65168 - 02b

Cust. #: JN-HS-01E

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 3 of 3

Asbestos Present: **NO**

Other - 100%

Other - 100%

Cellulose - 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

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

65168

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

4-449-9990 APEX

Other: 48 hour Rush Phone: Address: City, St., Zip: Lansing, MI 48901 Client Name: Turn Around Times: (Circle One) Lab ID (888)449-4566 24 hour 72 hour # CP Red Cedar Consulting PO Box 13216 120-120 PI ひとったっか TTP) All Samples Except Plaster
TEM: Client ID# Fax: (888) 448-8739 Roster Plaster Asbestos: Bulk Lead: Mold: 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 Date of Survey: 6-31-6 Contact Person: Project #: Project: 2516 Jeffers an & Bulk/NOB Air BioSIS Point Count Volume Aaron Paquet Fax: 734-449-9991 EPA Level II Paint Other Area PCM Soil Results Lab Use Only
Log-In _____ Report_

Rev: 12/03 Work Forms: COC Date:

Date:

Received by:

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APEX RESEARCH

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Red Cedar Consulting

Tables

Table 1 - Summary of Hazardous Materials, 2516 Jefferson St., Muskegon Heights, Michigan

Hazardous Materials Description and Location										
Location	Material Description	Quantity								
Exterior	Automobile Tire	1								
Garage	Automobile Tire	4								
Garage	4' Fluorescent Light (Fixture and Ballast Only)	1								
Garage	4' Fluorescent Bulb	2								
2 nd Fl. Landing	Smoke Detector	2								
Basement	Television	1								
Basement	Automobile Tire	Approx. 120								

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2516 Jefferson St., Muskegon Heights, Michigan

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
JN-HM-01A	Asphalt Shingle	No	M	Category I	ND/ND	Exterior	NA
JN-HM-01B	Asphalt Shingle	No	M	Category I	ND/ND	Exterior	NA
JN-HM-02A	Beige 9"x9" Vinyl Tile	No	M	Category I	5% CH	Living	436 sq. ft.
JN-HM-02B	Beige 9"x9" Vinyl Tile	No	M	Category I	NA	Dining	NA
JN-HM-03A	Green Linoleum	No	M	Category I	ND	Kitchen	NA
JN-HM-03B	Green Linoleum	No	M	Category I	ND	Kitchen	NA
JN-HM-04A	White Linoleum	No	M	Category I	ND/ND	Bath	NA
JN-HM-04B	White Linoleum	No	M	Category I	ND/ND	Bath	NA
JN-HM-05A	White 16"x16" Ceiling Tile	Yes	M	Category II	ND	Living/Dining	NA
JN-HM-05B	White 16"x16" Ceiling Tile	Yes	M	Category II	ND	Living/Dining	NA
JN-HM-06A	White 2'x4' Ceiling Tile	Yes	M	Category II	ND	Living	NA
JN-HM-06B	White 2'x4' Ceiling Tile	Yes	M	Category II	ND	Living	NA
JN-HM-07A	Drywall	No	M	Category II	ND/ND	Kitchen Ceiling	NA
JN-HM-07B	Drywall	No	M	Category II	ND/ND	Dining Wall	NA
JN-HM-08A	Glazing	Yes	M	Category II	ND	Living	NA
JN-HM-08B	Glazing	Yes	M	Category II	ND	Bedroom	NA
JN-HM-09A	Brown 9"x9" Vinyl Tile	No	M	Category I	5% CH/ND	2 nd Fl. Central Bedroom	528 sq. ft.
JN-HM-09B	Brown 9"x9" Vinyl Tile	No	M	Category I	ND	2 nd Fl. E Bedroom	NA
JN-HM-10A	Blue 12x12 Vinyl Tile	No	M	Category I	ND	2 nd Fl. Central Bedroom	NA
JN-HM-10B	Blue 12x12 Vinyl Tile	No	M	Category I	ND	2 nd Fl. W Bedroom	NA
JN-HM-11A	Fiberboard	Yes	M	Category II	ND	2 nd Fl. Central Bedroom Wall	NA
JN-HM-11B	Fiberboard	Yes	М	Category II	ND	2 nd Fl. Central Bedroom Wall	NA
JN-HS-01A	Plaster	No	S	Category II	ND	Living Wall	NA
JN-HS-01B	Plaster	No	S	Category II	ND	Bedroom Wall	NA
JN-HS-01C	Plaster	No	S	Category II	ND/ND	Bedroom Ceiling	NA
JN-HS-01D	Plaster	No	S	Category II	ND/ND/ND	Bedroom Wall	NA
JN-HS-01E	Plaster	No	S	Category II	ND/ND/ND	Bedroom Ceiling	NA

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2516 Jefferson St., Muskegon Heights, Michigan

Notes:

N	laterial Types	Abbrev	<u>riations</u>
N	ϵ	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, 2516 Jefferson St., Muskegon Heights, Michigan

A	bestos Containing Material Description and Location								
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity				
2 nd Fl. W/Central/E Bedroom (12 in. dia. HVAC Wrapped Ductwork, 20 lin. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	20 lin. 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, 2516 Jefferson St., Muskegon Heights, Michigan

Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Living	Beige 9"x9" Vinyl Tile		No	280 sq. ft.
Dining	Beige 9"x9" Vinyl Tile		No	156 sq. ft.
2 nd Fl. E Bedroom	Brown 9"x9" Vinyl Tile		No	144 sq. ft.
2 nd Fl. Center Bedroom	Brown 9"x9" Vinyl Tile		No	240 sq. ft.
2 nd Fl. W Bedroom	Brown 9"x9" Vinyl Tile		No	144 sq. ft.
		Total		964 sq. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
2 nd Fl. W/Central/E Bedroom (12 in. dia. HVAC Wrapped Ductwork, 20 lin. ft.)	HVAC Duct Wrap		Yes	20 lin. ft.
		Total		20 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 27, 2016

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 Jefferson St., Muskegon Heights, MI 49444
Parcel ID: 61-26-185-142-0006-00

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 2521 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 .29 acre residential parcel which contains a 280 sq. ft. detached garage and approximate 1,984 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 or stucco while the roof was sealed with asphalt shingles. The Building can be further divided into a kitchen and three bedrooms on the first floor while the second floor contains a bathroom and two bedrooms.

VISUAL INSPECTION AND SAMPLING

Asbestos Containing Materials Inspection

Mr. Aaron Paquet of Red Cedar Consulting (Red Cedar), an accredited State Of Michigan/EPA Asbestos Building Inspector (Accreditation Number A30955) whom completed training per the Michigan Asbestos

Project No.: 16-1070 Muskegon County Land Bank Parcel ID: 61-26-185-142-0006-00

Workers Accreditation Act 440 completed an inspection of the Subject Property on May 7, 2016 for suspected asbestos containing building materials.

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

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

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

- Asphalt Shingle
- Linoleum
- 1'x1' Ceiling Tile
- Stucco
- Glazing
- 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.

Project No.: 16-1070

Muskegon County Land Bank Parcel ID: 61-26-185-142-0006-00

Hazardous Materials Inspection

On May 7 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.

Project No.: 16-1070 Muskegon County Land Bank Parcel ID: 61-26-185-142-0006-00

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:

- SE Room (1 register, 10 sq. ft.)
- NE/NW Bedroom (1 register, 15 sq. ft.)
- 2nd Fl. Bathroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- 2nd Fl. Bathroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- 2nd Fl. S 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. plus 10 sq. ft. on horizontal chase in floor)
- 2nd Fl. W Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)

Category I ACM

Two types of resilient floor covering (Green Linoleum and Beige Linoleum) located within the SE Room, 2nd Fl. W Bedroom and 2nd Fl. Bathroom were found to contain up to 40% Chrysotile asbestos. The assessment to quantify the extent of this material identified approximately 387 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.

- SE Room (1 register, 10 sq. ft.)
- NE/NW Bedroom (1 register, 15 sq. ft.)
- 2nd Fl. Bathroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- 2nd Fl. Bathroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- 2nd Fl. S 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. plus 10 sq. ft. on horizontal chase in floor)
- 2nd Fl. W Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)

The resilient floor coverings (Green Linoleum and Beige 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.

Project No.: 16-1070

Muskegon County Land Bank Parcel ID: 61-26-185-142-0006-00

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 (5)
- Thermostat (1)
- Automobile Tire (3)
- Quart Container Glazing (1)

REGULATORY REQUIREMENTS

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

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

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

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

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

Project No.: 16-1070

Muskegon County Land Bank Parcel ID: 61-26-185-142-0006-00

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: 2521 Jefferson St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64733

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16 Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 30%

Other - 70%

Lab ID #: 64733 - 01

Cust. #: SN-HM-01A

Material: Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 2

Asbestos Present: **NO**No Asbestos Observed

NO Cellulose - 60%

Lab ID #: 64733 - 01a Cust. #: SN-HM-01A

Material: Tar Paper

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

resent. 110

Cellulose - 30%

No Asbestos Observed

Other - 70%

Other - 40%

Material: Shingle

Lab ID #: 64733 - 02

Cust. #: SN-HM-01B

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: 2521 Jefferson St.

Report To:

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

ARI Report # 16-64733

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16 Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 60%

Other - 40%

Lab ID #: 64733 - 02a

Cust. #: SN-HM-01B

Material: Tar Paper

Location:

Appearance: black,fibrous,homogenous

Layer: 2 of 2

Asbestos Present: YES

Cellulose - 10%

Other - 50%

Cust. #: SN-HM-02A

Lab ID #: 64733 - 03

Material: Green Linoleum

Location:

Appearance: green, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 64733 - 04

Asbestos Present:

Chrysotile - 40%

Cust. #: SN-HM-02B

Material: Green Linoleum

Location:

NOT ANALYZED

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.



Test Method, Polarized Light Microscopy (PLM)

Project: 2521 Jefferson St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64733

Date Collected: 05/07/16 Date Received: 05/11/16 Date Analyzed: 05/17/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 10%

Fiberglass - 10%

Other - 80%

Lab ID #: 64733 - 05

Cust. #: SN-HM-03A

Material: Brown Linoleum

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64733 - 06

Cust. #: SN-HM-03B

Material: Brown Linoleum

Asbestos Present: NO

No Asbestos Observed

Cellulose - 10%

Fiberglass - 10%

Other - 80%

Other - 100%

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Material: Glazing

Lab ID #: 64733 - 07

Cust. #: SN-HM-04A

r ...

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: 2521 Jefferson St.

Report To:

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

ARI Report # 16-64733

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16 Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64733 - 08

Cust. #: SN-HM-04B

Material: Glazing

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 1

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 30%

Other - 70%

Cust. #: SN-HM-05A

Lab ID #: 64733 - 09

Material: 1x1 White Ceiling Tile

Location:

Appearance: grey, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

Lab ID #: 64733 - 10 Cust. #: SN-HM-05B

Material: 1x1 White Ceiling Tile

No Asbestos Observed

Other - 70%

Cellulose - 30%

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

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Robert T. Letarte Jr., Laboratory Director

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Test Method, Polarized Light Microscopy (PLM)

Project: 2521 Jefferson St.

Report To:

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

ARI Report # 16-64733

Date Collected: 05/07/16

Date Received: 05/11/16 Date Analyzed: 05/17/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: YES

Non-Asbestos

Other - 65%

Lab ID #: 64733 - 11

Cust. #: SN-HM-06A

Material: Beige Linoleum

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Lab ID #: 64733 - 12

Cust. #: SN-HM-06B Material: Beige Linoleum

Location:

Appearance:

Layer:

Asbestos Present:

Chrysotile - 35%

NOT ANALYZED

Lab ID #: 64733 - 13

Cust. #: SN-HM-07A

Material: Yellow Linoleum

Location:

Appearance: yellow,fibrous,homogenous

Layer: 1 of 1

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: 2521 Jefferson St.

Report To:

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

ARI Report # 16-64733

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16 Date Reported: 05/18/16

Sample Information

Non-Asbestos

Lab ID #: 64733 - 14

Cust. #: SN-HM-07B

Material: Yellow Linoleum

Location:

Appearance: yellow,fibrous,nonhomogenous

Layer: 1 of 1

Lab ID #: 64733 - 15 Cust. #: SN-HM-08A

Material: Green Linoleum

Location:

Appearance: green, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64733 - 16

Cust. #: SN-HM-08B

Material: Green Linoleum

Location:

Appearance: green, fibrous, homogenous

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

Layer: 1 of 1

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 40%

Other - 60%

Asbestos Present: NO

No Asbestos Observed

Cellulose - 30%

Cellulose - 30% Other - 70%

Other - 70%

Robert T. Letarte Jr., Laboratory Director

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Test Method, Polarized Light Microscopy (PLM)

Project: 2521 Jefferson St.

Report To:

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

ARI Report # 16-64733

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16 Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 60%

Other - 40%

Other - 60%

Lab ID #: 64733 - 17

Cust. #: SN-HM-09A

Material: Blue Linoleum

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 40%

Lab ID #: 64733 - 18 Cust. #: SN-HM-09B

Material: Blue Linoleum

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Cellulose - 30%

Other - 70%

Lab ID #: 64733 - 19 Cust. #: SN-HM-10A

Material: Red & Green Linoleum

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: 2521 Jefferson St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64733

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16 Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 30%

Other - 70%

Other - 100%

Other - 100%

Lab ID #: 64733 - 20

Cust. #: SN-HM-10B

i. #. 5IN-IIIVI-10D

Material: Red & Green Linoleum

Location:

Appearance: grey, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Lab ID #: 64733 - 21

Cust. #: SN-HS-01A

Material: Stucco

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 1 of 1

Lab ID #: 64733 - 22

Cust. #: SN-HS-01B

Material: Stucco

Location:

Appearance: grey,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

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

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64733

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64733 - 23

Cust. #: SN-HS-01C

Material: Stucco

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 1 of 1

Asbestos Present: **NO**No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Lab ID #: 64733 - 24 Cust. #: SN-HS-02A

Material: Plaster

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 64733 - 24a

Cust. #: SN-HS-02A

Material: Mortar

Location:

Appearance: grey,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: 2521 Jefferson St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64733

Date Collected: 05/07/16 Date Received: 05/11/16 Date Analyzed: 05/17/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 5%

Other - 95%

Lab ID #: 64733 - 25 Cust. #: SN-HS-02B

Material: Plaster

Location:

Appearance: grey, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Cellulose - 20%

Other - 80%

Material: Plaster

Lab ID #: 64733 - 26

Cust. #: SN-HS-02C

iviateriar. I laster

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Lab ID #: 64733 - 27

Cust. #: SN-HS-02D

Material: Plaster

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Cellulose - 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: 2521 Jefferson St.

Report To:

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

ARI Report # 16-64733

Date Collected: 05/07/16 Date Received: 05/11/16 Date Analyzed: 05/17/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 2%

Other - 98%

Lab ID #: 64733 - 28 Cust. #: SN-HS-02E

Material: Plaster

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Lab ID #: 64733 - 29

Cust. #: SN-HM-11A

Material: Tan Linoleum

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 10%

Fiberglass - 10%

Other - 80%

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Lab ID #: 64733 - 30

Cust. #: SN-HM-11B

Material: Tan Linoleum

Location:

Appearance: grey,fibrous,homogenous

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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Apex # 64733

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: 570%,	Relinquished by:		ō	2	C)		6	U	5	W	7	\	Lab ID#	Office:	7\	48 hour 72 hour	Rush 24 hour	Turn Arol	Phone: (888) 44	City, St., Zip:	Address:	Client Name:
Date :	Received by:	SU-4m-66A	87-mm-05B	tra-ma-054	8 to who as	1/20-WH-KS	SU-HM-03B	Sp-4M-03A	SU-WM-028	ACO-124-13	SUCHM-OLB	S D-HM-OLA	Client ID#	(IIP)All Samples Except				Around Times: (Circle One)	(888) 449-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
APEX RESEARCH Date :	The College	Reide Liveleur	white val Ceiling Tile	white lat Coiling Tile	Clarina	2	Brown Linoleum		Green Liveleum	Green Lineleum	Shingle	Shirale	Material/Location	TEM: AHERA 7400	Mold: Bulk	Lead: Bulk W	Asbestos: Bulk X V	HTA	(888) 448-8739			ing
e :	Relinquished by:												n Volume	Bulk/NOB EPA Level II	Tape BioSIS	Wipe Air Paint	Wipe Point Count	PC all samples	Contact Person: Aaron	• •	2	Date of Survey: 5-7
Date:	Received by:												Area	evel II	Other Viable	nt Soil	PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	1 Paquet		Letteras 4.	
													Results			•		llting.net ACM.		redoct -	D CONTE	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

	Received by: NAY 1 1 2016 Date: Date:
	SU-HS-01B Street.
	_
	SU-HM-108 Red& Green Lindeum
	SD-Hm-09B Blue Lingleum
	١٣
	_
	Su-4m-08A Green Linden
	Su Am-078 Yellow Lindeum
	SU-HM- OTA Yellow Lindeum
	SN-HM-GB Beige Lindeum
Volume	Client ID # Material/Location
Bulk/NOB EPA Level II	TEM: AHERA 7400
BioSIS	TTP) All Samples Except Plaster
Air	Lead: Bulk Wipe
Point Count	Asbestos: Bulk Wipe
apaquet@redcedarconsulting.net call samples with a detection of <5% ACM.	Times: (Circle One) PLM EPA 600, PC
Contact Person:	Fax: (888) 448-8739 Co
	MI 48901 Pr
	Box 13216 Pr
Date of Survey: 5-7-16	Consulting

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: 5-10-16	Relinquished by			28	27	26	25	94 P	23	Lab ID#		Λ,	48 hour 72 hour	Rush 24 hour	Turn Arou	Phone: (888) 449-4566	City, St., Zip:	Address:	Client Name:
Date:	Received by			SU-WS-07E	SN-145-02B	S11-148-02C	SD-45-028	Sh-AS-074	Sh-AS-OC	Client ID#	Ail Samples Except				Turn Around Times: (Circle One)	49-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
Date: Date:	Relinquished by:			4				Plaster	Stuce	Material/Location	xcept Plaster TEM: AHERA 7400 Bulk/NOB	Mold: Bulk Tape	Lead: Bulk Wipe	Asbestos: Bulk Wipe	PLM E	(888) 448-8739	Project #:	Project	
Date :	Received by:									Volume Area	NOB EPA Level II	BioSIS Other	Air Paint S	Point Count PCM		Person: Aaron Paquet		<u>ک</u> د ر ا	Date of Survey: ビーフール
	by:									a Results		Viable	Soil		apaquet@redcedarconsulting.net with a detection of <5% ACM.				Lab Use Only

Rev: 12/03 Work Forms: COC

Red Cedar Consulting

Tables

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

	Hazardous Materials Description and Location	
Location	Material Description	Quantity
Exterior	Automobile Tire	1
NE Bedroom	Thermostat	1
NW Bedroom	Smoke Detector	1
2 nd Fl. E Bedroom	Smoke Detector	1
2 nd Fl. W Bedroom	Smoke Detector	1
2 nd Fl. Hall	Smoke Detector	1
Basement	Smoke Detector	1
Basement	Quart Container Glazing	1
Basement	Automobile Tire	2

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2521 Jefferson St., Muskegon Heights, Michigan

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
SN-HM-01A	Asphalt Shingle	No	M	Category I	ND/ND	Exterior	NA
SN-HM-01B	Asphalt Shingle	No	M	Category I	ND/ND	Exterior	NA
SN-HM-02A	Green Linoleum	No	M	Category I	40% CH	SE Room	315 sq. ft.
SN-HM-02B	Green Linoleum	No	M	Category I	NA	SE Room	NA
SN-HM-03A	Brown Linoleum	No	M	Category I	ND	Kitchen	NA
SN-HM-03B	Brown Linoleum	No	M	Category I	ND	Kitchen	NA
SN-HM-04A	Glazing	Yes	M	Category II	ND	SE Bedroom	NA
SN-HM-04B	Glazing	Yes	M	Category II	ND	NW Bedroom	NA
SN-HM-05A	White 1'x1' Ceiling Tile	Yes	M	Category II	ND	SE Room	NA
SN-HM-05B	White 1'x1' Ceiling Tile	Yes	M	Category II	ND	SE Room	NA
SN-HM-06A	Beige Linoleum	No	M	Category I	35% CH	2 nd Fl. Bathroom	72 sq. ft.
SN-HM-06B	Beige Linoleum	No	M	Category I	NA	2 nd Fl. Bathroom	NA
SN-HM-07A	Yellow Linoleum	No	M	Category I	ND	2 nd Fl. S Bedroom	NA
SN-HM-07B	Yellow Linoleum	No	M	Category I	ND	2 nd Fl. S Bedroom	NA
SN-HM-08A	Green Linoleum	No	M	Category I	ND	2 nd Fl. W Bedroom	NA
SN-HM-08B	Green Linoleum	No	M	Category I	ND	2 nd Fl. W Bedroom	NA
SN-HM-09A	Blue Linoleum	No	M	Category I	ND	2 nd Fl. Hall	NA
SN-HM-09B	Blue Linoleum	No	M	Category I	ND	2 nd Fl. Hall	NA
SN-HM-10A	Red & Green Linoleum	No	M	Category I	ND	2 nd Fl. Closet	NA
SN-HM-10B	Red & Green Linoleum	No	M	Category I	ND	2 nd Fl. Closet	NA
SN-HS-01A	Stucco	No	S	Category II	ND	Exterior	NA
SN-HS-01B	Stucco	No	S	Category II	ND	Exterior	NA
SN-HS-01C	Stucco	No	S	Category II	ND	Exterior	NA
SN-HS-02A	Plaster	No	S	Category II	ND/ND	NW Bedroom Wall	NA
SN-HS-02B	Plaster	No	S	Category II	ND	NE Room Wall	NA
SN-HS-02C	Plaster	No	S	Category II	ND	SE Room Ceiling	NA
SN-HS-02D	Plaster	No	S	Category II	ND	2 nd Fl. W Bedroom Wall	NA

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2521 Jefferson St., Muskegon Heights, Michigan

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
SN-HS-02E	Plaster	No	S	Category II	ND	2 nd Fl. E Bedroom Wall	NA
SN-HM-11A	Tan Linoleum	No	M	Category I	ND	Front Porch	NA
SN-HM-11B	Tan Linoleum	No	M	Category I	ND	Front Porch	NA

Notes:

= 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, 2521 Jefferson St., Muskegon Heights, Michigan

	Asbestos Containing Material Description	and Location			
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity
SE Room (1 register, 10 sq. ft.) NE/NW Bedroom (1 register, 15 sq. ft.) 2nd Fl. Bathroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) 2nd Fl. Bathroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) 2nd Fl. S 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.) 2nd Fl. E Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft. plus 10 sq. ft. on horizontal chase in floor) 2nd Fl. W Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	175 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, 2521 Jefferson St., Muskegon Heights, Michigan

Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
SE Room	Green Linoleum		No	195 sq. ft.
2 nd Fl. W Bedroom	Green Linoleum		No	120 sq. ft.
2 nd Fl. Bathroom	Beige Linoleum		No	72 sq. ft.
		Total		387 sq. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
SE Room (1 register, 10 sq. ft.) NE/NW Bedroom (1 register, 15 sq. ft.) 2 nd Fl. Bathroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) 2 nd Fl. Bathroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) 2 nd Fl. S Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) 2 nd Fl. E Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) 2 nd Fl. E Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft. plus 10 sq. ft. on horizontal chase in floor) 2 nd Fl. W Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)	HVAC Duct Wrap		Yes	175 sq. ft.
		Total		175 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.

Table 4 - Summary of All Asbestos Containing Materials, 2521 Jefferson St., 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 27, 2016

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 2528 Riordan St., Muskegon Heights, MI 49444

Parcel ID: 61-26-185-152-0017-00

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 2528 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 .24 acre residential parcel which contains an approximate 1,318 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 asphalt lap over wood lap while the roof was sealed with asphalt shingles and rolled roofing. The Building can be further divided into a front entry, living room, dining room, kitchen, bath, two bedrooms and rear entry on the first floor while the second floor contains two bedrooms.

VISUAL INSPECTION AND SAMPLING

Asbestos Containing Materials Inspection

Mr. Aaron Paquet of Red Cedar Consulting (Red Cedar), an accredited State Of Michigan/EPA Asbestos Building Inspector (Accreditation Number A30955) whom completed training per the Michigan Asbestos

Project No.: 16-1070 Muskegon County Land Bank Parcel ID: 61-26-185-152-0017-00

Workers Accreditation Act 440 completed an inspection of the Subject Property on May 22, 2016 for suspected asbestos containing building materials.

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

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

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

- Asphalt Shingle
- Asphalt Siding
- Rolled Roofing
- Linoleum
- 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.

Muskegon County Land Bank Parcel ID: 61-26-185-152-0017-00

Hazardous Materials Inspection

On May 22, 2016 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: 61-26-185-152-0017-00

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:

- SE Room (1 register, 15 sq. ft.)
- Basement (Misc. HVAC Paper on Basement Beam, 5 sq. ft.)

Category I ACM

One type of resilient floor covering (White Linoleum Multilayer) located within the kitchen was found to contain up to 5% Chrysotile asbestos. The assessment to quantify the extent of this material identified approximately 108 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.

- SE Room (1 register, 15 sq. ft.)
- Basement (Misc. HVAC Paper on Basement Beam, 5 sq. ft.)

The Category I resilient floor covering (White Linoleum Multilayer) 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 (4)
- Automobile Tire (3)

Muskegon County Land Bank Parcel ID: 61-26-185-152-0017-00

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: 61-26-185-152-0017-00

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

(Laron Pogwet

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: 2528 Riordan St

Report To:

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

ARI Report # 16-65038

Date Collected: 05/22/16 Date Received: 05/23/16 Date Analyzed: 05/25/16

Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65038 - 01 Cust. #: RS-HM-01A

Material: Asphalt Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 4

Asbestos Present: NO No Asbestos Observed

Cellulose - 20% Fiberglass - 2%

Other - 78%

Lab ID #: 65038 - 01a

Cust. #: RS-HM-01A

Material: Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 4

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 20%

Fiberglass - 2%

Other - 78%

Lab ID #: 65038 - 01b

Cust. #: RS-HM-01A

Material: Felt Location:

Appearance: brown, fibrous, homogenous

Layer: 3 of 4

Asbestos Present: NO

Cellulose - 70%

No Asbestos Observed

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: 2528 Riordan St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16

16-65038

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/25/16

Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 70%

Cellulose - 20%

Fiberglass - 2%

Other - 78%

Other - 30%

Lab ID #: 65038 - 01c

Cust. #: RS-HM-01A

Material: Felt Location:

Appearance: brown, fibrous, homogenous

Layer: 4 of 4

Lab ID #: 65038 - 02

Cust. #: RS-HM-01B

Material: Asphalt Shingle

Location:

A

Appearance: black, fibrous, homogenous

Layer: 1 of 3

Lab ID #: 65038 - 02a Cust. #: RS-HM-01B Asbestos Present: NO

Asbestos Present: **NO**

No Asbestos Observed

No Asbestos Observed

Cellulose - 20%

Fiberglass - 2%

Other - 78%

Material: Shingle

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

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Test Method, Polarized Light Microscopy (PLM)

Project: 2528 Riordan St

Report To:

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

ARI Report # Date Collected: 05/22/16

16-65038

Date Received: 05/23/16

Date Analyzed: 05/25/16

Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 70%

Other - 30%

Lab ID #: 65038 - 02b

Cust. #: RS-HM-01B

Material: Felt Location:

Appearance: brown, fibrous, homogenous

Layer: 3 of 3

No Asbestos Observed

Asbestos Present: **NO**

Cellulose - 60%

Other - 40%

Cust. #: RS-HM-02A

Lab ID #: 65038 - 03

Material: Asphalt Siding

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 65038 - 04

Cust. #: RS-HM-02B

Material: Asphalt Siding

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

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Test Method, Polarized Light Microscopy (PLM)

Project: 2528 Riordan St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-65038

Date Collected: 05/22/16 Date Received: 05/23/16 Date Analyzed: 05/25/16

Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Fiberglass - 20%

Other - 80%

Lab ID #: 65038 - 05

Cust. #: RS-HM-03A

Material: Rolled Roofing

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 65038 - 06

Cust. #: RS-HM-03B

Asbestos Present: NO

No Asbestos Observed

Fiberglass - 20%

Other - 80%

Material: Rolled Roofing

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 65038 - 07

Cust. #: RS-HM-04A

Material: Yellow Linoleum

Location:

Appearance: yellow,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: 2528 Riordan St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-65038

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/25/16

Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 60%

Other - 40%

Lab ID #: 65038 - 08

Cust. #: RS-HM-04B

Material: Yellow Linoleum

Location:

Appearance: yellow,fibrous,homogenous

Layer: 1 of 1

Lab ID #: 65038 - 09

Cust. #: RS-HM-05A

Asbestos Present: NO

No Asbestos Observed

Cellulose - 10%

Fiberglass - 5%

Other - 85%

Material: White Linoleum Multilayer

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 6

Lab ID #: 65038 - 09a

Asbestos Present: NO

No Asbestos Observed

Synthetic - 3%

Other - 97%

Cust. #: RS-HM-05A

Material: Floor Tile

Location:

Appearance: blue, fibrous, homogenous

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

Layer: 2 of 6

Robert T. Letarte Jr., Laboratory Director

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Test Method, Polarized Light Microscopy (PLM)

Project: 2528 Riordan St

Report To:

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

ARI Report #

16-65038

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/25/16

Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65038 - 09b

Cust. #: RS-HM-05A

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 3 of 6

Lab ID #: 65038 - 09c

Cust. #: RS-HM-05A

Material: Linoleum

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 4 of 6

Lab ID #: 65038 - 09d

Cust. #: RS-HM-05A

Material: Floor Tile

Location:

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

Layer: 5 of 6

Asbestos Present: NO No Asbestos Observed

Other - 100%

Asbestos Present: **NO**

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Cellulose - 10%

Fiberglass - 5%

Other - 85%

Cellulose - 5%

Appearance: yellow,fibrous,homogenous

Other - 95%

Robert T. Letarte Jr., Laboratory Director

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Test Method, Polarized Light Microscopy (PLM)

Project: 2528 Riordan St

Report To:

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

ARI Report # 16-65038

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/25/16 Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 65038 - 09e

Cust. #: RS-HM-05A

Material: Glue Location:

Appearance: clear,nonfibrous,homogenous

Layer: 6 of 6

Cellulose - 10%

Lab ID #: 65038 - 10 Cust. #: RS-HM-05B

Material: White Linoleum Multilayer

Asbestos Present: **NO** No Asbestos Observed

Fiberglass - 5%

Other - 85%

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 8

Asbestos Present: NO

Synthetic - 3%

Lab ID #: 65038 - 10a Cust. #: RS-HM-05B

Material: Floor Tile

No Asbestos Observed

Other - 97%

Location:

Appearance: blue, fibrous, homogenous

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

Layer: 2 of 8

Robert T. Letarte Jr., Laboratory Director

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Test Method, Polarized Light Microscopy (PLM)

Project: 2528 Riordan St

Report To:

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

ARI Report #

16-65038

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/25/16

Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65038 - 10b

Cust. #: RS-HM-05B

Material: Glue Location:

Appearance: clear,nonfibrous,homogenous

Layer: 3 of 8

Lab ID #: 65038 - 10c

Cust. #: RS-HM-05B

Material: Floor Tile

Location:

Appearance: white, fibrous, homogenous

Layer: 4 of 8

Lab ID #: 65038 - 10d

Cust. #: RS-HM-05B

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 5 of 8

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Asbestos Present: **NO** No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Cellulose - 5%

Other - 95%

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: 2528 Riordan St

Report To:

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

ARI Report # Date Collected: 05/22/16

16-65038

Date Received: 05/23/16

Date Analyzed: 05/25/16

Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

Asbestos Present: YES

Chrysotile - 5%

Non-Asbestos

Other - 95%

Lab ID #: 65038 - 10e

Cust. #: RS-HM-05B

Material: Floor Tile

Location:

Appearance: beige, fibrous, homogenous

Layer: 6 of 8

Asbestos Present: **NO**

No Asbestos Observed

Other - 100%

Lab ID #: 65038 - 10f Cust. #: RS-HM-05B

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 7 of 8

Lab ID #: 65038 - 10g

Cust. #: RS-HM-05B

Material: Linoleum

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 8 of 8

Asbestos Present: NO

No Asbestos Observed

Cellulose - 10% Fiberglass - 5%

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: 2528 Riordan St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-65038

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/25/16 Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 10%

Fiberglass - 5%

Other - 85%

Lab ID #: 65038 - 11

Cust. #: RS-HM-06A

Material: Black Linoleum

Location:

Appearance: black, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 65038 - 12

Cust. #: RS-HM-06B

Material: Black Linoleum

Asbestos Present: NO

No Asbestos Observed

Cellulose - 10%

Fiberglass - 5%

Other - 85%

Location:

Appearance: black,fibrous,nonhomogenous

Layer: 1 of 1

Lab ID #: 65038 - 13

Cust. #: RS-HM-07A

Material: Red Linoleum

Location:

Appearance: beige, 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: 2528 Riordan St

Report To:

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

ARI Report #

16-65038

Date Collected: 05/22/16

Date Received: 05/23/16 Date Analyzed: 05/25/16

Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65038 - 14

Cust. #: RS-HM-07B

Material: Red Linoleum

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 65038 - 15

Cust. #: RS-HM-08A

Material: Drywall

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 65038 - 16

Cust. #: RS-HM-08B

Material: Drywall

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 60%

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

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 2528 Riordan St

Report To:

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

ARI Report #

16-65038

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/25/16

Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65038 - 17

Cust. #: RS-HM-09A

Material: Glazing

Location:

Appearance: white, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 65038 - 18

Cust. #: RS-HM-09B

Material: Glazing

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO**

Chrysotile - Trace

POINT COUNT RESULT

Asbestos Present: NO

No Asbestos Observed

Lab ID #: 65038 - 19

Cust. #: RS-HS-01A

Material: Plaster/Adhesive

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 1 of 3

Asbestos Present: **NO**

No Asbestos Observed

Wollastonite - 1%

Other - 99%

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: 2528 Riordan St

Report To:

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

ARI Report #

16-65038

Date Collected: 05/22/16

Date Received: 05/23/16

Date Analyzed: 05/25/16

Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

No Asbestos Observed

Non-Asbestos

Lab ID #: 65038 - 19a

Cust. #: RS-HS-01A

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 3

Lab ID #: 65038 - 19b

Cust. #: RS-HS-01A

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

Layer: 3 of 3

Lab ID #: 65038 - 20

Cust. #: RS-HS-01B

Material: Plaster/Texture

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 3

Asbestos Present: NO

Other - 100%

Asbestos Present: **NO**

No Asbestos Observed

Hair - 2%

Other - 98%

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: 2528 Riordan St

Report To:

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

ARI Report # 16-65038

Date Collected: 05/22/16 Date Received: 05/23/16 Date Analyzed: 05/25/16

Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 65038 - 20a

Cust. #: RS-HS-01B

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 3

Lab ID #: 65038 - 20b

Cust. #: RS-HS-01B

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 1%

Hair - 2%

Other - 97%

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

Layer: 3 of 3

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Lab ID #: 65038 - 21 Cust. #: RS-HS-01C

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: 2528 Riordan St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16

16-65038

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/25/16

Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Hair - 3%

Other - 97%

Lab ID #: 65038 - 21a

Cust. #: RS-HS-01C

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: **NO**No Asbestos Observed

Other - 100%

Lab ID #: 65038 - 22 Cust. #: RS-HS-01D

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 65038 - 22a

Cust. #: RS-HS-01D

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 2

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: 2528 Riordan St

Report To:

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

ARI Report # Date Collected: 05/22/16

16-65038

Date Received: 05/23/16

Date Analyzed: 05/25/16

Date Reported: 05/25/16

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 #: 65038 - 23

Cust. #: RS-HS-01E

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 65038 - 23a

Cust. #: RS-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

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

48 hou Other Rush Phone: Client Name: City, St., Zip: Address: Relinquished by: Turn Around Times: (Circle One) Date: Lab ID# 27278 (888) 449-4566 24 hour 72 hour N Red Cedar Consulting PO Box 13216 Lansing, MI 48901 RS-HM-OUB 75- AM-01A YS-4-058 25-HM-05A RS-HM-04A PS-HM-03B RS-4M-018 RS-4M-06A RS-HM-03A RS-HM-02B RS-4M7-03A TTP) All Samples Except Plaster Client ID# Received by: January 1855 Date: Fax: MAY 2 3 2016 Black Linoleum Rolled Roofing Asphalt Shingle Asporalt Shingle White Lindeum Yellow Linoleum Rolled Roofing White Linoleum Multilayer Asphalt Siding Yellow Linoleum Asphalt Siding (888) 448-8739 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. Multi layer Wipe Relinquished by: Wipe Tape Contact Person: Aaron Paquet Date of Survey: 5.22.16 Project #: Project: 2538 Riordan St Bulk/NOB Аir BioSIS Point Count Volume EPA Level II Paint Other Received by: Area Soil Viable Results Lab Use Only Log-In ____ Report

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



Relinquished by:	F 2	£.	Z Z	<i>\$1</i>	3/	α	1	, Z	カ	Lab ID#	Other:	to nom	<i></i>			Phone: (888) 4	City, St., Zip:	Address:	Client Name:
	25-HS-01D	25-45-013	RS-45-01A	RS-HM-09A			25- mm-07B		RS-4M-06B	Client ID#	All Samples Except				Around Times: (Circle One)	(888) 449-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
Received by:	Plaster	मेकिस्ट	Plaster	Glazing	Daywall	Dawall	Red Linoleum	Red Linderson	Black Lindleson	Material/Location	xcept Plaster TEM: AHERA 7400	Mold: Bulk	Lead: Bulk	os: Bulk x	PLM EPA	X: (888) 448-8739			ing
Relinquished by:										on Volume	Bulk/NOB EPA Level II	Tape BioSIS	Wipe Air Paint	Wipe Point Count	apaquet@redcedarconsulting.net 600, PC all samples with a detection of <5% ACM.	rson:		-	Date of Survey: 5.30.16
Received by:										Area	vel II	Other Viable_	t Soil	PCM	et@redcedarconsul	Aaron Paquet		Riordan St.).[6
										Results					ting.net			Report	Lab Use Only Log-In

Rev: 12/03 Work Forms: COC

APEX 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



/03	Relinquished by:	ر ا					-	2	Lab ID #		Other:	48 hour 72 hour	Rush 24 hour	Turn Arou	Phone: (888) 449-4566		Address:	Client Name:
Date .	Received by							25-HS-01E	Client ID#		(TTP) All Samples Except			Turn Around Times: (Circle One)	49-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
APEX RESEARCH	23/18							Plaster	Material/Location	TEM: AHERA 7400 Bulk/NOB	Mold: Bulk Tape	Lead: Bulk Wipe	Asbestos: Bulk Wipe	PLM EPA 600, PC	(888) 448-8739	Project #:	Project	
Date :	Received by:								Volume Area	OBEPA Level II	BioSIS Other	Air Paint Soil	Point Count PCM	apaque with a de	Person: Aaron Paquet	Ċ	Direction of the	Date of Survey: 5.22.11
									Results	1	_ Viable	vil		arconsulting net of <5% ACM.		Report		Lab Use Only

Rev: 12/03 Work Forms: COC

Red Cedar Consulting

Tables

Table 1 - Summary of Hazardous Materials, 2528 Riordan St., Muskegon Heights, Michigan

	Hazardous Materials Description and Location										
Location	Material Description	Quantity									
Exterior	Automobile Tire	3									
Living	Smoke Detector	1									
NE Bedroom	Smoke Detector	1									
2 nd Fl. E Bedroom	Smoke Detector	1									
Basement	Smoke Detector	1									

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2528 Riordan St., Muskegon Heights, Michigan

Sample Number	Sample Description	le Description Friable Materia Type		Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
RS-HM-01A	Asphalt Shingle	No	M	Category I	ND/ND/ND/ND	Exterior	NA
RS-HM-01B	Asphalt Shingle	No	M	Category I	ND/ND/ND	Exterior	NA
RS-HM-02A	Asphalt Siding	No	M	Category I	ND	Exterior	NA
RS-HM-02B	Asphalt Siding	No	M	Category I	ND	Exterior	NA
RS-HM-03A	Rolled Roofing	No	M	Category I	ND	Exterior	NA
RS-HM-03B	Rolled Roofing	No	M	Category I	ND	Exterior	NA
RS-HM-04A	Yellow Linoleum	No	M	Category I	ND	Living/Dining	NA
RS-HM-04B	Yellow Linoleum	No	M	Category I	ND	Living/Dining	NA
RS-HM-05A	White Linoleum Multilayer	No	M	Category I	ND/ND/ND/ND/ ND	Kitchen	NA
RS-HM-05B	White Linoleum Multilayer	No	M	Category I	ND/ND/ND/ND/ND/ 5% CH/ND/ND	Kitchen	108 sq. ft.
RS-HM-06A	Black Linoleum	No	M	Category I	ND	Bath	NA
RS-HM-06B	Black Linoleum	No	M	Category I	ND	Bath	NA
RS-HM-07A	Red Linoleum	No	M	Category I	ND	NE Bedroom	NA
RS-HM-07B	Red Linoleum	No	M	Category I	ND	NE Bedroom	NA
RS-HM-08A	Drywall	Yes	M	Category II	ND	NE Bedroom Ceiling	NA
RS-HM-08B	Drywall	Yes	M	Category II	ND	NE Bedroom Wall	NA
RS-HM-09A	Glazing	Yes	M	Category II	ND	Living	NA
RS-HM-09B	Glazing	Yes	M	Category II	Trace CH	NW Bedroom	NA
RS-HS-01A	Plaster	No	S	Category II	ND/ND/ND	Living Wall	NA
RS-HS-01B	Plaster	No	S	Category II	ND/ND/ND	Kitchen Wall	NA
RS-HS-01C	Plaster	No	S	Category II	ND/ND	Kitchen Ceiling	NA
RS-HS-01D	Plaster	No	S	Category II	ND/ND	2 nd Fl. W Bedroom Wall	NA
RS-HS-01E	Plaster	No	S	Category II	ND/ND	2 nd Fl. E Bedroom Ceiling	NA

Notes:

Material Types

Abbreviations

M = Miscellaneous building material

NQ = Not quantified

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2528 Riordan 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 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, 2528 Riordan St., Muskegon Heights, Michigan

Asbestos Containing Material Description and Location										
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity					
SE Room (1 register, 15 sq. ft.) Basement (Misc. HVAC Paper on Basement Beam, 5 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, 2528 Riordan St., Muskegon Heights, Michigan

Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Kitchen	White Linoleum Multilayer		No	108 sq. ft.
		Total		108 sq. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
SE Room (1 register, 15 sq. ft.) Basement (Misc. HVAC Paper on Basement Beam, 5 sq. ft.)	HVAC Duct Wrap		Yes	20 sq. ft.
		Total		20 sq. ft.

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 27, 2016

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 Maffett St., Muskegon Heights, MI 49444

Parcel ID: 61-26-185-145-0008-00

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 2529 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 a 360 sq. ft. detached garage and approximate 1,148 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 aluminum 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 rear entry on the first floor while the second floor contains two bedrooms.

VISUAL INSPECTION AND SAMPLING

Asbestos Containing Materials Inspection

Mr. Aaron Paquet of Red Cedar Consulting (Red Cedar), an accredited State Of Michigan/EPA Asbestos Building Inspector (Accreditation Number A30955) whom completed training per the Michigan Asbestos

Project No.: 16-1070 Muskegon County Land Bank Parcel ID: 61-26-185-145-0008-00

Workers Accreditation Act 440 completed an inspection of the Subject Property on May 22, 2016 for suspected asbestos containing building materials.

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

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

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

- Asphalt Shingle
- Linoleum
- 1'x1' Ceiling Tile
- 2'x2' Ceiling Tile
- 12"x12" Vinyl Tile
- Drywall
- 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: 61-26-185-145-0008-00

Hazardous Materials Inspection

On May 22, 2016 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.

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: 61-26-185-145-0008-00

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, first and second floors:

- Living (1 register, 15 sq. ft.)
- Kitchen (1 register, 15 sq. ft.)
- NW Bedroom (1 register, 15 sq. ft.)
- Living Room Floor (1 register, 15 sq. ft.)
- NE Bedroom Floor (1 register, 15 sq. ft.)
- 2nd Fl. W Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- Basement (Misc. HVAC Tape on Cold Air Ductwork, 5 sq. ft.)
- Basement (Misc. HVAC wrap on Basement Post, 5 sq. ft.)
- Basement Crawl Space (Misc. HVAC Paper on E Wall Sill, 10 sq. ft.)
- Basement (8 in. dia. HVAC Wrapped Ductwork, 4 lin. ft.)

Category I ACM

One type of resilient floor covering (White Linoleum) located within the kitchen was found to contain up to 30% Chrysotile asbestos. The assessment to quantify the extent of this material identified approximately 121 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.)
- Kitchen (1 register, 15 sq. ft.)
- NW Bedroom (1 register, 15 sq. ft.)
- Living Room Floor (1 register, 15 sq. ft.)
- NE Bedroom Floor (1 register, 15 sq. ft.)
- 2nd Fl. W Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- Basement (Misc. HVAC Tape on Cold Air Ductwork, 5 sq. ft.)
- Basement (Misc. HVAC wrap on Basement Post, 5 sq. ft.)
- Basement Crawl Space (Misc. HVAC Paper on E Wall Sill, 10 sq. ft.)
- Basement (8 in. dia. HVAC Wrapped Ductwork, 4 lin. ft.)

Muskegon County Land Bank Parcel ID: 61-26-185-145-0008-00

The Category I resilient floor covering (White 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 (3)
- Automobile Tire (5)
- Television (1)
- 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: 61-26-185-145-0008-00

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: 2529 Maffett St

Report To:

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

ARI Report # 16-65042

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/25/16 Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

No Asbestos Observed

Non-Asbestos

Lab ID #: 65042 - 01

Cust. #: ST-HM-01A

Material: Asphalt Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 3

Lab ID #: 65042 - 01a

Cust. #: ST-HM-01A

Material: Brown Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 3

Lab ID #: 65042 - 01b

Cust. #: ST-HM-01A

Material: Tar Paper

Location:

Appearance: black,fibrous,homogenous

Layer: 3 of 3

Asbestos Present: **NO**

Cellulose - 40%

Other - 60%

Asbestos Present: **NO** No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Cellulose - 40%

Other - 60%

Cellulose - 50%

Other - 50%

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

Robert T. Letarte Jr., Laboratory Director

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



Test Method, Polarized Light Microscopy (PLM)

Project: 2529 Maffett St

Report To:

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ARI Report #

16-65042

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/25/16 Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65042 - 02

Cust. #: ST-HM-01B

Material: Asphalt Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 3

Lab ID #: 65042 - 02a

Cust. #: ST-HM-01B

Material: Brown Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 3

Lab ID #: 65042 - 02b

Cust. #: ST-HM-01B

Material: Tar Paper

Location:

Appearance: black,fibrous,homogenous

Layer: 3 of 3

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 - 50%

Other - 50%

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: 2529 Maffett St

Report To:

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

ARI Report # 16-65042

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/25/16 Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Fiberglass - 30%

Other - 70%

Lab ID #: 65042 - 03

Cust. #: ST-HM-02A

Material: Asphalt Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 1

Lab ID #: 65042 - 04

Asbestos Present: **NO**

No Asbestos Observed

Fiberglass - 30%

Other - 70%

Cust. #: ST-HM-02B

Material: Asphalt Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 65042 - 05

Material: White Linoleum

Asbestos Present: NO

Cellulose - 10%

Cust. #: ST-HM-03A No Asbestos Observed Fiberglass - 10%

Other - 80%

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 3

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Test Method, Polarized Light Microscopy (PLM)

Project: 2529 Maffett St

Report To:

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

ARI Report # 16-65042

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/25/16

Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65042 - 05a

Cust. #: ST-HM-03A

Material: Brown Linoleum

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 2 of 3

No Asbestos Observed

Cellulose - 10%

Other - 80%

Lab ID #: 65042 - 05b

Cust. #: ST-HM-03A

Material: Green Linoleum

Location:

Appearance: green, fibrous, nonhomogenous

Layer: 3 of 3

Lab ID #: 65042 - 06

Cust. #: ST-HM-03B

Material: White Linoleum

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 3

Asbestos Present: NO

Fiberglass - 10%

Asbestos Present: YES

Chrysotile - 30%

Other - 70%

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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Project: 2529 Maffett St

Report To:

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

ARI Report # 16-65042

Date Collected: 05/22/16 Date Received: 05/23/16 Date Analyzed: 05/25/16

Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 10%

Fiberglass - 10% Other - 80%

Lab ID #: 65042 - 06a

Cust. #: ST-HM-03B

Material: Brown Linoleum

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 2 of 3

Lab ID #: 65042 - 06b

Cust. #: ST-HM-03B

Material: Green Linoleum

Location:

Appearance:

Layer: 3 of 3

Asbestos Present:

NOT ANALYZED

Asbestos Present: NO

No Asbestos Observed

Lab ID #: 65042 - 07

Cust. #: ST-HM-04A

Material: Beige 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

Cellulose - 10%

Fiberglass - 10%

Other - 80%

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Test Method, Polarized Light Microscopy (PLM)

Project: 2529 Maffett St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-65042

Date Collected: 05/22/16 Date Received: 05/23/16 Date Analyzed: 05/25/16

Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 10%

Fiberglass - 10% Other - 80%

Lab ID #: 65042 - 08

Cust. #: ST-HM-04B

Material: Beige Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 65042 - 09

Cust. #: ST-HM-05A

Material: Brown Linoleum

Asbestos Present: **NO**No Asbestos Observed

Cellulose - 10%

Fiberglass - 10%

Other - 80%

Location:

Appearance: brown,fibrous,nonhomogenous

Layer: 1 of 1

Lab ID #: 65042 - 10

Cust. #: ST-HM-05B

Material: Brown Linoleum

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

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Test Method, Polarized Light Microscopy (PLM)

Project: 2529 Maffett St

Report To:

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

ARI Report #

16-65042

Date Collected: 05/22/16

Date Received: 05/23/16

Date Analyzed: 05/25/16 Date Reported: 05/25/16

Sample Information

No Asbestos Observed

Non-Asbestos

Lab ID #: 65042 - 11

Cust. #: ST-HM-06A

Material: White 1x1 Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 65042 - 12

Cust. #: ST-HM-06B

Material: White 1x1 Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 65042 - 13

Cust. #: ST-HM-07A

Material: Green 12x12 Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

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 - 80%

Other - 20%

Other - 20%

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

Robert T. Letarte Jr., Laboratory Director

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Project: 2529 Maffett St

Report To:

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ARI Report # 16-65042

Date Collected: 05/22/16

Date Received: 05/23/16 Date Analyzed: 05/25/16

Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 80%

Other - 20%

Lab ID #: 65042 - 14

Cust. #: ST-HM-07B

Material: Green 12x12 Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 40%

Lab ID #: 65042 - 15 Cust. #: ST-HM-08A

Material: White 2x4 Ceiling Tile

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 65042 - 16 Cust. #: ST-HM-08B

Asbestos Present: NO

Cellulose - 40%

No Asbestos Observed

Mineral Wool - 30%

Mineral Wool - 30%

Other - 30%

Other - 30%

Material: White 2x4 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: 2529 Maffett St

Report To:

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ARI Report #

16-65042 Date Collected: 05/22/16

Date Received: 05/23/16 Date Analyzed: 05/25/16

Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65042 - 17

Cust. #: ST-HM-09A

Material: White Pitted 2x2 Ceiling Tile

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: NO No Asbestos Observed

Cellulose - 40%

Mineral Wool - 40%

Other - 20%

Lab ID #: 65042 - 18

Cust. #: ST-HM-09B

Material: White Pitted 2x2 Ceiling Tile

Location:

Appearance: grey, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 40%

Mineral Wool - 40%

Other - 20%

Lab ID #: 65042 - 19 Cust. #: ST-HM-10A

Material: White Smooth 2x2 Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

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

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Test Method, Polarized Light Microscopy (PLM)

Project: 2529 Maffett St

Report To:

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

ARI Report # 16-65042

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/25/16

Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 70%

Other - 30%

Lab ID #: 65042 - 20

Cust. #: ST-HM-10B

Material: White Smooth 2x2 Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 20%

Other - 80%

Cust. #: ST-HM-11A Material: Drywall

Lab ID #: 65042 - 21

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 65042 - 22

Cust. #: ST-HM-11B

Material: 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

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Test Method, Polarized Light Microscopy (PLM)

Project: 2529 Maffett St

Report To:

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

ARI Report # 16-65042

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/25/16

Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 1%

Other - 99%

Lab ID #: 65042 - 23

Cust. #: ST-HM-12A

Material: Glazing

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 1

Asbestos Present: **NO**

Asbestos Present: NO

No Asbestos Observed

Other - 100% No Asbestos Observed

Lab ID #: 65042 - 24 Cust. #: ST-HM-12B

Material: Glazing

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 1

Lab ID #: 65042 - 25

Cust. #: ST-HM-13A

Material: Old Linoleum

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

Cellulose - 30%

Other - 70%

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Test Method, Polarized Light Microscopy (PLM)

Project: 2529 Maffett St

Report To:

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

ARI Report #

16-65042

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/25/16

Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

No Asbestos Observed

Non-Asbestos

Lab ID #: 65042 - 26

Cust. #: ST-HM-13B

Material: Old Linoleum

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 65042 - 27

Cust. #: ST-HS-01A

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 65042 - 27a

Cust. #: ST-HS-01A

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Asbestos Present: NO

Cellulose - 30%

Other - 100%

Other - 70%

Asbestos Present: **NO** No Asbestos Observed

Asbestos Present: NO

Hair - 5%

No Asbestos Observed

Other - 95%

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

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Project: 2529 Maffett St

Report To:

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ARI Report # 16-65042

Date Collected: 05/22/16

Date Received: 05/23/16 Date Analyzed: 05/25/16

Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Other - 100%

Lab ID #: 65042 - 28

Cust. #: ST-HS-01B

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 65042 - 28a

Cust. #: ST-HS-01B

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Lab ID #: 65042 - 29

Cust. #: ST-HS-01C

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

Hair - 5%

Other - 95%

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: 2529 Maffett St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-65042

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/25/16 Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Hair - 5%

Other - 95%

Lab ID #: 65042 - 29a Cust. #: ST-HS-01C

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%

Hair - 2%

Other - 98%

Lab ID #: 65042 - 30 Cust. #: ST-HS-01D

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 65042 - 30a

Cust. #: ST-HS-01D

Material: Plaster Base Coat

Location:

Appearance: grey,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.



Test Method, Polarized Light Microscopy (PLM)

Project: 2529 Maffett St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-

16-65042

Date Collected: 05/22/16 Date Received: 05/23/16

Date Received: 05/23/16 Date Analyzed: 05/25/16

Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

Asbestos Present: **NO**

No Asbestos Observed

No Asbestos Observed

Non-Asbestos

Other - 100%

Hair - 5%

Other - 95%

Lab ID #: 65042 - 31

Cust. #: ST-HS-01E

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 65042 - 31a

Cust. #: ST-HS-01E

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Lab ID #:

Asbestos Present:

C , "

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.

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



Fax: 734-449-9991

Date: 5-73-4	Polinomichad by:		0	9	8	7	6	6	7	.00	4		Lab ID#	Office .	`		Rush 24 hour	Turn Arou	Phone: (888) 449-4566	City, St., Zip: _1	Address:	Client Name: _R
		ST-HM-0(0)A	ST-4m-05B	5r-4m-05A	SI-HM-04B	ST-HM-OYA	ST-HM-03B	ST-HM-03A	ST-HM-02B	ST-HM-03A	ST-HM-01B	ST-HM-OIA	Client ID#	- LIF All Samples Except				Around Times: (Circle One)	9-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
MAY 2 3 2016 ReInquished by:		White IXI Ceiling Tike	Brown Linoleum	Brown Lineleum	Beige Linoleum	Beige Lingleum	white linder	white Linoleum	Asphalt Shingle	Asphalt Shingle	Asphalt Shingle	Asphalt Shingle	Material/Location	TEM: AHERA 7400	Mold: Bulk Tape	Lead: Bulk Wipe	Asbestos: Bulk Wipe	PLM EPA 600, PC	(888) 448-8739	Proj	Proj	
бу:	-												Volume	Bulk/NOBEPA Level II	BioSIS	Air Paint	Point Count	apaquet@redcedarconsulting.net all samples with a detection of <5% ACM.	Contact Person: Aaron 1	Project #:	Project: 2539 Maffett St.	Date of Survey : 5.22 \ \
Received by: Date:													Area	el II	Other Viable	Soil	PCM	t@redcedarcons	Paquet		ett St.	· 16
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Rev: 12/03 Work Forms: COC

APTIX PRISTARCE

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: \$/2	Relinquished by:												Lab ID#		Other:	As hour 72	Rush 24	Turn A	Phone: (8	City, St., Zip:	Address:	Client Name:
5/73/6 Date: MAY	Received by	20 ST-HM-11B D	31 ST-HM-IIA Da	ST-4M-10B	19 ST-HM-10A Whi	16 ST-HM-093 Whi	17 ST-HM-OGA Whi	16 Sr - HM - 08B Whi	15 ST-HM-08A Wh	ST-4M-07B	16 ST-HM-07A GAR	12 ST-HM-06B Whi	# Client ID #	TO DAY OF THE PARTY OF THE PART	TTP all complex forms	72 hour	24 hour	Around Times: (Circle One)	449-4566 Fax:	ip: Lansing, MI 48901	PO Box 13216	ne: Red Cedar Consulting
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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

APEX HISTARCH

Red Cedar Consulting

Tables

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

Hazardous Materials Description and Location								
Location	Material Description	Quantity						
Exterior	Automobile Tire	3						
Garage	Automobile Tire	2						
NE Bedroom	Smoke Detector	1						
2 nd Fl. E Bedroom	Smoke Detector	1						
2 nd Fl. E Bedroom	Television	1						
Basement	Smoke Detector	1						
Basement	Gallon Container Misc. Paint	2						

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2529 Maffet St., Muskegon Heights, Michigan

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
ST-HM-01A	Asphalt Shingle	No	M	Category I	ND/ND/ND	Exterior	NA
ST-HM-01B	Asphalt Shingle	No	M	Category I	ND/ND/ND	Exterior	NA
ST-HM-02A	Asphalt Shingle	No	M	Category I	ND	Garage Exterior	NA
ST-HM-02B	Asphalt Shingle	No	M	Category I	ND	Garage Exterior	NA
ST-HM-03A	White Linoleum	No	M	Category I	ND/ND/ 30% CH	Kitchen	121 sq. ft.
ST-HM-03B	White Linoleum	No	M	Category I	ND/ND/NA	Kitchen	NA
ST-HM-04A	Beige Linoleum	No	M	Category I	ND	Bath	NA
ST-HM-04B	Beige Linoleum	No	M	Category I	ND	Bath	NA
ST-HM-05A	Brown Linoleum	No	M	Category I	ND	Hall	NA
ST-HM-05B	Brown Linoleum	No	M	Category I	ND	Hall	NA
ST-HM-06A	White 1'x1' Ceiling Tile	Yes	M	Category II	ND	Kitchen	NA
ST-HM-06B	White 1'x1' Ceiling Tile	Yes	M	Category II	ND	Kitchen	NA
ST-HM-07A	Green 12x12 Vinyl Tile	No	M	Category I	ND	Front Entry	NA
ST-HM-07B	Green 12x12 Vinyl Tile	No	M	Category I	ND	Front Entry	NA
ST-HM-08A	White 2'x4' Ceiling Tile	Yes	M	Category II	ND	Living	NA
ST-HM-08B	White 2'x4' Ceiling Tile	Yes	M	Category II	ND	Living	NA
ST-HM-09A	White Pitted 2'x2' Ceiling Tile	Yes	M	Category II	ND	Front Entry	NA
ST-HM-09B	White Pitted 2'x2' Ceiling Tile	Yes	M	Category II	ND	Front Entry	NA
ST-HM-10A	White Smooth 2'x2' Ceiling Tile	Yes	M	Category II	ND	Front Entry	NA
ST-HM-10B	White Smooth 2'x2' Ceiling Tile	Yes	M	Category II	ND	Front Entry	NA
ST-HM-11A	Drywall	Yes	M	Category II	ND	Bath Wall	NA
ST-HM-11B	Drywall	Yes	M	Category II	ND	2 nd Fl. E Bedroom Ceiling	NA
ST-HM-12A	Glazing	Yes	M	Category II	ND	Living	NA
ST-HM-12B	Glazing	Yes	M	Category II	ND	NW Bedroom	NA
ST-HM-13A	Old Linoleum	No	M	Category I	ND	Basement Stairwell	NA
ST-HM-13B	Old Linoleum	No	M	Category I	ND	Basement Stairwell	NA
ST-HS-01A	Plaster	No	S	Category II	ND/ND	NE Bedroom Wall	NA

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2529 Maffet St., Muskegon Heights, Michigan

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
ST-HS-01B	Plaster	No	S	Category II	ND/ND	Kitchen Wall	NA
ST-HS-01C	Plaster	No	S	Category II	ND/ND	NW Bedroom Wall	NA
ST-HS-01D	Plaster	No	S	Category II	ND/ND	Dining Ceiling	NA
ST-HS-01E	Plaster	No	S	Category II	ND/ND	NW Bedroom Ceiling	NA

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

 $\begin{array}{lll} PC & = Point \ Count \ Analysis & lin. \ ft. & = linear \ feet \\ CH & = Chrysotile \ Asbestos & sq. \ ft. & = square \ feet \end{array}$

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 Maffet St., Muskegon Heights, Michigan

A	Asbestos Containing Material Description a	nd Location			
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity
Living (1 register, 15 sq. ft.) Kitchen (1 register, 15 sq. ft.) NW Bedroom (1 register, 15 sq. ft.) Living Room Floor (1 register, 15 sq. ft.) NE Bedroom Floor (1 register, 15 sq. ft.) 2 nd Fl. W Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) Basement (Misc. HVAC Tape on Cold Air Ductwork, 5 sq. ft.) Basement (Misc. HVAC wrap on Basement Post, 5 sq. ft.) Basement Crawl Space (Misc. HVAC Paper on E Wall Sill, 10 sq. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	144 sq. ft.
Basement (8 in. dia. HVAC Wrapped Ductwork, 4 lin. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	4 lin. ft.

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, 2529 Maffet St., Muskegon Heights, Michigan

Interior - Asbestos Containing Materials			
Location	Material Description	Friable	Approx. Quantity
Kitchen	White Linoleum	No	121 sq. ft.
	Total		121 sq. ft.
Interior - Asbestos Containing Materials			
Location	Material Description	Friable	Approx. Quantity
Living (1 register, 15 sq. ft.) Kitchen (1 register, 15 sq. ft.) NW Bedroom (1 register, 15 sq. ft.) Living Room Floor (1 register, 15 sq. ft.) NE Bedroom Floor (1 register, 15 sq. ft.) 2nd Fl. W Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) Basement (Misc. HVAC Tape on Cold Air Ductwork, 5 sq. ft.) Basement (Misc. HVAC wrap on Basement Post, 5 sq. ft.) Basement Crawl Space (Misc. HVAC Paper on E Wall Sill, 10 sq. ft.)	HVAC Duct Wrap	Yes	144 sq. ft.
	Total		144 sq. ft.
Interior - Asbestos Containing Materials			
Location	Material Description	Friable	Approx. Quantity
Basement (8 in. dia. HVAC Wrapped Ductwork, 4 lin. ft.)	HVAC Duct Wrap	Yes	4 lin. ft.
	Total		4 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 27, 2016

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 2532 Jefferson St., Muskegon Heights, MI 49444
Parcel ID: 61-26-185-143-0016-00

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 2532 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 .14 acre residential parcel which contains an approximate 1,625 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 over felt paper while the roof was sealed with asphalt shingles. The Building can be further divided into a sun room, living room, dining room, kitchen, bath, and two bedrooms on the first floor while the second floor contains a living room/dining room, kitchen, bathroom and two bedrooms.

VISUAL INSPECTION AND SAMPLING

Asbestos Containing Materials Inspection

Mr. Aaron Paquet of Red Cedar Consulting (Red Cedar), an accredited State Of Michigan/EPA Asbestos Building Inspector (Accreditation Number A30955) whom completed training per the Michigan Asbestos

Project No.: 16-1070 Muskegon County Land Bank Parcel ID: 61-26-185-143-0016-00

Workers Accreditation Act 440 completed an inspection of the Subject Property on May 7, 2016 for suspected asbestos containing building materials.

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

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

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

- Asphalt Shingle
- Felt Paper
- Linoleum
- 2'x4' Ceiling Tile
- Fiberboard
- 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: 61-26-185-143-0016-00

Hazardous Materials Inspection

On May 7, 2016 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.

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: 61-26-185-143-0016-00

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, 20 sq. ft.)
- Dining (1 register, 15 sq. ft.)
- NE Bedroom (1 register, 15 sq. ft.)
- 2nd Fl. Living/Dining (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- 2nd Fl. Kitchen (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.)
- Basement (misc. HVAC wrap on Ductwork, 15 sq. ft.)

Category I ACM

Four types of resilient floor covering (Brown Linoleum, White Linoleum, Beige Linoleum and Green Linoleum) located within the Building were found to contain up to 50% Chrysotile asbestos. The assessment to quantify the extent of this material identified approximately 1,064 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, 20 sq. ft.)
- Dining (1 register, 15 sq. ft.)
- NE Bedroom (1 register, 15 sq. ft.)
- 2nd Fl. Living/Dining (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- 2nd Fl. Kitchen (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.)
- Basement (misc. HVAC wrap on Ductwork, 15 sq. ft.)

The resilient floor coverings (Brown Linoleum, White Linoleum, Beige Linoleum and Green 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

Muskegon County Land Bank Parcel ID: 61-26-185-143-0016-00

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: 61-26-185-143-0016-00

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

(Laron Pogwet

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: 2532 Jefferson St.

Report To:

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

ARI Report # 16-64731

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16 Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64731 - 01

Cust. #: JF-HM-01A

Material: Asphalt Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 1

Lab ID #: 64731 - 02

Cust. #: JF-HM-01B

Material: Asphalt Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64731 - 03

Cust. #: JF-HM-02A

Material: Felt Paper/ Tar Paper

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 20%

Other - 80%

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 20%

Other - 80%

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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ARI Report # 16-64731

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16 Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 60%

Other - 40%

Lab ID #: 64731 - 04

Cust. #: JF-HM-02B

Material: Felt Paper

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: YES

Chrysotile - 50%

Other - 50%

Lab ID #: 64731 - 05 Cust. #: JF-HM-03A

Material: Brown Linoleum

Location:

Appearance: grey, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64731 - 06

Asbestos Present:

Cust. #: JF-HM-03B

Material: Brown Linoleum

Location:

NOT ANALYZED

Appearance: Layer: of

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ARI Report # 16-64731

Date Collected: 05/07/16 Date Received: 05/11/16 Date Analyzed: 05/17/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 30%

Other - 70%

Lab ID #: 64731 - 07

Cust. #: JF-HM-04A

Material: Blue Linoleum

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Lab ID #: 64731 - 08

Cust. #: JF-HM-04B

Asbestos Present: **NO**

Cellulose - 30%

No Asbestos Observed

Other - 70%

Other - 95%

Material: Blue Linoleum

Location:

Appearance: grey, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64731 - 09

Cust. #: JF-HM-05A

Material: Floor Tile

Location:

Appearance: white, fibrous, homogenous

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

Layer: 1 of 2

Asbestos Present: YES Chrysotile - 5%

Robert T. Letarte Jr., Laboratory Director

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Test Method, Polarized Light Microscopy (PLM)

Project: 2532 Jefferson St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64731

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16 Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: YES

Chrysotile - 30%

Non-Asbestos

Other - 70%

Lab ID #: 64731 - 09a

Cust. #: JF-HM-05A

Material: White Linoleum

Location:

Appearance: grey, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 64731 - 10

Cust. #: JF-HM-05B

Material: White Linoleum

Location:

Location.

Appearance: Layer:

NOT ANALYZED

Asbestos Present:

Lab ID #: 64731 - 11

Lau ID #. 04/31 - 11

Cust. #: JF-HM-06A

Material: Beige Linoleum

Location:

Appearance: blue, fibrous, homogenous

Layer: 1 of 2

Asbestos Present: YES

YES Cellulose - 20%

Chrysotile - 5%

Other - 75%

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

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ARI Report # 16-64731

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

No Asbestos Observed

Asbestos Present:

NOT ANALYZED

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Lab ID #: 64731 - 11a

Cust. #: JF-HM-06A

Material: Beige Linoleum

Location:

Appearance: white, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 64731 - 12

Cust. #: JF-HM-06B

Material: Beige Linoleum

Location:

Appearance:

Layer:

Lab ID #: 64731 - 13

Cust. #: JF-HM-07A

Material: Glazing

Location:

Appearance: brown,nonfibrous,homogenous

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

Layer: 1 of 1

Asbestos Present: NO

Cellulose - 20%

Other - 80%

Robert T. Letarte Jr., Laboratory Director

Other - 100%

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ARI Report # 16-64731

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64731 - 14

Cust. #: JF-HM-07B

Material: Glazing

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 1 of 1

Asbestos Present: **NO**

Cellulose - 30%

Lab ID #: 64731 - 15 Cust. #: JF-HM-08A

Material: Green Linoleum

No Asbestos Observed

Other - 70%

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 2

Asbestos Present: YES Chrysotile - 30%

Other - 70%

Lab ID #: 64731 - 15a

Cust. #: JF-HM-08A

Material: Green Linoleum

Location:

Appearance: yellow,fibrous,homogenous

Layer: 2 of 2

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Report To:

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

Lansing, MI 48901

ARI Report # 16-64731

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64731 - 16

Cust. #: JF-HM-08B

Material: Green Linoleum

Location:

Appearance:

Layer: of

Lab ID #: 64731 - 17

Cust. #: JF-HM-09A

Material: Brown Linoleum

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Lab ID #: 64731 - 18

Cust. #: JF-HM-09B

Material: Brown Linoleum

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present:

NOT ANALYZED

Asbestos Present: **NO** No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Cellulose - 40%

Cellulose - 30%

Other - 70%

Other - 60%

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Report To:

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Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16 Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64731 - 19

Cust. #: JF-HM-10A

Material: 2'x4' White Ceiling Tile

Location:

Appearance: grey, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Cellulose - 35%

Mineral Wool - 35%

Other - 30%

Lab ID #: 64731 - 20

Cust. #: JF-HM-10B

Material: 2'x4' White Ceiling Tile

Location:

Appearance: grey, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 35%

Mineral Wool - 35%

Other - 30%

Lab ID #: 64731 - 21

Cust. #: JF-HM-11A

Material: Fiberboard

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Cellulose - 60%

Other - 40%

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ARI Report #

16-64731

Date Collected: 05/07/16

Date Received: 05/11/16 Date Analyzed: 05/17/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64731 - 22

Cust. #: JF-HM-11B

Material: Fiberboard

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Lab ID #: 64731 - 23

Cust. #: JF-HM-12A

Material: Yellow Linoleum

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64731 - 24

Cust. #: JF-HM-12B

Material: Yellow Linoleum

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

Cellulose - 40%

No Asbestos Observed

Other - 60%

Asbestos Present: **NO** No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Cellulose - 30%

Cellulose - 30%

Other - 70%

Other - 70%

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

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Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64731 - 25

Cust. #: JF-HS-01A

Material: Plaster

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: NO

No Asbestos Observed

Cellulose - 2%

Other - 98%

Other - 100%

Material: Mortar

Lab ID #: 64731 - 25a

Cust. #: JF-HS-01A

Location:

Appearance: grey, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 64731 - 26

Cust. #: JF-HS-01B

Material: Plaster

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

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: 2532 Jefferson St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64731

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 20%

Other - 80%

Lab ID #: 64731 - 26a Cust. #: JF-HS-01B

Material: Mortar

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 #: 64731 - 27 Cust. #: JF-HS-01C

Material: Plaster

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 64731 - 27a

Cust. #: JF-HS-01C

Material: Mortar

Location:

Appearance: grey, fibrous, homogenous

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

Layer: 2 of 2

Robert T. Letarte Jr., Laboratory Director

Cellulose - 2%

Other - 98%

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ARI Report # 16-64731

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 2%

Other - 98%

Lab ID #: 64731 - 28

Cust. #: JF-HS-01D

Material: Plaster

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: **NO**

No Asbestos Observed

Other - 100%

Cust. #: JF-HS-01E

Lab ID #: 64731 - 29

Material: Plaster

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 64731 - 29a

Cust. #: JF-HS-01E

Material: Mortar

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

No Asbestos Observed

Asbestos Present: NO

Cellulose - 2% Other - 98%

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Apex # 64731

APEX Kesearch, 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 Phone: (888) 449-4566 Address: City, St., Zip: Turn Around Times: (Circle One) Client Name: 24 hour 72 hour Red Cedar Consulting Lansing, MI 48901 PO Box 13216 Hax: (888) 448-8739 Asbestos: Bulk Lead: Bulk PLM EPA 600, PC all samples with a detection of <5% ACM. × Wipe Wipe Contact Person: Aaron Paquet Date of Survey: Project: 2532 Project #: Air _ Point Count 5-7-16 Jefferson Soil Report_ Lab Use Only Log-In ____

Other: 5 Day

(TIP) All Samples Except Plaster
TEM:

Mold:

Bulk

Tape

BioSIS

Other

AHERA 7400

Bulk/NOB

EPA Level II

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)	JF-HM-06A	JF-4M-05R	JE-HM-05P	JF- HM-04B	JF- HM- 04A	JF- HM- 03B	JE- HM-03A	JF- HM-028	JF- HM- 03A	Jf- HM-01B	JE- HM- DIA	Client ID#
	JF-HM-06A Beige Lingleway	UT-HM-05B White Modern	UF-HM-05A White Lindleway	JF-HM-04B Blue Linoleum	JF-HM-04A Blue Lingieum	JF- HM- 03B Brown Linabum	Jr-HM-03A Brown Line kum	JF-HM-028 Felt Paper	Felt Paper	Asphalt Shinale	Asphalt Shingle	Material/Location
												Volume
												Area
												Results

Rev: 12/03 Work Forms: COC

Date: 5/0/6

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Date: 5-16-16

Received by:

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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: 5-10-Other: Doay Client Name: City, St., Zip: Furn Around Times: (Circle One) Lab ID# (888) 449-4566 24 hour 72 hour Red Cedar Consulting Lansing, MI 48901 PO Box 13216 BOL-MA-JOH DF-HM-DAA JF-HM-10B JF-HM-0713 JF-HM-09B JE-4m-08A JF- HM-07A JF-HM-08B JE-HM-06B (TTP) <u>All Samp</u>les Except Plaster TEM: Client ID# +- Hm-115 Received by: FM-11A Date: 5/0/6 Fax: (888) 448-8739 でかけ の、メロ、 White a'x4' fiber board Fiber board Down Linoleum <u>Umaga</u> Glazina STARCE OF Green Solazino Mold: Asbestos: Bulk Lead: Material/Location Linoleum Bulk Bulk mus look AHERA 7400 Modern Cino leven PLM EPA 600, PC all samples with a detection of <5% ACM. (eiling) × Relinquished by: Wipe Wipe Tape ゴボ 一. 人 Contact Person: Aaron Paquet Date of Survey:_ Project #: Project : <u>2532</u> Bulk/NOB APEX PRESEARCH Date: Air Point Count BioSIS Volume EPA Level II 5-7-16 Jetterson Paint Other Received by: Area PCM Soil Viable Results Lab Use Only
Log-In ____ Report_

48 hour

Rush

Phone:

Address:

Rev. 12/03 Work Forms: COC

Relinquished by:

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



Relinquished by: Date: 500 4 Rev: 12/03 Work Forms: COC			28	S) S)		26	300	して	E C	Lab ID#		Other: 5 pc	48 hour 72 hour	Rush 24 hour	Jurn Arou	Phone: (888)449-456	City, St., Zip:	Address:	Client Name:
Date:			JF-HS-OIE	JF HS-01D	JF-HS-01C	JF-HS-01B	JF-HS- OIA	JF-Hm-12B	DF-HM-JOA	Client ID#		TTP) All Samples Except			Around Times: (Circle One)	19-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
LOUS Retiniquis	DO 250		Plaster	Plaster	Plaster	Plaster	1 [Yellow Linoleum	Yellow Linoleum	Material/Location	TEM: AHERA 7400 Bulk/NOB	Mold: Bulk Tape	Lead: Bulk Wipe	Asbestos: Bulk X Wipe	Circle One) PLM EPA 600, PC all samples	148-8739	Project # :	Project	
	A A									Volume)B EPA Level II	BioSIS	Air Paint	Point Count		n: Aaron		11	Date of Survey・ カー
Received by:										Area	el II	Other Viable_	Soil	PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	Paquet		THAN SI	ハーコール
										Results					ting.net		Keport	Log-In	Lab Use Only

Red Cedar Consulting

Tables

Table 1 - Summary of Hazardous Materials, 2532 Jefferson St., Muskegon Heights, Michigan

Hazardous Materials Description and Location							
Location Material Description Qua							
Living	Smoke Detector	1					
Sun Room	Smoke Detector	1					

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2532 Jefferson St., Muskegon Heights, Michigan

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
JF-HM-01A	Asphalt Shingle	No	M	Category I	ND	Exterior	NA
JF-HM-01B	Asphalt Shingle	No	M	Category I	ND	Exterior	NA
JF-HM-02A	Felt Paper	No	M	Category I	ND	Exterior	NA
JF-HM-02B	Felt Paper	No	M	Category I	ND	Exterior	NA
JF-HM-03A	Brown Linoleum	No	M	Category I	50% CH	Living	673 sq. ft.
JF-HM-03B	Brown Linoleum	No	M	Category I	NA	Living	NA
JF-HM-04A	Blue Linoleum	No	M	Category I	ND	Dining	NA
JF-HM-04B	Blue Linoleum	No	M	Category I	ND	Dining	NA
JF-HM-05A	White Linoleum	No	M	Category I	5% CH/30%CH	Kitchen	168 sq. ft.
JF-HM-05B	White Linoleum	No	M	Category I	NA	Kitchen	NA
JF-HM-06A	Beige Linoleum	No	M	Category I	5% CH/ND	Bathroom	55 sq. ft.
JF-HM-06B	Beige Linoleum	No	M	Category I	NA	Bathroom	NA
JF-HM-07A	Glazing	Yes	M	Category II	ND	Dining	NA
JF-HM-07B	Glazing	Yes	M	Category II	ND	2 nd Fl. Living/Dining	NA
JF-HM-08A	Green Linoleum	No	M	Category I	ND/30% CH	2 nd Fl. Kitchen	168 sq. ft.
JF-HM-08B	Green Linoleum	No	M	Category I	NA	2 nd Fl. Kitchen	NA
JF-HM-09A	Brown Linoleum	No	M	Category I	ND	2 nd Fl. NE Bedroom	NA
JF-HM-09B	Brown Linoleum	No	M	Category I	ND	2 nd Fl. NW Bedroom	NA
JF-HM-10A	White 2'x4' Ceiling Tile	Yes	M	Category II	ND	Living	NA
JF-HM-10B	White 2'x4' Ceiling Tile	Yes	M	Category II	ND	Living	NA
JF-HM-11A	Fiberboard	Yes	M	Category II	ND	Basement Wall	NA
JF-HM-11B	Fiberboard	Yes	M	Category II	ND	Basement Wall	NA
JF-HM-12A	Yellow Linoleum	No	M	Category I	ND	Basement	NA
JF-HM-012B	Yellow Linoleum	No	M	Category I	ND	Basement	NA
JF-HS-01A	Plaster	No	S	Category II	ND/ND	Living Wall	NA
JF-HS-01B	Plaster	No	S	Category II	ND/ND	NW Bedroom Wall	NA
JF-HS-01C	Plaster	No	S	Category II	ND/ND	NE Bedroom Ceiling	NA

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2532 Jefferson St., Muskegon Heights, Michigan

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
JF-HS-01D	Plaster	No	S	Category II	ND	2 nd Fl. NE Bedroom Ceiling	NA
JF-HS-01E	Plaster	No	S	Category II	ND/ND	2 nd Fl. NW Bedroom Wall	NA

<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 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, 2532 Jefferson St., Muskegon Heights, Michigan

	Asbestos Containing Material Description	and Location			
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity
Living (1 register, 20 sq. ft.) Dining (1 register, 15 sq. ft.) NE Bedroom (1 register, 15 sq. ft.) 2 nd Fl. Living/Dining (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) 2 nd Fl. Kitchen (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) 2 nd Fl. NW Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) 2 nd Fl. NW Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) Basement (misc. HVAC wrap on Ductwork, 15 sq. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	170 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, 2532 Jefferson St., Muskegon Heights, Michigan

Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Living	Brown Linoleum		No	240 sq. ft.
2 nd Fl. Living/Dining	Brown Linoleum		No	144 sq. ft.
2 nd Fl. NE Bedroom	Brown Linoleum		No	120 sq. ft.
2 nd Fl. NW Bedroom	Brown Linoleum		No	169 sq. ft.
Kitchen	White Linoleum		No	168 sq. ft.
Bathroom	Beige Linoleum		No	55 sq. ft.
2 nd Fl. Kitchen	Green Linoleum		No	120 sq. ft.
2 nd Fl. Bathroom	Green Linoleum		No	48 sq. ft.
		Total		1,064 sq. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Living (1 register, 20 sq. ft.) Dining (1 register, 15 sq. ft.) NE Bedroom (1 register, 15 sq. ft.) 2 nd Fl. Living/Dining (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) 2 nd Fl. Kitchen (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) 2 nd Fl. NW Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) Basement (misc. HVAC wrap on Ductwork, 15 sq. ft.)	HVAC Duct Wrap		Yes	170 sq. ft.
Duscinent (mise, 1177) wrap on Ductwork, 15 sq. 1t.)		Total		170 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, 2532 Jefferson St., 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 27, 2016

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 2532 Riordan St., Muskegon Heights, MI 49444

Parcel ID: 61-26-185-152-0016-00

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 2532 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 .10 acre residential parcel which contains an approximate 824 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 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, two bedrooms and rear entry on the first floor while the second floor contains two bedrooms.

VISUAL INSPECTION AND SAMPLING

Asbestos Containing Materials Inspection

Mr. Aaron Paquet of Red Cedar Consulting (Red Cedar), an accredited State Of Michigan/EPA Asbestos Building Inspector (Accreditation Number A30955) whom completed training per the Michigan Asbestos

Muskegon County Land Bank Parcel ID: *61-26-185-152-0016-00*

Workers Accreditation Act 440 completed an inspection of the Subject Property on May 22, 2016 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
- Fiber Lap Siding
- Linoleum
- 1'x1' Ceiling Tile
- Glue Pod
- 12"x12" Vinyl Tile
- Drywall
- Glazing
- 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: *61-26-185-152-0016-00*

Hazardous Materials Inspection

On May 22, 2016 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.

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.

Project No.: 16-1070

Muskegon County Land Bank Parcel ID: 61-26-185-152-0016-00

Friable ACM's

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

Category I ACM

Three types of resilient floor covering (Brown Stone Linoleum, Green Multilayer Linoleum and Wood Grain Multilayer Linoleum) located within the Front Entry, Living Room and Dining Room, respectively, were found to contain up to 35% Chrysotile asbestos. The assessment to quantify the extent of this material identified approximately 397 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 (Brown Stone Linoleum, Green Multilayer Linoleum and Wood Grain Multilayer 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.

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)
- Television (1)
- 5-Gallon Container Misc. Paint (1)

Project No.: 16-1070

Muskegon County Land Bank Parcel ID: 61-26-185-152-0016-00

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

Project No.: 16-1070

Muskegon County Land Bank Parcel ID: 61-26-185-152-0016-00

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

(Laron Pogwet

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: 2532 Riordan St

Report To:

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

ARI Report # 16-65047

Date Collected: 05/22/16

Date Received: 05/23/16 Date Analyzed: 05/26/16

Date Reported: 05/26/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 25%

Other - 75%

Lab ID #: 65047 - 01

Cust. #: ST-HM-01A

Material: Asphalt Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 4

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 25% Other - 75%

Lab ID #: 65047 - 01a Cust. #: ST-HM-01A

Material: Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 4

Asbestos Present: NO

No Asbestos Observed

Cellulose - 25%

Other - 75%

Lab ID #: 65047 - 01b Cust. #: ST-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: 2532 Riordan St

Report To:

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

ARI Report # 16-65047

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/26/16

Date Reported: 05/26/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 25%

Other - 75%

Lab ID #: 65047 - 01c

Cust. #: ST-HM-01A

Material: Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 4 of 4

Lab ID #: 65047 - 02

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 25%

Other - 75%

Cust. #: ST-HM-01B

Material: Asphalt Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 5

Asbestos Present: NO

No Asbestos Observed

Cellulose - 25%

Other - 75%

Lab ID #: 65047 - 02a Cust. #: ST-HM-01B

Material: Shingle

Location:

Appearance: black,fibrous,homogenous

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

Layer: 2 of 5

Robert T. Letarte Jr., Laboratory Director

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Test Method, Polarized Light Microscopy (PLM)

Project: 2532 Riordan St

Report To:

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

ARI Report # 16-65047

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/26/16

Date Reported: 05/26/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 25%

Other - 75%

Lab ID #: 65047 - 02b

Cust. #: ST-HM-01B

Material: Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 3 of 5

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 25%

Other - 75%

Cust. #: ST-HM-01B

Material: Shingle

Lab ID #: 65047 - 02c

Location:

Appearance: black, fibrous, homogenous

Layer: 4 of 5

Lab ID #: 65047 - 02d

Cust. #: ST-HM-01B

Material: Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 5 of 5

Asbestos Present: NO

No Asbestos Observed

Cellulose - 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: 2532 Riordan St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-65047

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/26/16

Date Reported: 05/26/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 95%

Other - 5%

Lab ID #: 65047 - 03

Cust. #: ST-HM-02A

Material: Fiberlap Siding

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO**No Asbestos Observed

O

Cellulose - 95%

Other - 5%

Cust. #: ST-HM-02B

Lab ID #: 65047 - 04

Material: Fiberlap Siding

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO**No Asbestos Observed

Cellulose - 50%

Other - 50%

Lab ID #: 65047 - 05 Cust. #: ST-HM-03A

Material: Brown Stone Linoleum Multilayer

Location:

Appearance: red,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: 2532 Riordan St

Report To:

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

ARI Report # 16-65047

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/26/16 Date Reported: 05/26/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65047 - 05a

Cust. #: ST-HM-03A

Material: Linoleum

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 65047 - 06

Cust. #: ST-HM-03B

Material: Brown Stone Linoleum Multilayer

Location:

Appearance: red, fibrous, homogenous

Layer: 1 of 2

Lab ID #: 65047 - 06a

Location:

Layer: 2 of 2

Asbestos Present: YES

Chrysotile - 35%

Asbestos Present: **NO**

No Asbestos Observed

Other - 65%

Cellulose - 50%

Other - 50%

Cust. #: ST-HM-03B

Material: Linoleum

Appearance:

NOT ANALYZED

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.



Test Method, Polarized Light Microscopy (PLM)

Project: 2532 Riordan St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-65047

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/26/16

Date Reported: 05/26/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

Asbestos Present: **NO**

No Asbestos Observed

No Asbestos Observed

Non-Asbestos

Cellulose - 50%

Cellulose - 50%

Other - 50%

Other - 50%

Lab ID #: 65047 - 07

Cust. #: ST-HM-04A

orial: Croon Linelaum N

Material: Green Linoleum Multilayer

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 5

Lab ID #: 65047 - 07a Cust. #: ST-HM-04A

Material: Linoleum

Location:

Appearance: green, fibrous, homogenous

Layer: 2 of 5

Chrysotile - 35%

Asbestos Present: YES

Other - 65%

Lab ID #: 65047 - 07b

Cust. #: ST-HM-04A

Material: Linoleum

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: 2532 Riordan St

Report To:

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

ARI Report # 16-65047

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/26/16

Date Reported: 05/26/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 50%

Other - 50%

Lab ID #: 65047 - 07c

Cust. #: ST-HM-04A

Material: Linoleum

Location:

Appearance: white, fibrous, homogenous

Layer: 4 of 5

Asbestos Present: YES

Chrysotile - 20%

Cellulose - 10%

Other - 70%

Lab ID #: 65047 - 07d Cust. #: ST-HM-04A

Material: Linoleum

Location:

Appearance: green, fibrous, homogenous

Layer: 5 of 5

Lab ID #: 65047 - 08

Cust. #: ST-HM-04B

Material: Green Linoleum Multilayer

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 5

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: 2532 Riordan St

Report To:

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

ARI Report # 16-65047

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/26/16 Date Reported: 05/26/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 50%

Other - 50%

Lab ID #: 65047 - 08a

Cust. #: ST-HM-04B

Material: Linoleum

Location:

Appearance: green, fibrous, homogenous

Layer: 2 of 5

Lab ID #: 65047 - 08b

Cust. #: ST-HM-04B

Material: Linoleum

Location: Appearance:

Layer: 3 of 5

Asbestos Present:

NOT ANALYZED

Lab ID #: 65047 - 08c

Cust. #: ST-HM-04B

Material: Linoleum

Location:

Appearance: blue, fibrous, homogenous

Layer: 4 of 5

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: 2532 Riordan St

Report To:

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

Lansing, MI 48901

ARI Report # 16-65047

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/26/16

Date Reported: 05/26/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65047 - 08d

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

Location:

NOT ANALYZED

Asbestos Present:

Appearance: Layer: 5 of 5

Lab ID #: 65047 - 09

Cust. #: ST-HM-05A

Material: Wood Grain Linoleum Multilayer

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 5

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 10%

Fiberglass - 10%

Other - 80%

Lab ID #: 65047 - 09a

Asbestos Present: YES Chrysotile - 30%

Other - 70%

Cust. #: ST-HM-05A

Material: Linoleum

Location:

Appearance: brown, 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)

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Report To:

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ARI Report # 16-65047

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/26/16

Date Reported: 05/26/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 50%

Other - 50%

Lab ID #: 65047 - 09b

Cust. #: ST-HM-05A

Material: Linoleum

Location:

Appearance: green, fibrous, homogenous

Layer: 3 of 5

Asbestos Present: YES Chrysotile - 25%

Asbestos Present: YES

Chrysotile - 20%

Other - 75%

Cellulose - 10%

Other - 70%

Lab ID #: 65047 - 09c Cust. #: ST-HM-05A

Material: Linoleum

Location:

Appearance: beige, fibrous, homogenous

Layer: 4 of 5

Lab ID #: 65047 - 09d

Cust. #: ST-HM-05A

Material: Linoleum

Location:

Appearance: green, 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)

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ARI Report #

16-65047 Date Collected: 05/22/16

Date Received: 05/23/16 Date Analyzed: 05/26/16

Date Reported: 05/26/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65047 - 10

Cust. #: ST-HM-05B

Material: Wood Grain Linoleum Multilayer

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 5

Asbestos Present: NO No Asbestos Observed

Cellulose - 5%

Fiberglass - 10% Other - 85%

Lab ID #: 65047 - 10a

Cust. #: ST-HM-05B

Location:

Material: Linoleum

Appearance:

Layer: 2 of 5

NOT ANALYZED

Asbestos Present:

Lab ID #: 65047 - 10b Cust. #: ST-HM-05B

Material: Linoleum

Location:

Appearance: green, fibrous, homogenous

Layer: 3 of 5

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: 2532 Riordan St

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Lansing, MI 48901

ARI Report # 16-65047

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/26/16

Date Reported: 05/26/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65047 - 10c

Cust. #: ST-HM-05B Material: Linoleum

Location:

NOT ANALYZED

Asbestos Present:

Appearance: Layer: 4 of 5

Lab ID #: 65047 - 10d

Cust. #: ST-HM-05B Material: Linoleum

Location:

criai. Linoicum

Appearance:

Layer: 5 of 5

Asbestos Present:

NOT ANALYZED

Lab ID #: 65047 - 11

Asbestos Present: **NO**No Asbestos Observed

Other - 100%

Cust. #: ST-HM-06A

Material: Light Wood Grain Linoleum/Tan 12x12

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 1 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)

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ARI Report # 16-65047

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/26/16 Date Reported: 05/26/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 65047 - 11a

Cust. #: ST-HM-06A

Material: Mastic

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 #: 65047 - 11b Cust. #: ST-HM-06A

Material: Floor Tile

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 3 of 4

Lab ID #: 65047 - 11c

Cust. #: ST-HM-06A

Material: Mastic

Location:

Appearance: yellow,nonfibrous,homogenous

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

Layer: 4 of 4

Robert T. Letarte Jr., Laboratory Director

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Test Method, Polarized Light Microscopy (PLM)

Project: 2532 Riordan St

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ARI Report # 16-65047

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/26/16

Date Reported: 05/26/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Other - 100%

Lab ID #: 65047 - 12

Cust. #: ST-HM-06B

Material: Light Wood Grain Linoleum/Tan 12x12

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 1 of 4

Lab ID #: 65047 - 12a

Cust. #: ST-HM-06B

Material: Mastic

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 4

Lab ID #: 65047 - 12b

Cust. #: ST-HM-06B

Material: Floor Tile

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 3 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

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Test Method, Polarized Light Microscopy (PLM)

Project: 2532 Riordan St

Report To:

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Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/26/16

Date Reported: 05/26/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 65047 - 12c

Cust. #: ST-HM-06B

Material: Mastic

Location:

Appearance: yellow,nonfibrous,homogenous

Layer: 4 of 4

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Other - 100%

Lab ID #: 65047 - 13 Cust. #: ST-HM-07A

Cust. #. 51-IIVI-0/A

Material: Tan 12x12 Vinyl Tile

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 2

Lab ID #: 65047 - 13a

Cust. #: ST-HM-07A

Material: Mastic

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: 2532 Riordan St

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Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/26/16 Date Reported: 05/26/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 65047 - 14

Cust. #: ST-HM-07B

Material: Tan 12x12 Vinyl Tile

Location:

Appearance: beige, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Lab ID #: 65047 - 14a Cust. #: ST-HM-07B

Cust. #. 51-111v1-07

Material: Mastic

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 65047 - 15

Cust. #: ST-HM-08A

Material: Gold Linoleum Multilayer

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 2

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: 2532 Riordan St

Report To:

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

ARI Report # 16-65047

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/26/16

Date Reported: 05/26/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 50%

Other - 50%

Lab ID #: 65047 - 15a Cust. #: ST-HM-08A

Material: Linoleum

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 65047 - 16

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 50%

Other - 50%

Cust. #: ST-HM-08B Material: Gold Linoleum Multilayer

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 2

Asbestos Present: NO

Cellulose - 50%

No Asbestos Observed

Other - 50%

Cust. #: ST-HM-08B Material: Linoleum

Lab ID #: 65047 - 16a

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: 2532 Riordan St

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Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/26/16 Date Reported: 05/26/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 20%

Fiberglass - 5%

Other - 75%

Lab ID #: 65047 - 17

Cust. #: ST-HM-09A

Material: Wood Plank Linoleum Multilayer

Location:

Appearance: brown, fibrous, homogenous

Material: Wood Plank Linoleum Multilayer

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Cellulose - 20%

Fiberglass - 5%

Other - 75%

Location:

Appearance: brown, fibrous, homogenous

Cust. #: ST-HM-09B

Lab ID #: 65047 - 18

Layer: 1 of 1

No Asbestos Observed

Asbestos Present: **NO**

Other - 100%

Lab ID #: 65047 - 19 Cust. #: ST-HM-10A

Material: Beige 12x12 Vinyl Tile

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 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: 2532 Riordan St

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Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/26/16 Date Reported: 05/26/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65047 - 19a

Cust. #: ST-HM-10A

Material: Mastic

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 3

Asbestos Present: **NO**No Asbestos Observed

Other - 100%

Lab ID #: 65047 - 19b

Cust. #: ST-HM-10A

Material: Linoleum

Location:

Appearance: beige, fibrous, homogenous

Layer: 3 of 3

Asbestos Present: **NO**

No Asbestos Observed

Fiberglass - 10%

Other - 90%

Other - 100%

Lab ID #: 65047 - 20

Cust. #: ST-HM-10B

Material: Beige 12x12 Vinyl Tile

Location:

Appearance: beige,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

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ARI Report # 16-65047

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/26/16

Date Reported: 05/26/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 65047 - 20a

Cust. #: ST-HM-10B

Material: Mastic

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 3

No Asbestos Observed

Asbestos Present: **NO**

Fiberglass - 10%

Other - 90%

Lab ID #: 65047 - 20b Cust. #: ST-HM-10B

Material: Linoleum

Location:

Appearance: beige, fibrous, homogenous

Layer: 3 of 3

Asbestos Present: NO

Cellulose - 95%

Lab ID #: 65047 - 21 Cust. #: ST-HM-11A

No Asbestos Observed

Other - 5%

Material: White 1x1 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)

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ARI Report # 16-65047

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/26/16 Date Reported: 05/26/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 95%

Other - 5%

Lab ID #: 65047 - 22

Cust. #: ST-HM-11B

Material: White 1x1 Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO**

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Other - 100%

Material: Glazing

Lab ID #: 65047 - 23

Cust. #: ST-HM-12A

Location:

Appearance: beige, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 65047 - 24

Cust. #: ST-HM-12B

Material: 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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Date Collected: 05/22/16 Date Received: 05/23/16 Date Analyzed: 05/26/16

Date Reported: 05/26/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65047 - 25

Cust. #: ST-HM-13A

Material: White Linoleum

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 20% Fiberglass - 10%

Cellulose - 20%

Fiberglass - 10%

Other - 70%

Other - 70%

Lab ID #: 65047 - 26

Cust. #: ST-HM-13B

Material: White Linoleum

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 65047 - 27 Cust. #: ST-HM-14A

Asbestos Present: **NO**No Asbestos Observed

Cellulose - 50%

Other - 50%

Material: Pebbled Linoleum 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: 2532 Riordan St

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ARI Report # 16-65047

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/26/16 Date Reported: 05/26/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 50%

Other - 50%

Lab ID #: 65047 - 28

Cust. #: ST-HM-14B

Material: Pebbled Linoleum

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Cellulose - 80%

Lab ID #: 65047 - 29 Cust. #: ST-HM-15A

Material: White 1x1 Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 2

Asbestos Present: **NO** No Asbestos Observed

Fiberglass - 10%

Other - 10%

Other - 100%

Lab ID #: 65047 - 29a

Cust. #: ST-HM-15A

Material: Glue Pod

Location:

Appearance: brown,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: 2532 Riordan St

Report To:

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

ARI Report # 16-65047

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/26/16 Date Reported: 05/26/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65047 - 30

Cust. #: ST-HM-15B

Material: White 1x1 Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 2

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 80% Fiberglass - 10%

Other - 10%

Other - 100%

Lab ID #: 65047 - 30a

Cust. #: ST-HM-15B

Material: Glue Pod

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 65047 - 31

Cust. #: ST-HM-16A

Material: Drywall

Location:

Appearance: beige, 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

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Test Method, Polarized Light Microscopy (PLM)

Project: 2532 Riordan St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-65047

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/26/16 Date Reported: 05/26/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 20%

Other - 80%

Lab ID #: 65047 - 32 Cust. #: ST-HM-16B

Material: Drywall

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: **NO**No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Hair - 2%

Other - 98%

Cust. #: ST-HS-01A

Lab ID #: 65047 - 33

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 65047 - 33a

Cust. #: ST-HS-01A

Material: Plaster Base Coat

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

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 2532 Riordan St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-65047

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/26/16

Date Reported: 05/26/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Other - 100%

Lab ID #: 65047 - 34

Cust. #: ST-HS-01B

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 65047 - 34a

Cust. #: ST-HS-01B

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 65047 - 35

Cust. #: ST-HS-01C

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

suestos Type/Percent Non-Asuesto

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: NO

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

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 2532 Riordan St

Report To:

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

ARI Report # 16-65047

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/26/16

Date Reported: 05/26/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Hair - 2%

Other - 98%

Lab ID #: 65047 - 35a Cust. #: ST-HS-01C

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 65047 - 36

Cust. #: ST-HS-01D

Asbestos Present: **NO**

No Asbestos Observed

Other - 100%

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 65047 - 36a

Cust. #: ST-HS-01D

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 2

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: 2532 Riordan St

Report To:

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

ARI Report # 16-65047

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/26/16

Date Reported: 05/26/16

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 #: 65047 - 37

Cust. #: ST-HS-01E

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 65047 - 37a

Cust. #: ST-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

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research 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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The Line 1 CSearch, 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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		Receive	T NOO-WH-IC	< ilb.	ST-HM-OSR	ST-4M-05A	ST-HM-04B	ST-HM-04A	ST-HM-03B	5T-HM-03A	ST-HM-02B	ST-HM-0AA	ST-HM-01B	ST-HM- OIA	Client ID#	רייא) איז אינפטר דערפטר דערפטר - (***) - אינפטר	TTP All Camples Ed			Around Limes: (Circle One))-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
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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: 5-23-18	Relinquished by.	2	ñ	2	10	- On	J	8	5,	2.	100	12	Lab ID#	Other:	(48 hour /12 hour	Rush 24 hour	Turn Arou	Phone: (888) 44	City, St., Zip:	Address: _	Client Name: _
Date:	Received by:	ST-4M-11B	ST-4M-11A	ST-HM-103	5T-HM-10A	ST-HM-09B	ST-HM-09A	ST-HM-08B	ST-HM-08A	ST-HM-07B	ST-4M-07A	ST-HM-06B	Client ID#	(TTP) All Samples Except				Around Times: (Circle One)	(888) 449-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
MAY 2 3 2016 Date:	THOUSE VI	Ixl Ceiling	white Ixl Ceiling Tile	Beign 12x 12 Vinul Tile	Being 12x12 Vinul Tile	Wood Flonk Lipoleum Muttilayer	r		Gold Linoleum Mutilayer	Tan 12x12 Vinyl Tite	Tan BXID VINUI TIE	Light Wood Grain Linoleum Over Ton 12×12	Material/Location	xcept Plaster 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 :	Received by:												Volume Area R	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			Date of Survey:5.aa 🗤
													Results		**************************************			ing.net CM.			Report	Lab Use Only Log-In

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

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Relinquished by:	33	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		30 5		28	27 S	26 5	<i>S S</i>	- company	D D	Lab ID #		Other:	18 hour 72 hour	Rush 24 hour	Turn Aroun	Phone: (888) 449-4	, Zip: _	Address: Po	Client Name: Red
	ST-HS-01A	ST-4M-16B	ST-HM-16A	ST - HM - 15B	ST - HM - 15A	ST-HM-14B	ST-HM- HA	ST - HM- 13B	ST-4M-13A	ST-4M-10B	5T-HM-10A	Client ID#		TTP) All Samples Except			Around Times: (Circle One)	-4566 Fax:	Lansing, MI 48901	Box 13216	Red Cedar Consulting
	Plaster	Daywall	Dawall	white 1x1 ceiling Tite/Glue Pod	White Ixl Ceiling Tile/Glue Pod	Pebbled Linoleum	Pebbled Linoleum	White Linoleum	White Linoleum	Glazing	Glazina	Material/Location		Mold: Bulk	Bulk	os: Bulk	PLM EPA 60	(888) 448-8739		The state of the s	ng
				we Tod	e Pod							n Volume	Bulk/NOB EPA I	Tape BioSIS	Air		PC all	Contact Person: Aaron		<u>စ</u>	Date of Survey: 5:6
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Relinquished by:				37	96	85	ΡĞ	Lab ID#	Omer:		Ĕ	Rush 24 hour	Turn Arou	Phone: (888) 449-4566	City, St., Zip:	Address:	Client Name: _
				ST-HS-01E	ST-HS-01D	ST-HS-OIC	ST-HS-01B	Client ID#	All Samples Except Plaster TEM:				Turn Around Times: (Circle One)	19-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
Received by: MAY 2 3 2016 Date:				Plaster	Plaster	Plaster	Plaster	Material/Location	xcept Plaster TEM: AHERA 7400	Mold: Bulk Tape	Lead: Bulk Wipe _	Asbestos: Bulk X Wipe	PLM EPA	(888) 448-8739	Pro	Pro	
								Volume 1	Bulk/NOB EPA Level II	BioSISOther	Air Paint	Point Count	apaquet@re	Contact Person: Aaron Paquet		ا دــ	Date of Survey: 5.22.16
Received by:								Area Results		r Viable	Soil	PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	uet		'	Lab Use Only

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AFEX RESEARCH

Red Cedar Consulting

Tables

Table 1 - Summary of Hazardous Materials, 2532 Riordan St., Muskegon Heights, Michigan

Hazardous Materials Description and Location								
Location	Material Description	Quantity						
2 nd Floor West Bedroom	Television	1						
2 nd Floor Bedroom	Smoke Detector	1						
Basement	Smoke Detector	1						
Kitchen	5-Gallon Container Misc. Paint	1						

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2532 Riordan St., Muskegon Heights, Michigan

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
ST-HM-01A	Asphalt Shingle	No	M	Category I	ND/ND/ND/ND	Exterior	NA
ST-HM-01B	Asphalt Shingle	No	М	Category I	ND/ND/ND/ND/ ND	Exterior	NA
ST-HM-02A	Fiber Lap Siding	Yes	M	Category II	ND	Exterior	NA
ST-HM-02B	Fiber Lap Siding	Yes	M	Category II	ND	Exterior	NA
ST-HM-03A	Brown Stone Linoleum Multilayer	No	M	Category I	ND/35%CH	Front Entry	66 sq. ft.
ST-HM-03B	Brown Stone Linoleum Multilayer	No	M	Category I	ND/NA	Front Entry	NA
ST-HM-04A	Green Linoleum Multilayer	No	M	Category I	ND/ND/35%CH/ ND/20%CH	Living Room	144 sq. ft.
ST-HM-04B	Green Linoleum Multilayer	No	М	Category I	ND/ND/NA/ND/ NA	Living Room	NA
ST-HM-05A	Woodgrain Linoleum Multilayer	No	M	Category I	ND/30%CH/ND/ 25%CH/20%CH	Dining Room	187 sq. ft.
ST-HM-06B	Woodgrain Linoleum Multilayer	No	M	Category I	ND/NA/ND/NA/ NA	Dining Room	NA
ST-HM-06A	Light Woodgrain Linoleum over Tan 12x12 Vinyl Tile	No	M	Category I	ND/ND/ND/ND	Kitchen	NA
ST-HM-06B	Light Woodgrain Linoleum over Tan 12x12 Vinyl Tile	No	M	Category I	ND/ND/ND/ND	Kitchen	NA
ST-HM-07A	Tan 12x12 Vinyl Tile	No	M	Category I	ND/ND	Bathroom	NA
ST-HM-07B	Tan 12x12 Vinyl Tile	No	M	Category I	ND/ND	Bathroom	NA
ST-HM-08A	Gold Linoleum Multilayer	No	M	Category I	ND/ND	SW Bedroom	NA
ST-HM-08B	Gold Linoleum Multilayer	No	M	Category I	ND/ND	SW Bedroom	NA
ST-HM-09A	Wood Plank Linoleum Multilayer	No	M	Category I	ND	SE Bedroom	NA
ST-HM-09B	Wood Plank Linoleum Multilayer	No	M	Category I	ND	SE Bedroom	NA
ST-HM-10A	Beige 12x12 Vinyl Tile	No	M	Category I	ND/ND/ND	Rear Entry	NA
ST-HM-10B	Beige 12x12 Vinyl Tile	No	M	Category I	ND/ND/ND	Rear Entry	NA
ST-HM-11A	White 1'x1' Ceiling Tile	Yes	M	Category II	ND	Rear Entry	NA
ST-HM-11B	White 1'x1' Ceiling Tile	Yes	M	Category II	ND	Rear Entry	NA
ST-HM-12A	Glazing	Yes	M	Category II	ND	Living Room Window	NA
ST-HM-12B	Glazing	Yes	M	Category II	ND	Dining Room Window	NA

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2532 Riordan St., Muskegon Heights, Michigan

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
ST-HM-13A	White Linoleum	No	M	Category I	ND	2 nd Floor East Bedroom	NA
ST-HM-13B	White Linoleum	No	M	Category I	ND	2 nd Floor East Bedroom	NA
ST-HM-14A	Pebbled Linoleum	No	М	Category I	ND	2 nd Floor West Bedroom	NA
ST-HM-14B	Pebbled Linoleum	No	М	Category I	ND	2 nd Floor West Bedroom	NA
ST-HM-15A	White 1'x1' Ceiling Tile/Glue Pod	Yes	M	Category II	ND/ND	2 nd Floor	NA
ST-HM-15B	White 1'x1' Ceiling Tile/Glue Pod	Yes	M	Category II	ND/ND	2 nd Floor	NA
ST-HM-16A	Drywall	Yes	М	Category II	ND	2 nd Fl. East Bedroom Ceiling	NA
ST-HM-16B	Drywall	Yes	М	Category II	ND	2 nd Fl. West Bedroom Wall	NA
ST-HS-01A	Plaster	No	S	Category II	ND/ND	Living Room Wall	NA
ST-HS-01B	Plaster	No	S	Category II	ND/ND	SW Bedroom Wall	NA
ST-HS-01C	Plaster	No	S	Category II	ND/ND	SE Bedroom Wall	NA
ST-HS-01D	Plaster	No	S	Category II	ND/ND	Kitchen Ceiling	NA
ST-HS-01E	Plaster	No	S	Category II	ND/ND	Dining 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, 2532 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										

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, 2532 Riordan St., Muskegon Heights, Michigan

Interior - Asbestos Containing Mat	erials		
Location	Material Description	Friable	Approx. Quantity
Front Entry	Brown Stone Linoleum	No	66 sq. ft.
Living	Green Linoleum Multilayer	No	144 sq. ft.
Dining	Wood Grain Linoleum Multilayer	No	187 sq. ft.
	Tot	al	397 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 27, 2016

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 2536 Jefferson St., Muskegon Heights, MI 49444
Parcel ID: 61-26-185-143-0015-00

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 2536 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 .14 acre residential parcel which contains an approximate 748 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 front porch.

VISUAL INSPECTION AND SAMPLING

Asbestos Containing Materials Inspection

Mr. Aaron Paquet of Red Cedar Consulting (Red Cedar), an accredited State Of Michigan/EPA Asbestos Building Inspector (Accreditation Number A30955) whom completed training per the Michigan Asbestos Workers Accreditation Act 440 completed an inspection of the Subject Property on May 7, 2016 for suspected asbestos containing building materials.

Project No.: 16-1070 Muskegon County Land Bank

Parcel ID: 61-26-185-143-0015-00

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
- 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 May 7, 2016 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: 61-26-185-143-0015-00

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 was classified as PACM due to the age of the structure and samples were not collected.

Vermiculite insulation was identified during the completion of this inspection and was classified as PACM due to the age of the structure and samples were not collected.

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

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

Friable ACM's

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.)

Muskegon County Land Bank Parcel ID: 61-26-185-143-0015-00

- Bathroom (1 register, 15 sq. ft.)
- Basement (misc. HVAC wrap on Ductwork, 10 sq. ft.)

Vermiculite insulation identified in the Building is classified as friable ACM. The visual assessment to quantify the extent of this material identified approximately 704 sq. ft. at a depth of 4" within the Building 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

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 Ductwork, 10 sq. ft.)

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:

- Mercury Bulb (1)
- Smoke Detector (2)
- Gallon Container Misc. Paint (4)

Muskegon County Land Bank Parcel ID: 61-26-185-143-0015-00

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: 61-26-185-143-0015-00

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

Caron Pogwet

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: 2536 Jefferson St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64718

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/16/16 Date Reported: 05/16/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Fiberglass - 30%

Other - 70%

Lab ID #: 64718 - 01

Cust. #: JE-HM-01A

Material: Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 2

No Asbestos Observed

Asbestos Present: **NO**

Cellulose - 50%

Other - 50%

Lab ID #: 64718 - 01a Cust. #: JE-HM-01A

Material: Felt

Material: Felt

Location:

Appearance: black,fibrous,homogenous

Layer: 2 of 2

Lab ID #: 64718 - 02

Cust. #: JE-HM-01B

Material: 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: 2536 Jefferson St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64718

Date Collected: 05/07/16 Date Received: 05/11/16 Date Analyzed: 05/16/16

Date Reported: 05/16/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 50%

Other - 50%

Lab ID #: 64718 - 02a

Cust. #: JE-HM-01B

Material: Felt Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: **NO**

Cellulose - 10%

Lab ID #: 64718 - 03 Cust. #: JE-HM-02A

Material: White Linoleum

No Asbestos Observed

Fiberglass - 10%

Other - 80%

Location:

Location.

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 64718 - 04

Cust. #: JE-HM-02B

Material: White Linoleum

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: 2536 Jefferson St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64718

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/16/16 Date Reported: 05/16/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

Non-Asbestos

Cellulose - 10%

Fiberglass - 10%

Other - 80%

Lab ID #: 64718 - 05

Cust. #: JE-HM-03A

Material: Beige Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 3

. . _

Asbestos Present: **NO**

Other - 100%

Lab ID #: 64718 - 05a Cust. #: JE-HM-03A

Material: Glue

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 2 of 3

Lab ID #: 64718 - 05b

Cust. #: JE-HM-03A

Material: White Linoleum

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 3 of 3

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: 2536 Jefferson St.

Report To:

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

ARI Report # 16-64718

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/16/16 Date Reported: 05/16/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 10%

Fiberglass - 10%

Other - 80%

Lab ID #: 64718 - 06

Cust. #: JE-HM-03B

Material: Beige Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 3

No Asbestos Observed

Asbestos Present: **NO**

Other - 100%

Lab ID #: 64718 - 06a Cust. #: JE-HM-03B

Material: Glue

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 2 of 3

Lab ID #: 64718 - 06b

Cust. #: JE-HM-03B

Material: White Linoleum

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 3 of 3

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: 2536 Jefferson St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64718 Date Collected: 05/07/16

Date Received: 05/11/16 Date Analyzed: 05/16/16

Date Reported: 05/16/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 1%

Other - 99%

Other - 99%

Lab ID #: 64718 - 07

Cust. #: JE-HM-04A

Material: Glazing

Location:

Appearance: beige, nonfibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO**No Asbestos Observed

O Cellulose - 1%

Cust. #: JE-HM-04B

Material: Glazing

Lab ID #: 64718 - 08

Location:

Appearance: beige, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 64718 - 09

Cust. #: JE-HM-05A

Material: Glazing

Location:

Appearance: beige, 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

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Test Method, Polarized Light Microscopy (PLM)

Project: 2536 Jefferson St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64718

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/16/16 Date Reported: 05/16/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 1%

Other - 99%

Lab ID #: 64718 - 10

Cust. #: JE-HM-05B

Material: Glazing

Location:

Appearance: beige, nonfibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO**No Asbestos Observed

Cellulose - 1% Other - 99%

Cust. #: JE-HM-06A

Material: Glazing

Lab ID #: 64718 - 11

Location:

Appearance: beige, nonfibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

Cellulose - 1%

Lab ID #: 64718 - 12 Cust. #: JE-HM-06B

No Asbestos Observed

Other - 99%

Material: 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: 2536 Jefferson St.

Report To:

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

ARI Report # 16-64718

Date Collected: 05/07/16 Date Received: 05/11/16 Date Analyzed: 05/16/16

Date Reported: 05/16/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64718 - 13

Cust. #: JE-HS-01A

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: **NO**

Cellulose - 5%

Other - 100%

Lab ID #: 64718 - 13a Cust. #: JE-HS-01A

Material: Plaster Base Coat

No Asbestos Observed

Hair - 1% Other - 94%

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

Lab ID #: 64718 - 14 Cust. #: JE-HS-01B

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

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: 2536 Jefferson St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64718

Date Collected: 05/07/16 Date Received: 05/11/16 Date Analyzed: 05/16/16

Date Reported: 05/16/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Hair - 2%

Other - 98%

Lab ID #: 64718 - 14a Cust. #: JE-HS-01B

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Lab ID #: 64718 - 15 Cust. #: JE-HS-01C

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 64718 - 15a

Cust. #: JE-HS-01C

Material: Plaster Base Coat

Location:

Appearance: grey,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

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 2536 Jefferson St.

Report To:

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

ARI Report # 16-64718

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/16/16 Date Reported: 05/16/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64718 - 16

Cust. #: JE-HS-01D

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 64718 - 16a

Cust. #: JE-HS-01D

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 64718 - 17

Cust. #: JE-HS-01E

Material: Plaster Texture

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 3

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO**

No Asbestos Observed

Other - 100%

Hair - 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: 2536 Jefferson St.

Report To:

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

ARI Report # 16-64718

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/16/16 Date Reported: 05/16/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64718 - 17a

Cust. #: JE-HS-01E

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 3

Lab ID #: 64718 - 17b

Asbestos Present: **NO**

Cellulose - 1%

Cust. #: JE-HS-01E

No Asbestos Observed

Hair - 2%

Material: Plaster Base Coat

Other - 97%

Location:

Appearance: brown, fibrous, homogenous

Layer: 3 of 3

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 # 64718

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	Date: 5-10-16	Relinquished by	1/	10	2	8	7	6	4	4	W	2	_	Lab ID#		Other:	48 hour 72 hour	Rush 24 hour			City, St., Zip:	Address:	Client Name:
	Date :	Received by:	JE-4-06 A	JE-HM-083	JE-4M-05/7	JE-HM-OUB	TE-HM-OHA	JE-4M-03R	JE-HM-03A	JE-HM-OZB	JE-HM-02A	JE-HM-OB	JE-HM-01A	Client ID#	- Config. Co.	(TTP) All Samples Event			Around Times: (Circle One)	(888) 449-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
APEX RESEARCH	MA 1 2 2010 Date:	The Cartier of the Ca	(Beige Lindreum.	ReigeLiroleun	white Liveleum	white Limbers	Shingle	Shindle	Material/Location	TEM: AHERA 7400 Bulk/NOB			Asbestos: Bulk Wipe	PLM EPA 60	148-8739		Project	ing Date of Survey
		T												Volume	DBEPA Level II	BioSIS O	Air Paint _	Point Count		Aaron			Survev: 5-7-4
	Date:	Received by:												Area	П	Other Viable	Soil	PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	Paquet		Tefferson St	0 /
														Results					lting.net ACM.		Topol.	Report 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

Date: 5-10-16.	Relinquished by)			17	16	52	41	100	12	Lab ID#		Other:	48 hour (72 hour	Rush 24 hour	Turn Arol	Phone: (888) 4	City, St., Zip:	Address:	Client Name:
Date :	Received by:				JE-KS-01E	JE-MS-01D	JE-HS-ac	JE-45-013	JE-45-01A	JE-4m-688	Client ID#		(TTP) All Samples Except			Around Times: (Circle One)	(888) 449-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
APEX RESTAROH Date:	Relinquished by:				*				Plaster	Colazina	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:	
Date :	Received by:										Volume Area	NOB EPA Level II	BioSISOther Vi	Air Paint Soil	Point Count PCM	apaquet@redcedarconsulting.net samples with a detection of <5% ACM.	Contact Person: Aaron Paquet		, ,	Date of Survey: 5-7-16
											Results		Viable		1	onsulting.net		Negoti		Lab Use Only

Rev: 12/03 Work Forms: COC

Red Cedar Consulting

Tables

Table 1 - Summary of Hazardous Materials, 2536 Jefferson St., Muskegon Heights, Michigan

Hazardous Materials Description and Location									
Location	Location Material Description								
Dining	Mercury Bulb	1							
Basement Hall	Smoke Detector	2							
Basement	Gallon Container Misc. Paint	4							

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results 2536 Jefferson St., Muskegon Heights, Michigan

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
JE-HM-01A	Asphalt Shingle	No	M	Category I	ND/ND	Exterior	NA
JE-HM-01B	Asphalt Shingle	No	M	Category I	ND/ND	Exterior	NA
JE-HM-02A	White Linoleum	No	M	Category I	ND	Living	NA
JE-HM-02B	White Linoleum	No	M	Category I	ND	Dining	NA
JE-HM-03A	Beige Linoleum	No	M	Category I	ND/ND/ND	Kitchen	NA
JE-HM-03B	Beige Linoleum	No	M	Category I	ND/ND/ND	Bathroom	NA
JE-HM-04A	Glazing	Yes	M	Category II	ND	Front Porch	NA
JE-HM-04B	Glazing	Yes	M	Category II	ND	Front Porch	NA
JE-HM-05A	Glazing	Yes	M	Category II	ND	Rear Entry	NA
JE-HM-05B	Glazing	Yes	M	Category II	ND	Rear Entry	NA
JE-HM-06A	Glazing	Yes	M	Category II	ND	Living	NA
JE-HM-06B	Glazing	Yes	M	Category II	ND	NE Bedroom	NA
JE-HS-01A	Plaster	No	S	Category II	ND/ND	NW Bedroom	NA
JE-HS-01B	Plaster	No	S	Category II	ND/ND	Bathroom	NA
JE-HS-01C	Plaster	No	S	Category II	ND/ND	Dining	NA
JE-HS-01D	Plaster	No	S	Category II	ND/ND	Dining	NA
JE-HS-01E	Plaster	No	S	Category II	ND/ND/ND	Living	NA

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, 2536 Jefferson St., Muskegon Heights, Michigan

A	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.) Bathroom (1 register, 15 sq. ft.) Basement (misc. HVAC wrap on Ductwork, 10 sq. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	55 sq. ft.						
Attic (704 sq. ft. at 4" depth)	Vermiculite	Yes	Fair	M	704 sq. ft. at 4" 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, 2536 Jefferson 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.) Bathroom (1 register, 15 sq. ft.) Basement (misc. HVAC wrap on Ductwork, 10 sq. ft.)	HVAC Duct Wrap		Yes	55 sq. ft.
		Total		55 sq. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Building Attic	Vermiculite		Yes	704 sq. ft. at 4" depth
		Total		704 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

June 1, 2016

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 2544 Leahy St., Muskegon Heights, MI 49444

Parcel ID: 61-26-185-148-0013-00

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 2544 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 .09 acre residential parcel which contains a 240 sq. ft. detached garage and approximate 828 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 lap 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, bathroom and two bedrooms.

VISUAL INSPECTION AND SAMPLING

Asbestos Containing Materials Inspection

Mr. Aaron Paquet of Red Cedar Consulting (Red Cedar), an accredited State Of Michigan/EPA Asbestos Building Inspector (Accreditation Number A30955) whom completed training per the Michigan Asbestos

Muskegon County Land Bank Parcel ID: 61-26-185-148-0013-00

Workers Accreditation Act 440 completed an inspection of the Subject Property on May 24, 2016 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
- Rolled Roofing
- Linoleum
- 1'x1' Ceiling Tile
- 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 May 24, 2016 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

Muskegon County Land Bank Parcel ID: 61-26-185-148-0013-00

equipment and any items or containers that may contain or be classified as a hazardous or regulated material. Each material, if identified, was documented along with the approximate location. Any materials identified as hazardous are included in Table 1.

INSPECTION RESULTS AND RECOMMENDATIONS

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

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

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

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

Presumed Asbestos Containing Material

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

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

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

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

Friable ACM's

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

Muskegon County Land Bank Parcel ID: 61-26-185-148-0013-00

- Front Entry (1 register, 15 sq. ft.)
- Living (1 register, 15 sq. ft.)
- Dining (1 register, 15 sq. ft.)
- Bathroom (1 register, 15 sq. ft.)
- NW Bedroom (1 register, 15 sq. ft.)
- Basement (misc. HVAC Tape on Cold Air Return Ductwork, 15 sq. ft.)
- Basement (10 in. dia. HVAC Wrapped Ductwork, 20 lin. ft.)

Category I ACM

One type of resilient floor covering (Yellow Linoleum) located within the bathroom was found to contain up to 30% Chrysotile asbestos. The assessment to quantify the extent of this material identified approximately 66 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.

- Front Entry (1 register, 15 sq. ft.)
- Living (1 register, 15 sq. ft.)
- Dining (1 register, 15 sq. ft.)
- Bathroom (1 register, 15 sq. ft.)
- NW Bedroom (1 register, 15 sq. ft.)
- Basement (misc. HVAC Tape on Cold Air Return Ductwork, 15 sq. ft.)
- Basement (10 in. dia. HVAC Wrapped Ductwork, 20 lin. ft.)

The Category I resilient floor covering (Yellow 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: 61-26-185-148-0013-00

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:

- 5 Gallon Container Contents Unknown (5)
- Automobile Tire (1)
- Smoke Detector (1)
- Television (2)
- Gallon Container Misc. Paint (12)

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: 61-26-185-148-0013-00

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

(Laron Pogwet

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: 2544 Leahy St

Report To:

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

ARI Report #

16-65112 Date Collected: 05/24/16

Date Received: 05/26/16

Date Analyzed: 05/31/16 Date Reported: 05/31/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Fiberglass - 30%

Other - 70%

Lab ID #: 65112 - 01

Cust. #: LS-HM-01A

Material: Asphalt Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: **NO** No Asbestos Observed

Fiberglass - 30%

Other - 70%

Cust. #: LS-HM-01B

Lab ID #: 65112 - 02

Material: Asphalt Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO No Asbestos Observed

Fiberglass - 30%

Other - 70%

Lab ID #: 65112 - 03 Cust. #: LS-HM-02A

Material: Rolled Roofing/Shingle

Location:

Appearance: black,fibrous,homogenous

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: 2544 Leahy St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-65112

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/31/16 Date Reported: 05/31/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Fiberglass - 30%

Other - 70%

Lab ID #: 65112 - 04

Cust. #: LS-HM-02B

Material: Rolled Roofing/Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 65112 - 05

Asbestos Present: NO

: NO

Cellulose - 10%

Cust. #: LS-HM-03A

Material: Stone Linoleum

No Asbestos Observed

Fiberglass - 10%

Other - 80%

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 65112 - 06

Cust. #: LS-HM-03B

Material: Stone Linoleum

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: 2544 Leahy St

Report To:

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

ARI Report # 16-65112

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/31/16 Date Reported: 05/31/16

Sample Information

Asbestos Type/Percent

Asbestos Present: YES

Chrysotile - 30%

Non-Asbestos

Other - 70%

Lab ID #: 65112 - 07

Cust. #: LS-HM-04A

Material: Yellow Linoleum

Location:

Appearance: yellow,fibrous,nonhomogenous

Layer: 1 of 1

Lab ID #: 65112 - 08

Cust. #: LS-HM-04B Material: Yellow Linoleum

Location:

Appearance:

Layer:

NOT ANALYZED

Asbestos Present:

Lab ID #: 65112 - 09

Cust. #: LS-HM-05A

Material: MultiColor Linoleum

Location:

Appearance: brown, 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: 2544 Leahy St

Report To:

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

ARI Report #

16-65112

Date Collected: 05/24/16

Date Received: 05/26/16 Date Analyzed: 05/31/16

Date Reported: 05/31/16

Sample Information

Asbestos Type/Percent

No Asbestos Observed

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Lab ID #: 65112 - 10

Cust. #: LS-HM-05B

Material: MultiColor Linoleum

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 65112 - 11

Cust. #: LS-HM-06A

Material: White 1x1 Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 65112 - 12

Cust. #: LS-HM-06B

Material: White 1x1 Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

Cellulose - 40%

Cellulose - 80%

Other - 20%

Other - 60%

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: 2544 Leahy St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-65112

Date Collected: 05/24/16 Date Received: 05/26/16 Date Analyzed: 05/31/16

Date Reported: 05/31/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 1%

Other - 99%

Lab ID #: 65112 - 13

Cust. #: LS-HM-07A

Material: Glazing

Location:

Appearance: beige, nonfibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Cellulose - 1%

Other - 99%

Other - 100%

Material: Glazing

Lab ID #: 65112 - 14

Cust. #: LS-HM-07B

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 1

Lab ID #: 65112 - 15

Cust. #: LS-HM-08A

Material: Glazing

Location:

Appearance: white, 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

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 2544 Leahy St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-65112

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/31/16

Date Reported: 05/31/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 65112 - 16

Cust. #: LS-HM-08B

Material: Glazing

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 65112 - 17

Asbestos Present: **NO**No Asbestos Observed

Cellulose - 40%

Other - 60%

Cust. #: LS-HM-09A

Material: Multi Layer Linoleum

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 3

Asbestos Present: NO

Cellulose - 40%

Lab ID #: 65112 - 17a Cust. #: LS-HM-09A

Material: Blue Sheet Flooring

No Asbestos Observed

Other - 60%

Location:

Appearance: blue, fibrous, nonhomogenous

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: 2544 Leahy St

Report To:

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

ARI Report # 16-65112 Date Collected: 05/24/16

Date Received: 05/26/16 Date Analyzed: 05/31/16

Date Reported: 05/31/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65112 - 17b

Cust. #: LS-HM-09A

Material: White Sheet Flooring

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 3 of 3

Lab ID #: 65112 - 18

Cust. #: LS-HM-09B

Material: Multi Layer Linoleum

Location:

Appearance: black, fibrous, nonhomogenous

Layer: 1 of 3

Lab ID #: 65112 - 18a

Cust. #: LS-HM-09B

Material: Blue Sheet Flooring

Location:

Appearance: black,fibrous,nonhomogenous

Layer: 2 of 3

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: 2544 Leahy St

Report To:

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

ARI Report #

16-65112

Date Collected: 05/24/16

Date Received: 05/26/16

Date Analyzed: 05/31/16

Date Reported: 05/31/16

Sample Information

Asbestos Type/Percent

No Asbestos Observed

Non-Asbestos

Lab ID #: 65112 - 18b

Cust. #: LS-HM-09B

Material: White Sheet Flooring

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 3 of 3

Lab ID #: 65112 - 19

Cust. #: LS-HS-01A

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 65112 - 19a

Cust. #: LS-HS-01A

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

Cellulose - 40%

Other - 60%

Asbestos Present: NO

No Asbestos Observed

Other - 100%

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: 2544 Leahy St

Report To:

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

ARI Report #

16-65112

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/31/16

Date Reported: 05/31/16

Sample Information

No Asbestos Observed

Non-Asbestos

Lab ID #: 65112 - 20

Cust. #: LS-HS-01B

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 65112 - 20a

Cust. #: LS-HS-01B

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 65112 - 21

Cust. #: LS-HS-01C

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

Cellulose - 1%

Other - 99%

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: 2544 Leahy St

Report To:

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

ARI Report # 16-65112

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/31/16

Date Reported: 05/31/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65112 - 21a Cust. #: LS-HS-01C

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

No Asbestos Observed

Asbestos Present: **NO**

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

Cellulose - 1%

Other - 99%

Lab ID #: 65112 - 22

Cust. #: LS-HS-01D

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 65112 - 22a

Cust. #: LS-HS-01D

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

Cellulose - 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: 2544 Leahy St

Report To:

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

ARI Report # 16-65112

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/31/16

Date Reported: 05/31/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 65112 - 23

Cust. #: LS-HS-01E

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 1% Other - 99%

Lab ID #: 65112 - 23a Cust. #: LS-HS-01E

Material: Plaster Base Coat

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Lab ID #:

Asbestos Present:

Cust. #:

Layer:

Material: 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.

65112



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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APEX Research, Inc. 11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-5 E-mail: apexresearch@chartermi.net Fax: 734-449-99

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Red Cedar Consulting

Tables

Table 1 - Summary of Hazardous Materials, 2544 Leahy St., Muskegon Heights, Michigan

	Hazardous Materials Description and Location	
Location	Material Description	Quantity
Garage	5 Gallon Container Contents Unknown	5
Garage	Automobile Tire	1
Living	Smoke Detector	1
Living	Television	1
NE Bedroom	Television	1
Basement	Gallon Container Misc. Paint	12

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2544 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	Asphalt Shingle	No	M	Category I	ND	Exterior	NA
LS-HM-01B	Asphalt Shingle	No	M	Category I	ND	Exterior	NA
LS-HM-02A	Rolled Roofing	No	M	Category I	ND	Garage Exterior	NA
LS-HM-02B	Rolled Roofing	No	M	Category I	ND	Garage Exterior	NA
LS-HM-03A	Stone Linoleum	No	M	Category I	ND	Kitchen	NA
LS-HM-03B	Stone Linoleum	No	M	Category I	ND	Kitchen	NA
LS-HM-04A	Yellow Linoleum	No	M	Category I	30%CH	Bathroom	66 sq. ft.
LS-HM-04B	Yellow Linoleum	No	M	Category I	NA	Bathroom	NA
LS-HM-05A	Multicolor Linoleum	No	M	Category I	ND	NW Bedroom	NA
LS-HM-05B	Multicolor Linoleum	No	M	Category I	ND	NE Bedroom	NA
LS-HM-06A	White 1'x1' Ceiling Tile	Yes	M	Category II	ND	Dining	NA
LS-HM-06B	White 1'x1' Ceiling Tile	Yes	M	Category II	ND	Dining	NA
LS-HM-07A	Glazing	Yes	M	Category II	ND	Dining	NA
LS-HM-07B	Glazing	Yes	M	Category II	ND	Dining	NA
LS-HM-08A	Glazing	Yes	M	Category II	ND	Front Entry	NA
LS-HM-08B	Glazing	Yes	M	Category II	ND	Front Entry	NA
LS-HM-09A	Multilayer Linoleum	No	M	Category I	ND/ND/ND	Basement	NA
LS-HM-09B	Multilayer Linoleum	No	M	Category I	ND/ND/ND	Basement	NA
LS-HS-01A	Plaster	No	S	Category II	ND/ND	Living Wall	NA
LS-HS-01B	Plaster	No	S	Category II	ND/ND	NW Bedroom Wall	NA
LS-HS-01C	Plaster	No	S	Category II	ND/ND	NE Bedroom Wall	NA
LS-HS-01D	Plaster	No	S	Category II	ND/ND	Living Ceiling	NA
LS-HS-01E	Plaster	No	S	Category II	ND/ND	Dining Ceiling	NA

Notes:

Material Types

M = Miscellaneous building material TSI = Thermal System Insulation

= Surfacing Material S

Abbreviations

= Not quantified NQ

NA = Not applicable

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

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2544 Leahy 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, 2544 Leahy St., Muskegon Heights, Michigan

A	Asbestos Containing Material Description a	nd Location			
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity
Front Entry (1 register, 15 sq. ft.) Living (1 register, 15 sq. ft.) Dining (1 register, 15 sq. ft.) Bathroom (1 register, 15 sq. ft.) NW Bedroom (1 register, 15 sq. ft.) Basement (misc. HVAC Tape on Cold Air Return Ductwork, 15 sq. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	90 sq. ft.
Basement (10 in. dia. HVAC Wrapped Ductwork, 20 lin. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	20 lin. ft.

Notes:

Material Types

M = Miscellaneous building material

TSI = Thermal System Insulation

S = Surfacing Material

Abbreviations

lin. ft. = linear feet

sq. ft. = square feet

Table 4 - Summary of All Asbestos Containing Materials, 2544 Leahy St., Muskegon Heights, Michigan

Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Bathroom	Yellow Linoleum		No	66 sq. ft.
		Total		66 sq. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Front Entry (1 register, 15 sq. ft.) Living (1 register, 15 sq. ft.) Dining (1 register, 15 sq. ft.) Bathroom (1 register, 15 sq. ft.) NW Bedroom (1 register, 15 sq. ft.) Basement (misc. HVAC Tape on Cold Air Return Ductwork, 15 sq. ft.)	HVAC Duct Wrap		Yes	90 sq. ft.
		Total		90 sq. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Basement (10 in. dia. HVAC Wrapped Ductwork, 20 lin. ft.)	HVAC Duct Wrap		Yes	20 lin. ft.
		Total		20 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

June 1, 2016

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 2622 Hoyt St., Muskegon Heights, MI 49444

Parcel ID: 61-26-610-002-0006-00

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 2622 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 .12 acre residential parcel which contains a 264 sq. ft. attached garage and approximate 874 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 Transite siding over felt paper while the roof was sealed with asphalt shingles. The Building can be further divided into a front entry, living room, dining room, kitchen, bathroom and two bedrooms.

VISUAL INSPECTION AND SAMPLING

Asbestos Containing Materials Inspection

Mr. Aaron Paquet of Red Cedar Consulting (Red Cedar), an accredited State Of Michigan/EPA Asbestos Building Inspector (Accreditation Number A30955) whom completed training per the Michigan Asbestos

Project No.: 16-1070 Muskegon County Land Bank Parcel ID: 61-26-610-002-0006-00

Workers Accreditation Act 440 completed an inspection of the Subject Property on May 24, 2016 for suspected asbestos containing building materials.

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

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

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

- Asphalt Shingle
- Felt Paper
- 12"x12" Vinyl Tile
- Glazing
- Plaster
- 1'x1' Ceiling Tile

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: 61-26-610-002-0006-00

Hazardous Materials Inspection

On May 24, 2016 the Subject Property was also inspected for the presence of hazardous materials which include but are not limited to polychlorinated biphenyls (PCBs) and potential mercury containing equipment and any items or containers that may contain or be classified as a hazardous or regulated material. Each material, if identified, was documented along with the approximate location. Any materials identified as hazardous are included in Table 1.

INSPECTION RESULTS AND RECOMMENDATIONS

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

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

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

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

Presumed Asbestos Containing Material

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

The HVAC Duct Wrap located in the Building and the 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: 61-26-610-002-0006-00

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:

• Living (1 register, 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 was classified as PACM and no samples were collected. The visual assessment to quantify the extent of this material identified 1,212 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.

• Living (1 register, 10 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.

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)
- Automobile Tires (5)

Muskegon County Land Bank Parcel ID: 61-26-610-002-0006-00

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: 61-26-610-002-0006-00

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

Rain 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: 2622 Hoyt St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-65113

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/31/16 Date Reported: 05/31/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65113 - 01

Cust. #: HS-HM-01A

Material: Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 2

Asbestos Present: **NO**No Asbestos Observed

Fiberglass - 15%

Other - 85%

Lab ID #: 65113 - 01a

Cust. #: HS-HM-01A

Material: Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: **NO**No Asbestos Observed

Fiberglass - 15%

Other - 85%

Lab ID #: 65113 - 02

Cust. #: HS-HM-01B

Material: 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: 2622 Hoyt St

Report To:

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

ARI Report # 16-65113

Date Collected: 05/24/16

Date Received: 05/26/16 Date Analyzed: 05/31/16

Date Reported: 05/31/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Fiberglass - 15%

Other - 85%

Lab ID #: 65113 - 02a

Cust. #: HS-HM-01B

Material: Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 2 of 2

Lab ID #: 65113 - 03

Cust. #: HS-HM-02A

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 40%

Other - 60%

Material: Felt Paper

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 65113 - 04

Cust. #: HS-HM-02B

Material: Felt Paper

Location:

Appearance: black,fibrous,homogenous

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

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Test Method, Polarized Light Microscopy (PLM)

Project: 2622 Hoyt St

Report To:

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

ARI Report # 16-65113

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/31/16 Date Reported: 05/31/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65113 - 05

Cust. #: HS-HM-03A

Material: Brown 12x12 Vinyl Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 2

Asbestos Present: **NO** No Asbestos Observed

Synthetic - 3%

Other - 97%

Lab ID #: 65113 - 05a

Cust. #: HS-HM-03A

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

Asbestos Present: **NO**

No Asbestos Observed

Other - 100%

Lab ID #: 65113 - 06

Cust. #: HS-HM-03B

Material: Brown 12x12 Vinyl Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 2

Asbestos Present: NO

Synthetic - 3%

No Asbestos Observed

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: 2622 Hoyt St

Report To:

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

ARI Report # 16-65113

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/31/16

Date Reported: 05/31/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 65113 - 06a

Cust. #: HS-HM-03B

Material: Glue Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

No Asbestos Observed

Asbestos Present: **NO**

Synthetic - 3% Other - 97%

Cust. #: HS-HM-04A

Lab ID #: 65113 - 07

Material: Green 12x12 Vinyl Tile

Location:

Appearance: green, fibrous, homogenous

Layer: 1 of 3

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Lab ID #: 65113 - 07a Cust. #: HS-HM-04A

Material: Glue Location:

Appearance: clear,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: 2622 Hoyt St

Report To:

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

ARI Report #

16-65113

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/31/16

Date Reported: 05/31/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65113 - 07b

Cust. #: HS-HM-04A Material: Linoleum

Location:

Appearance: brown, fibrous, homogenous

Layer: 3 of 3

Lab ID #: 65113 - 08

Cust. #: HS-HM-04B

Material: Green 12x12 Vinyl Tile

Location:

Appearance: green, fibrous, homogenous

Layer: 1 of 3

Lab ID #: 65113 - 08a

Cust. #: HS-HM-04B

Material: Glue Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 3

Asbestos Present: NO

No Asbestos Observed

Cellulose - 15% Synthetic - 5%

Other - 80%

Asbestos Present: **NO**

No Asbestos Observed

Synthetic - 3%

Other - 97%

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: 2622 Hoyt St

Report To:

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

Lansing, MI 48901

ARI Report # 16-65113

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/31/16

Date Reported: 05/31/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 15%

Synthetic - 5% Other - 80%

Lab ID #: 65113 - 08b

Cust. #: HS-HM-04B

Material: Linoleum

Location:

Appearance: brown, fibrous, homogenous

Layer: 3 of 3

Asbestos Present: **NO**

Cellulose - 1% Other - 98.75%

Cellulose - 1%

Other - 98.25%

Cust. #: HS-HM-05A

Material: Glazing

Lab ID #: 65113 - 09

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

POINT COUNT RESULT

Chrysotile - 0.25%

Lab ID #: 65113 - 10

Cust. #: HS-HM-05B

Material: Glazing

Location:

Asbestos Present: NO

Chrysotile - 0.75%

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

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: 2622 Hoyt St

Report To:

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

ARI Report # 16-65113

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/31/16 Date Reported: 05/31/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 65113 - 11

Cust. #: HS-HS-01A

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 65113 - 11a

Cust. #: HS-HS-01A

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 1%

Hair - 1%

Other - 98%

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO No Asbestos Observed

Other - 100%

Lab ID #: 65113 - 12 Cust. #: HS-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: 2622 Hoyt St

Report To:

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

ARI Report # 16-65113

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/31/16 Date Reported: 05/31/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65113 - 12a

Cust. #: HS-HS-01B

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 2

No Asbestos Observed

Cellulose - 1%

Other - 98%

Other - 100%

Lab ID #: 65113 - 13

Cust. #: HS-HS-01C

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 65113 - 13a

Cust. #: HS-HS-01C

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

Hair - 1%

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: 2622 Hoyt St

Report To:

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

ARI Report # 16-65113

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/31/16

Date Reported: 05/31/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 65113 - 14

Cust. #: HS-HS-01D

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 65113 - 14a

Cust. #: HS-HS-01D

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 1%

Hair - 1%

Other - 98%

Other - 100%

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Cust. #: HS-HS-01E

Lab ID #: 65113 - 15

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: 2622 Hoyt St

Report To:

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

ARI Report # 16-65113

Date Collected: 05/24/16

Date Received: 05/26/16 Date Analyzed: 05/31/16

Date Reported: 05/31/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Cellulose - 1%

Lab ID #: 65113 - 15a

Cust. #: HS-HS-01E

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

Hair - 1%

Layer: 2 of 2

Lab ID #: 65113 - 16

Cust. #: HS-HM-06A

Material: White 1x1 Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 65113 - 17

Cust. #: HS-HM-06B

Material: White 1x1 Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Other - 98%

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.

65113

121 122 128earch, Inc. 11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990 E-mail: apexresearch@chartermi.net Fax: 734-449-9991



なられる	Relinquished by:		3	2	8	7	6	C	4	در	دو	ش	Lab ID#		Other:	/48 hour 72 hour	Rush 24 hour		Turn Arol	Phone: (888) 449-456	City, St., Zip:	Address:	Client Name:
`	Received by:	まっま-014	ますからま	B-HM-84	148/Hm 64B	Pho was Si	45-m-38	H5-4m-034	Sto-my-SH	UTS-14M-02A	SIG-WH-SH	あまるらみ	Client ID#	אירים ממווחובה פערבטר.	TIP ALL COMPLETE				Around Times: (Circle One)	49-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
とって	y: Relinguished by:	Plaster	Claring	6 laring	Green 12012 Ungliche	Green 12×12 vinylTile	Brown 12x2 VinyTile	Brown 12x12 ving/Tile	Felt Paper	Fet Paper	Shingle	Shingle	Material/Location	TEM: AHERA 7400	Mold: Bulk Tape _	Lead: Bulk Wipe		los: Bulk × Wine	PLM EPA 600, PC	(888) 448-8739 Co1	Proj	Pro	
													Volume Area	Bulk/NOB EPA Level II	BioSISOther _	Air Paint		Point Count PCM	apaquet@redcedarconsulting.net	Contact Person: Aaron Paquet		p 1	Date of Survey: 5-24-6
MAY 2 6 2016	RECENTED 10:20	٥											ea Results		Viable	Soil	Y L		edarconsulting.net			Report	Lab Use Only Log-In

Rev: 12/03 Work Forms: COC

Date:

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Date:_

22818

Date:

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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

(888) 448-8739 Contact Person: Aaron Paquet	Project # :	2622 Hayt St.	Date of Survey: 5244 Lab Use	
		Report	Lab Use Only Log-In	

Address:

PO Box 13216

Client Name:

Red Cedar Consulting

	Rush 24 hour	Turn Ar	Phone: (88)	City, St., Zij
Lead: Bulk	hour Asbestos: Bulk X Wipe	Turn Around Times: (Circle One) PLM EI	888) 449-4566 Fax: (888) 448-8739	City, St., Zip: Lansing, MI 48901
Wipe Air Paint Soil	X Wipe Point Count PCM	apaquet@redcedarconsulting.net PLM EPA 600, PC all samples with a detection of <5% ACM.	Contact Person: Aaron Paquet	_ Project # :

Rush

AS hour

72 hour

(TIP) <u>All Samp</u>les Except Plaster TEM:

Mold:

Bulk

Tape

BioSIS

Other

Viable_

AHERA 7400

Bulk/NOB

EPA Level II_

									Lab ID#
)			17	E.	15	4	13	Z) #
			HS-4m-0613	WS-4m-66A	15-15-01E	おくならら	であるべ	HS-VX-OLB	Client ID#
•			white	white	(Plaster	
			lat coiling tile	6 US-4m-664 white by Ceiling Tile				ار ا	Material/Location
									Volume
									Area
									Results

Date:

Date:

Received by:

Relinquished by:

Received by:

Date: MAY 2 6 2016

APEX RESEARCH

Relinquished by:

Rev: 12/03 Work Forms: COC

Red Cedar Consulting

Tables

Table 1 - Summary of Hazardous Materials, 2622 Hoyt St., Muskegon Heights, Michigan

Hazardous Materials Description and Location								
Location	Material Description	Quantity						
Exterior	Automobile Tires	5						
Living	Smoke Detector	1						
SE Bedroom	Smoke Detector	1						
SW Bedroom	Smoke Detector	1						

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2622 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	Asphalt Shingle	No	M	Category I	ND/ND	Exterior	NA
HS-HM-01B	Asphalt Shingle	No	M	Category I	ND/ND	Exterior	NA
HS-HM-02A	Felt Paper	Yes	M	Category II	ND	Exterior	NA
HS-HM-02B	Felt Paper	Yes	M	Category II	ND	Exterior	NA
HS-HM-03A	Brown 12"x12" Vinyl Tile	No	M	Category I	ND/ND	Front Entry	NA
HS-HM-03B	Brown 12"x12" Vinyl Tile	No	M	Category I	ND/ND	Front Entry	NA
HS-HM-04A	Green 12x12 Vinyl Tile	No	М	Category I	ND/ND/ND	Kitchen	NA
HS-HM-04B	Green 12x12 Vinyl Tile	No	M	Category I	ND/ND/ND	Bathroom	NA
HS-HM-05A	Glazing	Yes	M	Category II	0.25%CH	SE Bedroom	NA
HS-HM-05B	Glazing	Yes	M	Category II	0.75%CH	SW Bedroom	NA
HS-HS-01A	Plaster	No	S	Category II	ND/ND	Living Wall	NA
HS-HS-01B	Plaster	No	S	Category II	ND/ND	SW Bedroom Wall	NA
HS-HS-01C	Plaster	No	S	Category II	ND/ND	Kitchen Wall	NA
HS-HS-01D	Plaster	No	S	Category II	ND/ND	SE Bedroom Ceiling	NA
HS-HS-01E	Plaster	No	S	Category II	ND/ND	Dining Ceiling	NA
HS-HM-06A	White 1'x1' Ceiling Tile	Yes	М	Category II	ND	Front Entry	NA
HS-HM-06B	White 1'x1' Ceiling Tile	Yes	M	Category II	ND	Front Entry	NA

Notes:

Material Types

M = Miscellaneous building material

TSI = Thermal System Insulation

S = Surfacing Material

PC = Point Count Analysis CH = Chrysotile Asbestos

Abbreviations

NQ = Not quantified NA = Not applicable

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

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

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

Table 3 - Summary of Presumed Asbestos Containing Materials, 2622 Hoyt 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	1,212 sq. ft.			
Living (1 register, 10 sq. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	10 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, 2622 Hoyt St., Muskegon Heights, Michigan

Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Living (1 register, 10 sq. ft.)	HVAC Duct Wrap		Yes	10 sq. ft.
		Total		10 sq. ft.
Exterior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Building Exterior	Transite Siding		No	1,212 sq. ft.
		Total		1,212 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 27, 2016

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 2809 6th St., Muskegon Heights, MI 49444
Parcel ID: 61-26-185-216-0003-00

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 2809 6th 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 400 sq. ft. detached garage and approximate 1,857 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 one apartment with living room/dining room, kitchen, bath and bedroom on the first floor while the second floor has one apartment in the front with living/dining room, kitchen, bath and bedroom as well as one apartment in the rear with living/dining room, kitchen, bath and bedroom.

VISUAL INSPECTION AND SAMPLING

Asbestos Containing Materials Inspection

Mr. Aaron Paquet of Red Cedar Consulting (Red Cedar), an accredited State Of Michigan/EPA Asbestos Building Inspector (Accreditation Number A30955) whom completed training per the Michigan Asbestos

Muskegon County Land Bank Parcel ID: 61-26-185-216-0003-00

Workers Accreditation Act 440 completed an inspection of the Subject Property on May 15, 2016 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
- Rolled Roofing
- Linoleum
- 1'x1' Ceiling Tile
- 2'x4' Pitted Ceiling Tile
- 12"x12" Vinyl Tile
- 9"x9" Vinyl Tile
- Transite Pipe
- Drywall
- Glazing
- Plaster

Red Cedar staff collected forty six samples of suspect ACBM separated into twenty 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 forty six samples is included as Attachment A.

Muskegon County Land Bank Parcel ID: 61-26-185-216-0003-00

Hazardous Materials Inspection

On May 15, 2016 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 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: 61-26-185-216-0003-00

Friable ACM's

A window glazing sample collected from a window in the Front Porch was found to contain up to 1.25% 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:

• Front Porch (10 windows 28" 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:

- Front Porch (1 register, 15 sq. ft.)
- Living/Dining (1 register, 15 sq. ft.)
- Kitchen (1 register, 15 sq. ft.)
- Bathroom (1 register, 15 sq. ft.)
- Bedroom (1 register, 15 sq. ft.)
- Basement (misc. HVAC wrap on Ductwork, 15 sq. ft.)
- Basement (Misc. ¹/₄" ACM Board on Chimney, 2.5 sq. ft.)
- Basement (12 in. dia. HVAC Wrapped Ductwork, 65 lin. ft.)
- Rear Apt. (Transite Pipe, 6" diam. (6 lin. ft.)

Category I ACM

Two types of resilient floor covering (9"x9" Speckled Vinyl Floor Tile and 12"x12" Beige Vinyl Tile) located within the Front Porch and 1st Fl. Kitchen, respectively, were found to contain up to 30% Chrysotile asbestos. The assessment to quantify the extent of this material identified approximately 227 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.

- Front Porch (1 register, 15 sq. ft.)
- Living/Dining (1 register, 15 sq. ft.)
- Kitchen (1 register, 15 sq. ft.)
- Bathroom (1 register, 15 sq. ft.)
- Bedroom (1 register, 15 sq. ft.)
- Basement (misc. HVAC wrap on Ductwork, 15 sq. ft.)

Muskegon County Land Bank Parcel ID: 61-26-185-216-0003-00

- Basement (Misc. 1/4" ACM Board on Chimney, 2.5 sq. ft.)
- Basement (12 in. dia. HVAC Wrapped Ductwork, 65 lin. ft.)
- Rear Apt. (Transite Pipe, 6" diam. (6 lin. ft.)

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:

• Front Porch (10 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.

The Category I resilient floor coverings (9"x9" Speckled Vinyl Floor Tile and 12"x12" Beige 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 (2)
- Thermostat (1)
- Television (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: 61-26-185-216-0003-00

- 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: 2809 Sixth St.

Report To:

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

ARI Report # 16-64887

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/24/16

Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Fiberglass - 20%

Other - 80%

Lab ID #: 64887 - 01

Cust. #: ST-HM-01A

Material: Asphalt Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 3

Asbestos Present: **NO**

No Asbestos Observed

Fiberglass - 20%

Other - 80%

Material: Shingle

Lab ID #: 64887 - 01a

Cust. #: ST-HM-01A

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 3

Asbestos Present: NO

Fiberglass - 10%

Cust. #: ST-HM-01A

Material: Tar Paper

Lab ID #: 64887 - 01b

No Asbestos Observed

Other - 90%

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: 2809 Sixth St.

Report To:

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

ARI Report # 16-64887

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/24/16

Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Fiberglass - 20%

Other - 80%

Lab ID #: 64887 - 02

Cust. #: ST-HM-01B

Material: Asphalt Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 3

Asbestos Present: **NO**

No Asbestos Observed

Fiberglass - 20%

Other - 80%

Cust. #: ST-HM-01B

Material: Shingle

Lab ID #: 64887 - 02a

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 3

Lab ID #: 64887 - 02b

Cust. #: ST-HM-01B

Material: Tar Paper

Location:

Appearance: black,fibrous,homogenous

Layer: 3 of 3

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: 2809 Sixth St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64887

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/24/16

Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 30%

Other - 70%

Lab ID #: 64887 - 03

Cust. #: ST-HM-02A

Material: Rolled Roofing/Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Cellulose - 30%

Other - 70%

Other - 100%

Material: Rolled Roofing/Shingle

Lab ID #: 64887 - 04

Cust. #: ST-HM-02B

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64887 - 05

Cust. #: ST-HM-03A

Material: 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

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 2809 Sixth St.

Report To:

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

ARI Report # 16-64887

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/24/16

Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64887 - 06

Cust. #: ST-HM-03B

Material: Glazing

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 1

Asbestos Present: YES Chrysotile - 10%

Asbestos Present: NO

No Asbestos Observed

Other - 90%

Other - 100%

Lab ID #: 64887 - 07 Cust. #: ST-HM-04A

Material: Speckled 9x9 Vinyl Tile

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 2

Lab ID #: 64887 - 07a

Cust. #: ST-HM-04A

Material: Mastic

Location:

Appearance: black,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: 2809 Sixth St.

Report To:

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

ARI Report # 16-64887

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/24/16

Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Other - 100%

Other - 70%

Lab ID #: 64887 - 08

Cust. #: ST-HM-04B

Location:

Material: Speckled 9x9 Vinyl Tile

NOT ANALYZED

Asbestos Present: **NO**

Asbestos Present: YES

Chrysotile - 30%

No Asbestos Observed

Asbestos Present:

Appearance: Layer: 1 of 2

Lab ID #: 64887 - 08a

Cust. #: ST-HM-04B

Material: Mastic

Location:

Appearance: black,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 64887 - 09

Cust. #: ST-HM-05A

Material: Beige 12x12 Vinyl Tile

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

Location:

Appearance: beige, fibrous, 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: 2809 Sixth St.

Report To:

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

ARI Report # 16-64887

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/24/16

Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 35%

Other - 65%

Lab ID #: 64887 - 09a

Cust. #: ST-HM-05A

Material: Flooring

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 2 of 2

Lab ID #: 64887 - 10

Cust. #: ST-HM-05B

Material: Beige 12x12 Vinyl Tile

Location:

Appearance:

Layer: 1 of 2

Asbestos Present:

NOT ANALYZED

Asbestos Present: NO

No Asbestos Observed

Lab ID #: 64887 - 10a Cust. #: ST-HM-05B

Material: Flooring

Location:

Appearance: beige, fibrous, nonhomogenous

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

Layer: 2 of 2

Robert T. Letarte Jr., Laboratory Director

Cellulose - 35%

Other - 65%

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 2809 Sixth St.

Report To:

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

ARI Report # 16-64887

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/24/16 Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 35%

Other - 65%

Lab ID #: 64887 - 11

Cust. #: ST-HM-06A

Material: Speckled Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 35% Other - 65%

Lab ID #: 64887 - 12 Cust. #: ST-HM-06B

Material: Speckled Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 64887 - 13

Cust. #: ST-HM-07A

Material: White 2x4 Pitted Ceiling Tile

Location:

Appearance: grey,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: 2809 Sixth St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64887

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/24/16

Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64887 - 14

Cust. #: ST-HM-07B

Material: White 2x4 Pitted Ceiling Tile

Location:

Appearance: grey, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

Cellulose - 65%

Mineral Wool - 3

ippeurunee. gr

Lab ID #: 64887 - 15

Cust. #: ST-HM-08A

Material: Glazing

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 64887 - 16

Cust. #: ST-HM-08B

Material: Glazing

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

No Asbestos Observed

Mineral Wool - 30%

Other - 5%

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: 2809 Sixth St.

Report To:

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

ARI Report # 16-64887

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/24/16 Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Other - 98.75%

Lab ID #: 64887 - 17

Cust. #: ST-HM-09A

Material: Glazing

Location:

Appearance: white, fibrous, homogenous

Layer: 1 of 1

POINT COUNT RESULT

Asbestos Present: YES

Chrysotile - 1.25%

Lab ID #: 64887 - 18

Cust. #: ST-HM-09B Material: Glazing

Location:

Appearance: Layer:

Asbestos Present:

NOT ANALYZED

Asbestos Present: NO

No Asbestos Observed

Lab ID #: 64887 - 19

Cust. #: ST-HM-10A

Material: Green 9x9 Vinyl Tile/Flooring

Location:

Appearance: green, fibrous, nonhomogenous

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

Layer: 1 of 1

Robert T. Letarte Jr., Laboratory Director

Cellulose - 30% 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: 2809 Sixth St.

Report To:

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

ARI Report # 16-64887

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/24/16

Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 30%

Other - 70%

Lab ID #: 64887 - 20

Cust. #: ST-HM-10B

Material: Green 9x9 Vinyl Tile/Flooring

Location:

Appearance: green, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: **NO**

Cellulose - 20%

Lab ID #: 64887 - 21 Cust. #: ST-HM-11A

Material: Yellow Linoleum

No Asbestos Observed

Fiberglass - 10%

Other - 70%

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 64887 - 22

Cust. #: ST-HM-11B

Material: Yellow 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

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Test Method, Polarized Light Microscopy (PLM)

Project: 2809 Sixth St.

Report To:

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

ARI Report # 16-64887

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/24/16

Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 35%

Other - 65%

Lab ID #: 64887 - 23

Cust. #: ST-HM-12A

Material: Light Green Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 35%

Other - 65%

Lab ID #: 64887 - 24 Cust. #: ST-HM-12B

Material: Light Green Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: NO No Asbestos Observed

Cellulose - 20%

Other - 80%

Lab ID #: 64887 - 25 Cust. #: ST-HM-13A

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: 2809 Sixth St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64887

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/24/16

Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64887 - 25a

Cust. #: ST-HM-13A

Material: Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Asbestos Present: **NO**No Asbestos Observed

Cellulose - 20%

Cust. #: ST-HM-13B

Material: Drywall

Lab ID #: 64887 - 26

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Other - 80%

Lab ID #: 64887 - 26a Cust. #: ST-HM-13B

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: 2809 Sixth St.

Report To:

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

ARI Report # 16-64887

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/24/16 Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Other - 100%

Other - 100%

Other - 100%

Lab ID #: 64887 - 27

Cust. #: ST-HM-14A

Material: Grey 12x12 Vinyl Tile

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 1 of 2

Lab ID #: 64887 - 27a

Cust. #: ST-HM-14A

Material: Mastic

Location:

Appearance: yellow,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 64887 - 28

Cust. #: ST-HM-14B

Material: Grey 12x12 Vinyl Tile

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: 2809 Sixth St.

Report To:

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

ARI Report # 16-64887

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/24/16

Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

No Asbestos Observed

Non-Asbestos

Lab ID #: 64887 - 28a

Cust. #: ST-HM-14B

Material: Mastic

Location:

Appearance: yellow,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 64887 - 29

Cust. #: ST-HM-15A

Material: Yellow Linoleum

Location:

Appearance: yellow,fibrous,nonhomogenous

Layer: 1 of 1

Lab ID #: 64887 - 30

Cust. #: ST-HM-15B

Material: Yellow Linoleum

Location:

Appearance: yellow,fibrous,nonhomogenous

Layer: 1 of 1

Asbestos Present: **NO**

Other - 100%

Asbestos Present: **NO**

No Asbestos Observed

Asbestos Present: NO

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

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Test Method, Polarized Light Microscopy (PLM)

Project: 2809 Sixth St.

Report To:

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

ARI Report # 16-64887

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/24/16 Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64887 - 31

Cust. #: ST-HM-16A

Material: Block/White 9x Vinyl Tile/Flooring

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 64887 - 32

Cust. #: ST-HM-16B

Material: Block/White 9x Vinyl Tile/Flooring

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 64887 - 33

Cust. #: ST-HM-17A

Material: Old Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 35%

Other - 65%

Asbestos Present: NO

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

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Test Method, Polarized Light Microscopy (PLM)

Project: 2809 Sixth St.

Report To:

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

ARI Report # 16-64887

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/24/16

Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 35%

Other - 65%

Lab ID #: 64887 - 34

Cust. #: ST-HM-17B

Material: Old Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 35%

Other - 65%

Cust. #: ST-HM-18A

Lab ID #: 64887 - 35

Material: Tan Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 64887 - 36

Cust. #: ST-HM-18B

Material: Tan Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

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

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Test Method, Polarized Light Microscopy (PLM)

Project: 2809 Sixth St.

Report To:

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

ARI Report # 16-64887

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/24/16

Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 95%

Other - 5%

Lab ID #: 64887 - 37

Cust. #: ST-HM-19A

Material: White 1x1 Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64887 - 38

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 95%

Other - 5%

Cust. #: ST-HM-19B

Material: White 1x1 Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Cellulose - 20%

Other - 80%

Lab ID #: 64887 - 39 Cust. #: ST-HM-20A

Material: Drywall

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: 2809 Sixth St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64887

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/24/16

Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

Asbestos Present: YES

Asbestos Present: NO

No Asbestos Observed

Chrysotile - 25% Crocidolite - 5%

No Asbestos Observed

Non-Asbestos

Cellulose - 20%

Other - 80%

Other - 70%

Other - 100%

Lab ID #: 64887 - 40

Cust. #: ST-HM-20B

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 64887 - 41

Cust. #: ST-HM-21
Material: Transite Pine

Material: Transite Pipe

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Lab ID #: 64887 - 42

Cust. #: ST-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: 2809 Sixth St.

Report To:

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

ARI Report # 16-64887

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/24/16

Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 2%

Other - 98%

Lab ID #: 64887 - 42a

Cust. #: ST-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 #: 64887 - 43 Cust. #: ST-HS-01B

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 64887 - 43a

Cust. #: ST-HS-01B

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

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Test Method, Polarized Light Microscopy (PLM)

Project: 2809 Sixth St.

Report To:

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

ARI Report # 16-64887

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/24/16

Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64887 - 44

Cust. #: ST-HS-01C

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 64887 - 44a

Cust. #: ST-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 #: 64887 - 45

Cust. #: ST-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: 2809 Sixth St.

Report To:

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

ARI Report # 16-64887

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/24/16

Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64887 - 45a

Cust. #: ST-HS-01D

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

No Asbestos Observed

Asbestos Present: **NO**

No Asbestos Observed

Other - 100%

Lab ID #: 64887 - 46

Cust. #: ST-HS-01E

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 64887 - 46a

Cust. #: ST-HS-01E

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Asbestos Present: NO

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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64887

AFLA 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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Rush Date:_ 48 hour Phone: City, St., Zip: Address: Relinquished by: Other: Client Name: Turn Around Times: (Circle One) Lab ID# (888)449-4566 24 hour 72 hour Ò Ų. 0 Red Cedar Consulting Lansing, MI 48901 PO Box 13216 Stry-my-13 ST-HM-05B ST-Hunof A ST-WM-GSA 845-15 -CAY ST-14m-03B 57-4m-03A ST-4m 024 520 WH-13 かのとどしい ga-war-15 TTP) All Samples Except Plaster Client ID# Date : 3:23 pm Received by: MA Fax: (888) 448-8739 Speeder gas vingetile Rolling Rooting Spakles Linsleum Spedicio for vin Tile Clazing Clarics Beige 12x12 u.ml Tile しょれて とれての Ashalt Shingle Asbestos: Bulk Mold: Lead: Material/Location Bulk Bulk **AHERA 7400** apaquet@redcedarconsulting.net PLM EPA 600, PC all samples with a detection of <5% ACM. × Relinquished by MAY Pate: 2016 Wipe Wipe Tape Contact Person: Project : 2809 sinth St Project #: Date of Survey: Bulk/NOB Air BioSIS Point Count Volume Aaron Paquet EPA Level II 31-31-5 Paint Other Received by: PCM. Area Soil Viable Results Log-In_ 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

APEX	1
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Date: 577-6 Date:	Redinquished by: Received by:	SI-MM-11B	VIT-WALTS It	30 ST-Hm-108	9 ST-Hm-LOH	800-LAH-15 B	Apormuls ti	6 ST-Wm-0813	15 ST-HM-08A	SLO-WA-15 HI	13 ST-WM-07A	2 ST-HM-88	Lab ID # Client ID #		Other: The all families E	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
APEX RESEARCH Date:	y: Madden 1918 Relinquished by:	Yellas Linsleam	Yellas Lindeun		Granges viry (Tite	4	l	6 lazin	Clarin	white 2+4 Pilled Celling Tile	white 2+4 pilled Celling tik	Specklas Lingleum	Material/Location	TEM: AHERA 7400 Bulk/NOB		Lead: Bulk Wipe	Asbestos: Bulk Wipe	PLM EPA 600, PC all	x: (888) 448-8739 Contact Person		Project	ing Date of Survey
Date :	Received by:												Volume Area	DB EPA Level II	BioSISOther Viable	Air Paint Soil	Point Count PCM	apaquet@redcedarconsulting.net samples with a detection of <5% ACM.	Person: Aaron Paquet		Project: 2809 Sinth St.	Survey: 5-6-6
													Results		le	1		sulting.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

Date : 577	Relinquished by:	23	2	31	80	29	28	22	26	25	かめ	25	Lab ID#		Other: LO	48 hour 72 hour	Rush 24 hour	lurn Arou		City, St., Zip:	Address:	Client Name:
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E-mail: apexresearch@chartermi.net Fax: 734-449-9991



Date: 6-17-16	Relinquished by:	44 57	12 27	42 S.	4 5	15, OH	IS RE	38 ST	27 23	36 57	3	34 5	Lab ID#		Other:	48 hour 72 hour	Rush 24 hour	Turn Aroun	Phone: (888) 449-4	City, St., Zip: Lar	Address: PO	Client Name: Red
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Rev: 12/03 Work Forms: COC

PREX 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



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	Aaron Paquet	rson:	-8739	(888) 448	9-4566 Fax:	Phone: (888) 449-456
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Lab Use Only	5-15-16	Date of Survey: 5-	Date of	ing	Red Cedar Consulting	Client Name: _

Rev: 12/03 Work Forms: COC

Red Cedar Consulting

Tables

 $Table\ 1\ -\ Summary\ of\ Hazardous\ Materials,\ 2809\ 6^{th}\ St.,\ Muskegon\ Heights,\ Michigan$

	Hazardous Materials Description and Location	
Location	Material Description	Quantity
Garage	Automobile Tire	2
Living	Thermostat	1
Basement	Television	3

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2809 6th St., Muskegon Heights, Michigan

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
ST-HM-01A	Asphalt Shingle	No	M	Category I	ND/ND/ND	Exterior	NA
ST-HM-01B	Asphalt Shingle	No	M	Category I	ND/ND/ND	Exterior	NA
ST-HM-02A	Rolled Roofing	No	M	Category I	ND	Exterior	NA
ST-HM-02B	Rolled Roofing	No	M	Category I	ND	Exterior	NA
ST-HM-03A	Glazing	Yes	M	Category II	ND	Exterior	NA
ST-HM-03B	Glazing	Yes	M	Category II	ND	Exterior	NA
ST-HM-04A	Speckled 9"x9" Vinyl Tile	No	M	Category I	10% CH/ND	Front Porch	35 sq. ft.
ST-HM-04B	Speckled 9"x9" Vinyl Tile	No	M	Category I	NA/ND	Front Porch	NA
ST-HM-05A	Beige 12x12 Vinyl Tile	No	M	Category I	30% CH/ND	1st Fl. Kitchen	192 sq. ft.
ST-HM-05B	Beige 12x12 Vinyl Tile	No	M	Category I	NA/ND	1st Fl. Kitchen	NA
ST-HM-06A	Speckled Linoleum	No	M	Category I	ND	1st Fl. Bedroom	NA
ST-HM-06B	Speckled Linoleum	No	M	Category I	ND	1st Fl. Bedroom	NA
ST-HM-07A	White 2'x4' Pitted Ceiling Tile	Yes	M	Category II	ND	1st Fl. Bedroom Ceiling	NA
ST-HM-07B	White 2'x4' Pitted Ceiling Tile	Yes	M	Category II	ND	1st Fl. Bedroom Ceiling	NA
ST-HM-08A	Glazing	Yes	M	Category II	ND	1 st Fl. Kitchen	NA
ST-HM-08B	Glazing	Yes	M	Category II	ND	1st Fl. Kitchen	NA
ST-HM-09A	Glazing	Yes	M	Category II	1.25% CH	Front Porch	10 Windows
ST-HM-09B	Glazing	Yes	M	Category II	NA	Front Porch	NA
ST-HM-10A	Green 9"x9" Vinyl Tile	No	M	Category I	ND	2 nd Fl. Front Apt Living/Dining	NA
ST-HM-10B	Green 9"x9" Vinyl Tile	No	M	Category I	ND	2 nd Fl. Front Apt Living/Dining	NA
ST-HM-11A	Yellow Linoleum	No	M	Category I	ND	2 nd Fl. Front Apt Kitchen	NA
ST-HM-11B	Yellow Linoleum	No	M	Category I	ND	2 nd Fl. Front Apt Kitchen	NA
ST-HM-12A	Light Green Linoleum	No	M	Category I	ND	2 nd Fl. Front Apt Bedroom	NA
ST-HM-12B	Light Green Linoleum	No	M	Category I	ND	2 nd Fl. Front Apt Bedroom	NA
ST-HM-13A	Drywall	Yes	M	Category II	ND/ND	2 nd Fl. Bath Ceiling	NA

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2809 6th St., Muskegon Heights, Michigan

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
ST-HM-13B	Drywall	Yes	M	Category II	ND/ND	2 nd Fl. Closet Wall	NA
ST-HM-14A	Gray 12x12 Vinyl Tile	No	M	Category I	ND/ND	Rear Apt. Front Entry	NA
ST-HM-14B	Gray 12x12 Vinyl Tile	No	M	Category I	ND/ND	Rear Apt. Front Entry	NA
ST-HM-15A	Yellow Linoleum	No	М	Category I	ND	2 nd Fl. Rear Living/Dining	NA
ST-HM-15B	Yellow Linoleum	No	M	Category I	ND	Rear Apt. Living/Dining	NA
ST-HM-16A	Black & White 9"x9" Vinyl Tile	No	M	Category I	ND	Rear Apt. Kitchen	NA
ST-HM-16B	Black & White 9"x9" Vinyl Tile	No	M	Category I	ND	Rear Apt. Kitchen	NA
ST-HM-17A	Old Linoleum	No	M	Category I	ND	Rear Apt. Bath	NA
ST-HM-17B	Old Linoleum	No	M	Category I	ND	Rear Apt. Bath	NA
ST-HM-18A	Tan Linoleum	No	M	Category I	ND	Rear Apt. Bedroom	NA
ST-HM-18B	Tan Linoleum	No	M	Category I	ND	Rear Apt. Bedroom	NA
ST-HM-19A	White 1'x1' Ceiling Tile	Yes	M	Category II	ND	Rear Apt. Dining	NA
ST-HM-19B	White 1'x1' Ceiling Tile	Yes	M	Category II	ND	Rear Apt. Dining	NA
ST-HM-20A	Drywall	Yes	М	Category II	ND	Rear Apt. Living Ceiling	NA
ST-HM-20B	Drywall	Yes	M	Category II	ND	Rear Apt. Living Wall	NA
ST-HM-21	Transite Pipe	Yes	M	Category II	25% CH/ 5%CR	Rear Apartment	6 lin. ft. 6" diameter
ST-HS-01A	Plaster	No	S	Category II	ND/ND	1st Fl. Kitchen Wall	NA
ST-HS-01B	Plaster	No	S	Category II	ND/ND	1 st Fl. Living Wall	NA
ST-HS-01C	Plaster	No	S	Category II	ND/ND	1 st Fl. Kitchen Ceiling	NA
ST-HS-01D	Plaster	No	S	Category II	ND/ND	2 nd Fl. Kitchen Wall	NA
ST-HS-01E	Plaster	No	S	Category II	ND/ND	2 nd Fl. Living Ceiling	NA

Notes:

Material Types

M = Miscellaneous building materialTSI = Thermal System Insulation

S = Surfacing Material

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

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2809 6th St., Muskegon Heights, Michigan

CH = Chrysotile Asbestos sq. ft. = square feet

CR = Crocidolite

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, 2809 6th St., Muskegon Heights, Michigan

A	Asbestos Containing Material Description a	nd Location			
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity
Front Porch (1 register, 15 sq. ft.) Living/Dining (1 register, 15 sq. ft.) Kitchen (1 register, 15 sq. ft.) Bathroom (1 register, 15 sq. ft.) Bedroom (1 register, 15 sq. ft.) Basement (misc. HVAC wrap on Ductwork, 15 sq. ft.) Basement (Misc. ¹ / ₄ " ACM Board on Chimney, 2.5 sq. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	92.5 sq. ft.
Basement (12 in. dia. HVAC Wrapped Ductwork, 65 lin. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	65 lin. ft.

Notes:

Material Types

M = Miscellaneous building material TSI = Thermal System Insulation

= Surfacing Material

Abbreviations

lin. ft. = linear feet

sq. ft. = square feet

Table 4 - Summary of All Asbestos Containing Materials, 2809 6th St., Muskegon Heights, Michigan

Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
1 st Fl. Kitchen	Beige 12"x12" Vinyl Tile		No	192 sq. ft.
Front Porch	Speckled 9"x9" Vinyl Tile		No	35 sq. ft.
		Total		227 sq. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Front Porch (1 register, 15 sq. ft.)				
Living/Dining (1 register, 15 sq. ft.)				
Kitchen (1 register, 15 sq. ft.) Bathroom (1 register, 15 sq. ft.)	HVAC Duct Wrap		Yes	92.5 sq. ft.
Bedroom (1 register, 15 sq. ft.)	Trife Buct Wilap		1 05	72.3 sq. rt.
Basement (Misc. HVAC wrap on Ductwork, 15 sq. ft.)				
Basement (Misc. 1/4" ACM Board on Chimney, 2.5 sq. ft.)				
		Total		92.5 sq. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Basement (12 in. dia. HVAC Wrapped Ductwork, 65 lin. ft.)	HVAC Duct Wrap		Yes	65 lin. ft.
		Total		65 lin. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Front Porch (10 Windows 28"x54")	Glazing		Yes	10 Windows
		Total		10 Windows
Interior - Asbestos Containing Materials			-	
Location	Material Description		Friable	Approx. Quantity
Rear Apt.	Transite Pipe 6" Diameter		No	6 lin. ft.
		Total		6 lin. ft.

Notes:

Abbreviations

lin. ft. = linear feet

Table 4 - Summary of All Asbestos Containing Materials, 2809 6th St., Muskegon Heights, Michigan

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 27, 2016

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 2813 6th St., Muskegon Heights, MI 49444
Parcel ID: 61-26-185-216-0004-00

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 2813 6th 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 288 sq. ft. detached garage and approximate 1,120 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 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, bedroom and rear entry in the rear apartment while the front apartment contains a living/dining room, kitchen, bath and bedroom.

VISUAL INSPECTION AND SAMPLING

Asbestos Containing Materials Inspection

Mr. Aaron Paquet of Red Cedar Consulting (Red Cedar), an accredited State Of Michigan/EPA Asbestos Building Inspector (Accreditation Number A30955) whom completed training per the Michigan Asbestos

Project No.: 16-1070 Muskegon County Land Bank Parcel ID: 61-26-185-216-0004-00

Workers Accreditation Act 440 completed an inspection of the Subject Property on May 15, 2016 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
- Fiber Lap Siding
- Rolled Roofing
- Linoleum
- 12"x12" Vinyl Tile
- 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: 61-26-185-216-0004-00

Hazardous Materials Inspection

On May 15, 2016 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" Chimney Pipe 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: 61-26-185-216-0004-00

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, first and second floors:

- Front Apt. Living Room (1 register, 15 sq. ft.)
- Rear Apt. (Misc. HVAC wrap in crawlspace, 25 sq. ft.)
- Front Apt. (Transite Chimney Pipe 6" dia. 8 lin. ft.)

Category I ACM

One type of resilient floor covering (12"x12" Beige Vinyl Tile) located within the Rear Bathroom was found to contain up to 1.75% Chrysotile asbestos. The assessment to quantify the extent of this material identified approximately 42 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.

- Front Apt. Living Room (1 register, 15 sq. ft.)
- Rear Apt. (Misc. HVAC wrap in crawlspace, 25 sq. ft.)
- Front Apt. (Transite Chimney Pipe 6" dia. 8 lin. ft.)

The Category I resilient floor covering (12"x12" Beige Vinyl Tile) 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)

Muskegon County Land Bank Parcel ID: 61-26-185-216-0004-00

- 5-Gallon Container Misc. Paint (1)
- Gallon Container Misc. Paint (2)
- Gallon Container Misc. (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: 61-26-185-216-0004-00

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

(Anon 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: 2813 Sixth St

Report To:

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

ARI Report # Date Collected: 05/15/16

16-64880

Date Received: 05/17/16

Date Reported: 05/20/16

Date Analyzed: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Fiberglass - 15%

Other - 85%

Other - 85%

Lab ID #: 64880 - 01

Cust. #: SS-HM-01A

Material: Asphalt Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 3

Asbestos Present: **NO** No Asbestos Observed

Fiberglass - 15%

Cust. #: SS-HM-01A

Lab ID #: 64880 - 01a

Material: Asphalt Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 3

Asbestos Present: NO

Cellulose - 2%

Lab ID #: 64880 - 01b Cust. #: SS-HM-01A

Material: Tar Paper

No Asbestos Observed

Fiberglass - 3% Other - 95%

Location:

Appearance: black,fibrous,homogenous

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

Layer: 3 of 3

Robert T. Letarte Jr., Laboratory Director

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Test Method, Polarized Light Microscopy (PLM)

Project: 2813 Sixth St

Report To:

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

ARI Report # 16-64880

Date Collected: 05/15/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Fiberglass - 15%

Other - 85%

Lab ID #: 64880 - 02

Cust. #: SS-HM-01B

Material: Asphalt Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 3

Lab ID #: 64880 - 02a

Cust. #: SS-HM-01B

Asbestos Present: **NO**

No Asbestos Observed

Fiberglass - 15%

Other - 85%

Material: Asphalt Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 3

Lab ID #: 64880 - 02b

Cust. #: SS-HM-01B

Material: Tar Paper

Location:

Appearance: black, fibrous, homogenous

Layer: 3 of 3

Asbestos Present: NO

No Asbestos Observed

Cellulose - 2% Fiberglass - 3%

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: 2813 Sixth St

Report To:

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

ARI Report # 16-64880

Date Collected: 05/15/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64880 - 03

Cust. #: SS-HM-02A

Material: Fiberglass Siding

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 64880 - 04

Cust. #: SS-HM-02B

Material: Fiberglass Siding

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 64880 - 05

Cust. #: SS-HM-03A

Material: Rolled Roofing

Location:

Appearance: black, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: **NO**

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Cellulose - 40%

Other - 60%

Asbestos Present: NO

No Asbestos Observed

Cellulose - 10% Fiberglass - 10%

Cellulose - 40%

Other - 60%

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: 2813 Sixth St

Report To:

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

ARI Report # 16-64880 Date Collected: 05/15/16

Date Received: 05/17/16 Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64880 - 06

Cust. #: SS-HM-03B Material: Rolled Roofing No Asbestos Observed

Fiberglass - 10%

Location:

Appearance: black,fibrous,nonhomogenous

Layer: 1 of 1

Lab ID #: 64880 - 07

Cust. #: SS-HM-04A

Material: Glazing

Location:

Appearance: beige, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 64880 - 08

Cust. #: SS-HM-04B

Material: Glazing

Location:

Appearance: beige, nonfibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO**

Cellulose - 10%

Other - 80%

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: 2813 Sixth St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64880

Date Collected: 05/15/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64880 - 09

Cust. #: SS-HM-05A

Asbestos Present: NO

Cellulose - 30%

No Asbestos Observed

Other - 70%

Material: Multilayer Linoleum/Flooring/Backing/Mastic

Location:

Appearance: blue, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 64880 - 10

Asbestos Present: NO

Cellulose - 30%

Cust. #: SS-HM-05B

No Asbestos Observed

Other - 70%

Material: Multilayer Linoleum/Flooring/Backing/Mastic

Location:

Appearance: blue,fibrous,nonhomogenous

Layer: 1 of 2

Lab ID #: 64880 - 10a

Asbestos Present: NO

Cellulose - 40%

Cust. #: SS-HM-05B

No Asbestos Observed

Other - 60%

Material: Flooring/Backing

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

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Test Method, Polarized Light Microscopy (PLM)

Project: 2813 Sixth St

Report To:

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

ARI Report # 16-64880

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Other - 98.25%

Other - 100%

Lab ID #: 64880 - 11

Cust. #: SS-HM-06A

Material: Beige 12x12 Vinyl Tile

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 3

Asbestos Present: YES

POINT COUNT RESULT

Lab ID #: 64880 - 11a

Cust. #: SS-HM-06A

Material: Glue

Location:

Appearance: yellow,nonfibrous,homogenous

Layer: 2 of 3

Lab ID #: 64880 - 11b

Cust. #: SS-HM-06A

Material: Flooring/Backing

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 3 of 3

Chrysotile - 1.75%

Asbestos Present: **NO**

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Cellulose - 30%

Other - 70%

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

Robert T. Letarte Jr., Laboratory Director

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Test Method, Polarized Light Microscopy (PLM)

Project: 2813 Sixth St

Report To:

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

ARI Report # 16-64880

Date Collected: 05/15/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64880 - 12

Cust. #: SS-HM-06B

Material: Beige 12x12 Vinyl Tile

Location:

Appearance: Layer: 1 of 3

Asbestos Present: **NO**

No Asbestos Observed

NOT ANALYZED

Asbestos Present:

Lab ID #: 64880 - 12a

Cust. #: SS-HM-06B

Material: Glue

Location:

Appearance: yellow,nonfibrous,homogenous

Layer: 2 of 3

Lab ID #: 64880 - 12b

Cust. #: SS-HM-06B

Asbestos Present: NO

Cellulose - 30%

Other - 100%

Other - 70% No Asbestos Observed

Material: Flooring/Backing

Location:

Appearance: beige, 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: 2813 Sixth St

Report To:

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

ARI Report #

16-64880

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 60%

Other - 40%

Other - 40%

Other - 100%

Lab ID #: 64880 - 13

Cust. #: SS-HM-07A

Material: Red Linoleum

Location:

Appearance: red,fibrous,nonhomogenous

Layer: 1 of 1

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 60%

Lab ID #: 64880 - 14 Cust. #: SS-HM-07B

Material: Red Linoleum

Location:

Appearance: red,fibrous,nonhomogenous

Layer: 1 of 1

Lab ID #: 64880 - 15

Asbestos Present: NO Cust. #: SS-HM-08A No Asbestos Observed

Material: 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: 2813 Sixth St

Report To:

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

ARI Report # 16-64880 Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Other - 100%

Lab ID #: 64880 - 16

Cust. #: SS-HM-08B

Material: Glazing

Location:

Appearance: beige, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 64880 - 17

Cust. #: SS-HM-09A

Material: White/Black Linoleum

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 64880 - 18

Cust. #: SS-HM-09B

Material: White/Black Linoleum

Location:

Appearance: white, 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 - 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: 2813 Sixth St

Report To:

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

ARI Report # 16-64880

Date Collected: 05/15/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64880 - 19

Cust. #: SS-HM-10A

Material: Beige 12x12 Vinyl Tile

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 3

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO**

Other - 100%

Cellulose - 40%

Other - 60%

Lab ID #: 64880 - 19a Cust. #: SS-HM-10A

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 3

Lab ID #: 64880 - 19b

Cust. #: SS-HM-10A

Material: Sheet Flooring

Location:

Appearance: red,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: 2813 Sixth St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64880 Date Collected: 05/15/16

Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64880 - 20

Cust. #: SS-HM-10B

Material: Beige 12x12 Vinyl Tile

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 3

Asbestos Present: **NO**No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

) (

Other - 100%

Cellulose - 40%

Other - 60%

Lab ID #: 64880 - 20a

Cust. #: SS-HM-10B

Material: Glue

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 3

Lab ID #: 64880 - 20b

Cust. #: SS-HM-10B

Material: Sheet Flooring

Location:

Appearance: red,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: 2813 Sixth St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64880

Date Collected: 05/15/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64880 - 21

Cust. #: SS-HS-01A

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: **NO**No Asbestos Observed

Cellulose - 2%

Lab ID #: 64880 - 21a Cust. #: SS-HS-01A

Material: Plaster Base Coat

Location:

Appearance: grey, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Other - 98%

Lab ID #: 64880 - 22 Cust. #: SS-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: 2813 Sixth St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64880

Date Collected: 05/15/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 2%

Other - 98%

Lab ID #: 64880 - 22a Cust. #: SS-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%

Cellulose - 2%

Other - 98%

Lab ID #: 64880 - 23 Cust. #: SS-HS-01C

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 64880 - 23a

Cust. #: SS-HS-01C

Material: Plaster Base Coat

Location:

Appearance: grey,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: 2813 Sixth St

Report To:

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

ARI Report # 16-64880

Date Collected: 05/15/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64880 - 24

Cust. #: SS-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 #: 64880 - 24a Cust. #: SS-HS-01D

Material: Plaster Base Coat

Location:

Appearance: grey, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Lab ID #: 64880 - 25 Cust. #: SS-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: 2813 Sixth St

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

ARI Report # 16-64880 Date Collected: 05/15/16

Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64880 - 25a Cust. #: SS-HS-01E

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 2% Other - 98%

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Lab ID #:

Cust. #: Material: Location: Appearance:

Layer:

of

of

Lab ID #:

Cust. #: Material: Location:

Appearance: Layer:

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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64880

AFEX Research, 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

Date: 5-17-16	Relinquished by:	11 55 Horos A	552 mp 55 01	450 mt 55 b	BH2-WHSS 8	tho-was 56 t	85-m-03B	750-my-55	1 55 Am 0218	2 58 Amost	J Symous	PIO-WH-SS 1	Lab ID # Client ID #	Outer: (117) Att S		48 hour 72 hour)	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
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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

13 SSAMOOTA Reg Linelaur	14 SS-4m-07B Red Lindeum	13 55 4m 084 Clarile	25-442-013 25-444-104 25-444-104 25-444-104 25-444-104
12 SS Jun-66B Berge (2x12 wing) Tile	25 Jun-6613	\$5.4mr-66.B \$7.4mr-85 \$7.6mm/25	25-140-663 25-140-663 25-140-67 25-140-683 25-140-683 25-140-683 25-140-683 25-140-683 25-140-683 25-140-663 25-140-
	S5.4m2-07.A	\$5.4m.97A	25-45-013 25-44-013 25-44-013 25-44-013 25-44-013 25-44-013 25-44-013 25-44-013 25-44-013
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\$80-mh-55 \$80-mh-55 \$10-mh-55	880 mm 58		25-445-013 55-445-013 55-445-013
880-WM-55 880-WM-55 880-WM-55 810-WM-55	380-WM-588 880-WM-558	55-1/m -0813	55-45-013 55-45-013
830-44-58 880-44-58 880-44-58	280-44-58 58-44-0818 580-44-58	55-4m-08B 55-4m-08B	25-42-012 So-44-58
8150-WH-55 8150-WH-55 8180-WH-55 8180-WH-55 810-WH-55	25-44-568 280-44-588 280-44-58	25-4m-104 210-44-55 410-44-55	55-45-012 >5-45-013
25-44-513 25-44-5813 280-48-5813 280-5813 280-	25-44-08B 280-44-56B 280-44-56B 380-44-56	25-4m-093 25-4m-093 25-4m-093 380-mh-58	55-45-013
800-WH-55 800-WH-55 8180-WH-55 81	25-140-0818 25-140-0818 25-140-0818 25-140-0818 25-140-0818 25-140-0818	25-140-0818 55-140-0918 6 55-140-0918 6 55-140-0918 6 55-140-0918	

Rev: 12/03 Work Forms: COC

Relinquished by:

Date: 577-16

Date:

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Date:

Received by:

ST. 242

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

Relinquished by: Date:			35 85 HS-01E	SS 4800	No-84-85 88	Lab ID # Client ID #	Other: (TTP) All Samples Except	48 hour 72 hour	Rush 24 hour	Turn Around Times: (Circle One)	449-4566	City, St., Zip: Lansing, MI 48901	Address: PO Box 13216	Client Name: Red Cedar Consulting
d by: Relinquished by:					Plesto	Material/Location	Plaster TEM:	Mold: Bulk Wipe	os: Bulk X	Ada Wid	Fax: (888) 448-8739 Contact Person:		Project	
Received by: Date :						Volume Area		l Soil	nt Count PCM	apaquet@redcedarconsulting.net 600, PC all samples with a detection of <5% ACM.	Person: Aaron Paquet	Project #:		Date of Survey: 5-16-16
						Results				lting.net ACM.		200	Report	Lab Use Only Log-In

Red Cedar Consulting

Tables

 $Table\ 1\ -\ Summary\ of\ Hazardous\ Materials,\ 2813\ 6^{th}\ St.,\ Muskegon\ Heights,\ Michigan$

Hazardous Materials Description and Location							
Location	Material Description	Quantity					
Garage	5 Gallon Container Misc. Paint	1					
Garage	Gallon Container Misc. Paint						
Front Apt. Living	Smoke Detector	1					
Front Apt. Bedroom	Smoke Detector	2					
Basement	Gallon Container Misc. Paint	7					

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2813 6th 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/ND	Exterior	NA
SS-HM-01B	Asphalt Shingle	No	M	Category I	ND/ND/ND	Exterior	NA
SS-HM-02A	Fiber Lap Siding	Yes	M	Category II	ND	Exterior	NA
SS-HM-02B	Fiber Lap Siding	Yes	M	Category II	ND	Exterior	NA
SS-HM-03A	Rolled Roofing	No	M	Category I	ND	Exterior	NA
SS-HM-03B	Rolled Roofing	No	M	Category I	ND	Exterior	NA
SS-HM-04A	Glazing	Yes	M	Category II	ND	Garage	NA
SS-HM-04B	Glazing	Yes	M	Category II	ND	Garage	NA
SS-HM-05A	Multilayer Linoleum	No	M	Category I	ND	Rear Kitchen	NA
SS-HM-05B	Multilayer Linoleum	No	M	Category I	ND/ND	Rear Kitchen	NA
SS-HM-06A	Beige 12x12 Vinyl Tile	No	М	Category I	1.75%CH/ ND/ND	Rear Bath	42 sq. ft.
SS-HM-06B	Beige 12x12 Vinyl Tile	No	M	Category I	NA/ND/ND	Rear Bath	NA
SS-HM-07A	Red Linoleum	No	M	Category I	ND	Rear Entry	NA
SS-HM-07B	Red Linoleum	No	M	Category I	ND	Rear Entry	NA
SS-HM-08A	Glazing	Yes	M	Category II	ND	Living	NA
SS-HM-08B	Glazing	Yes	M	Category II	ND	Kitchen	NA
SS-HM-09A	White & Black Linoleum	No	M	Category I	ND	Front Kitchen	NA
SS-HM-09B	White & Black Linoleum	No	M	Category I	ND	Front Kitchen	NA
SS-HM-10A	Beige 12x12 Vinyl Tile	No	M	Category I	ND/ND/ND	Front Bedroom	NA
SS-HM-10B	Beige 12x12 Vinyl Tile	No	M	Category I	ND/ND/ND	Front Bedroom	NA
SS-HS-01A	Plaster	No	S	Category II	ND/ND	Rear Kitchen Wall	NA
SS-HS-01B	Plaster	No	S	Category II	ND/ND	Rear Bedroom Ceiling	NA
SS-HS-01C	Plaster	No	S	Category II	ND/ND	Front Living Wall	NA
SS-HS-01D	Plaster	No	S	Category II	ND/ND	Front Bedroom Wall	NA
SS-HS-01E	Plaster	No	S	Category II	ND/ND	Front Living Ceiling	NA

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2813 6th St., Muskegon Heights, Michigan

Mater	ial Types	Abbrev	<u>riations</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
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, 2813 6th St., Muskegon Heights, Michigan

A	Asbestos Containing Material Description and Location									
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity					
Front Apt. (Transite Chimney Pipe 6" dia. 8 lin. ft.)	Transite Chimney Pipe	No	Fair	M	8 lin. ft.					
Front Apt. Living Room (1 register, 15 sq. ft.) Rear Apt. (Misc. HVAC wrap in crawlspace, 25 sq. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	40 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, 2813 6th St., Muskegon Heights, Michigan

Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Rear Bathroom	Beige 12x12 Vinyl Tile		No	42 sq. ft.
		Total		42 sq. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Front Apt. Living Room (1 register, 15 sq. ft.) Rear Apt. (Misc. HVAC wrap in crawlspace, 25 sq. ft.)	HVAC Duct Wrap		Yes	40 sq. ft.
		Total		40 sq. ft.
Exterior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Front Apt. (Transite Chimney Pipe 6" dia. 8 lin. ft.)	Transite Chimney Pipe		No	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 27, 2016

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 2813 Riordan St., Muskegon Heights, MI 49444 Parcel ID: 61-26-635-249-0024-00

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 2813 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 .12 acre residential parcel which contains a 384 sq. ft. detached garage and approximate 1,080 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 stucco while the roof was sealed with asphalt shingles. The Building can be further divided into a living room, dining room, kitchen and bedroom on the first floor while the second floor contains a bathroom and three bedrooms.

VISUAL INSPECTION AND SAMPLING

Asbestos Containing Materials Inspection

Mr. Aaron Paquet of Red Cedar Consulting (Red Cedar), an accredited State Of Michigan/EPA Asbestos Building Inspector (Accreditation Number A30955) whom completed training per the Michigan Asbestos

Project No.: 16-1070 Muskegon County Land Bank

Parcel ID: 61-26-635-249-0024-00

Workers Accreditation Act 440 completed an inspection of the Subject Property on May 22, 2016 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
- Stucco
- Glazing
- Plaster

Red Cedar staff collected eighteen 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 eighteen samples is included as Attachment A.

Hazardous Materials Inspection

On May 22, 2016 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

Muskegon County Land Bank Parcel ID: 61-26-635-249-0024-00

material. Each material, if identified, was documented along with the approximate location. Any materials identified as hazardous are included in Table 1.

INSPECTION RESULTS AND RECOMMENDATIONS

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

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

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

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

Presumed Asbestos Containing Material

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

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

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

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

Friable ACM's

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

• 2nd Fl. Bath (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)

Muskegon County Land Bank Parcel ID: 61-26-635-249-0024-00

- 2nd Fl. N 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.)
- 2nd Fl. S Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- Basement (Misc. HVAC Tape on Basement Beam, 1 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.

- 2nd Fl. Bath (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- 2nd Fl. N 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.)
- 2nd Fl. S Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- Basement (Misc. HVAC Tape on Basement Beam, 1 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:

- Television (1)
- Gallon Container Glazing (2)
- Gallon Container Misc. (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.

Muskegon County Land Bank Parcel ID: 61-26-635-249-0024-00

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: 61-26-635-249-0024-00

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

Rain 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: 2813 Riordan St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-65037

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/24/16 Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Fiberglass - 30%

Other - 70%

Lab ID #: 65037 - 01

Cust. #: RI-HM-01A

Material: Asphalt Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 2

No Asbestos Observed

Asbestos Present: **NO**

Cellulose - 60%

Other - 40%

Lab ID #: 65037 - 01a Cust. #: RI-HM-01A

Material: Tar Paper

Location:

Location

Appearance: black, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 65037 - 02

Asbestos Present: **NO**No Asbestos Observed

Fiberglass - 30%

Other - 70%

Cust. #: RI-HM-01B

Material: Asphalt Shingle

Location:

Appearance: black, fibrous, homogenous

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

Layer: 1 of 2

Tang Je

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 2813 Riordan St.

Report To:

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

ARI Report #

16-65037

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/24/16 Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

No Asbestos Observed

Non-Asbestos

Lab ID #: 65037 - 02a

Cust. #: RI-HM-01B

Material: Tar Paper

Location:

Appearance: black,fibrous,homogenous

Layer: 2 of 2

Lab ID #: 65037 - 03

Cust. #: RI-HM-02A

Material: Old Linoleum

Location:

Appearance: grey,fibrous,nonhomogenous

Layer: 1 of 1

Lab ID #: 65037 - 04

Cust. #: RI-HM-02B

Material: Old Linoleum

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: NO

Cellulose - 60%

Other - 40%

Asbestos Present: **NO** No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Cellulose - 30%

Other - 70%

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: 2813 Riordan St.

Report To:

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

ARI Report # 16-65037

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/24/16 Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 65037 - 05

Cust. #: RI-HM-03A

Material: 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 #: 65037 - 06 Cust. #: RI-HM-03B

Material: Glazing

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 1 of 1

Lab ID #: 65037 - 07

Cust. #: RI-HM-04A

Material: Glazing

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

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Test Method, Polarized Light Microscopy (PLM)

Project: 2813 Riordan St.

Report To:

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

ARI Report # 16-65037

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/24/16 Date Reported: 05/24/16

Sample Information

Non-Asbestos

Lab ID #: 65037 - 08

Cust. #: RI-HM-04B

Material: Glazing

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 1 of 1

Lab ID #: 65037 - 09

Cust. #: RI-HS-01A

Material: Stucco

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 1 of 1

Lab ID #: 65037 - 10

Cust. #: RI-HS-01B

Material: Stucco

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 1 of 1

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

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 2813 Riordan St.

Report To:

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

ARI Report # 16-65037

Date Collected: 05/22/16 Date Received: 05/23/16 Date Analyzed: 05/24/16

Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 65037 - 11

Cust. #: RI-HS-01C

Material: Stucco

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 1 of 1

Asbestos Present: **NO** No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Other - 100%

Lab ID #: 65037 - 12 Cust. #: RI-HS-01D

Material: Stucco

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 1 of 1

Lab ID #: 65037 - 13

Cust. #: RI-HS-01E

Material: Stucco

Location:

Appearance: grey,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: 2813 Riordan St.

Report To:

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

ARI Report # 16-65037

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/24/16

Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 65037 - 14

Cust. #: RI-HS-02A

Material: Plaster

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 2% Other - 98%

Lab ID #: 65037 - 14a Cust. #: RI-HS-02A

Material: Mortar

Location:

Appearance: grey, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 65037 - 15

Cust. #: RI-HS-02B

Material: Mortar

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 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

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 2813 Riordan St.

Report To:

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

ARI Report #

16-65037

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/24/16

Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Other - 100%

Cellulose - 2%

Other - 98%

Lab ID #: 65037 - 15a

Cust. #: RI-HS-02B Material: Plaster

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Lab ID #: 65037 - 16

Cust. #: RI-HS-02C

Material: Plaster

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 65037 - 16a

Cust. #: RI-HS-02C

Material: Mortar

Location:

Appearance: grey,fibrous,homogenous

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

Layer: 2 of 2

Asbestos Present: **NO**

Other - 100%

No Asbestos Observed

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: 2813 Riordan St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-65037

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/24/16 Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 65037 - 17

Cust. #: RI-HS-02D

Material: Plaster

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: **NO**No Asbestos Observed

NO

Cellulose - 2% Other - 98%

Lab ID #: 65037 - 17a Cust. #: RI-HS-02D

Material: Mortar

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Lab ID #: 65037 - 18 Cust. #: RI-HS-02E

Material: Plaster

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: 2813 Riordan St.

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Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-65037

Date Collected: 05/22/16 Date Received: 05/23/16 Date Analyzed: 05/24/16

Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 2%

Other - 98%

Lab ID #: 65037 - 18a Cust. #: RI-HS-02E

Material: Mortar

Location:

Appearance: grey, fibrous, homogenous

Layer: 2 of 2

Lab ID #: Asbestos Present:

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

Lab ID #:

Coat #

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.

65037

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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				Glazina	R1-11-04B	8
				Glazing	RI-HM-04A	7
				Glazing	21-4m-03B	6
				6 lazing	R1-HM-03A	2.
				old Wholeum	B1-4m-028	1
				old Linoleum	R1-HM-02A	
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Lab Use Only Log-In	ુ 16	Date of Survey: 5.30.16	Date of	ing	Red Cedar Consulting	Client Name:

Rev: 12/03 Work Forms: COC

ROTATION AND ARCH

65037

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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			18 RI-HS-03E Acster	R1-45-02D	5	14 RI-HS-00A Plaster	13 RI-HS-OIE Stucco	17 RI-HS-DID Stucco	Lab ID # Client ID # Material/Location Volume Are	TEM: AHERA 7400 Bulk/NOB EPA Level II		48 hour 72 hour Paint Paint Paint	Rush 24 hour Asbestos: Bulk x Wipe Point Count PCN	Turn Around Times: (Circle One) PLM EPA 600, PC all samples with a detection	149-4566 Fax: (888) 448-8739			Client Name: Red Cedar Consulting Date of Survey: 5.23.16
									Volume Area		Other		Point Count PCM	apaquet@redcedarconsulting.netsamples with a detection of <5% ACM.			٦.	• •
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Rev: 12/03 Work Forms: COC

APEX HESEARCH

Red Cedar Consulting

Tables

Table 1 - Summary of Hazardous Materials, 2813 Riordan St., Muskegon Heights, Michigan

Hazardous Materials Description and Location								
Location	Location Material Description							
Exterior	Television	1						
Living	Gallon Container Misc. Glazing	2						
Basement	Gallon Container Misc. Paint	3						

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2813 Riordan St., Muskegon Heights, Michigan

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
RI-HM-01A	Asphalt Shingle	No	M	Category I	ND/ND	Exterior	NA
RI-HM-01B	Asphalt Shingle	No	M	Category I	ND/ND	Exterior	NA
RI-HM-02A	Old Linoleum	No	M	Category I	ND	Kitchen	NA
RI-HM-02B	Old Linoleum	No	M	Category I	ND	Kitchen	NA
RI-HM-03A	Glazing	Yes	M	Category II	ND	Dining	NA
RI-HM-03B	Glazing	Yes	M	Category II	ND	2 nd Fl. E Bedroom	NA
RI-HM-04A	Glazing	Yes	M	Category II	ND	Exterior Misc. Pile	NA
RI-HM-04B	Glazing	Yes	M	Category II	ND	Exterior Misc. Pile	NA
RI-HS-01A	Stucco	No	S	Category II	ND	S Exterior	NA
RI-HS-01B	Stucco	No	S	Category II	ND	W Exterior	NA
RI-HS-01C	Stucco	No	S	Category II	ND	NW Exterior	NA
RI-HS-01D	Stucco	No	S	Category II	ND	NE Exterior	NA
RI-HS-01E	Stucco	No	S	Category II	ND	Porch Exterior	NA
RI-HS-02A	Plaster	No	S	Category II	ND/ND	Bedroom Ceiling	NA
RI-HS-02B	Plaster	No	S	Category II	ND/ND	Living Wall	NA
RI-HS-02C	Plaster	No	S	Category II	ND/ND	Dining Wall	NA
RI-HS-02D	Plaster	No	S	Category II	ND/ND	2 nd Fl. N Bedroom Wall	NA
RI-HS-02E	Plaster	No	S	Category II	ND/ND	2 nd Fl. E Bedroom Ceiling	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, 2813 Riordan St., Muskegon Heights, Michigan

Asbestos Containing Material Description and Location									
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity				
2 nd Fl. Bath (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) 2 nd Fl. N Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) 2 nd Fl. E Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) 2 nd Fl. S Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) 2 nd Fl. S Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) Basement (Misc. HVAC Tape on Basement Beam, 1 sq. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	141 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, 2813 Riordan St., Muskegon Heights, Michigan

Interior - Asbestos Containing Materials			
Location	Material Description	Friable	Approx. Quantity
2 nd Fl. Bath (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) 2 nd Fl. N Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) 2 nd Fl. E Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) 2 nd Fl. S Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) 2 nd Fl. S Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) Basement (Misc. HVAC Tape on Basement Beam, 1 sq. ft.)	HVAC Duct Wrap	Yes	141 sq. ft.
	Tota	al	141 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 27, 2016

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 2819 Riordan St., Muskegon Heights, MI 49444 Parcel ID: 61-26-635-249-0022-00

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 2819 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 .12 acre residential parcel which contains a 288 sq. ft. detached garage and approximate 672 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 Transite 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 two bedrooms.

VISUAL INSPECTION AND SAMPLING

Asbestos Containing Materials Inspection

Mr. Aaron Paquet of Red Cedar Consulting (Red Cedar), an accredited State Of Michigan/EPA Asbestos Building Inspector (Accreditation Number A30955) whom completed training per the Michigan Asbestos

Project No.: 16-1070 Muskegon County Land Bank Parcel ID: 61-26-635-249-0022-00

Workers Accreditation Act 440 completed an inspection of the Subject Property on May 22, 2016 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
- 2'x4' Ceiling Tile
- Drywall
- 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: 61-26-635-249-0022-00

Hazardous Materials Inspection

On May 22, 2016 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 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: 61-26-635-249-0022-00

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 1,150 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:

- Automobile Tire (17)
- Television (1)
- Gallon Container Misc. Paint (8)

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: 61-26-635-249-0022-00

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: 2819 Riordan St.

Report To:

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

ARI Report #

16-65032

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/24/16 Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65032 - 01

Cust. #: RD-HM-01A

Material: Asphalt Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 1

Lab ID #: 65032 - 02

Cust. #: RD-HM-01B

Material: Asphalt Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 65032 - 03

Cust. #: RD-HM-02A

Material: Tan Linoleum

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO**

Cellulose - 20%

No Asbestos Observed

Other - 80%

Asbestos Present: **NO**

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

Cellulose - 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.



Test Method, Polarized Light Microscopy (PLM)

Project: 2819 Riordan St.

Report To:

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

16-65032

Date Collected: 05/22/16 Date Received: 05/23/16

Date Received: 05/23/16 Date Analyzed: 05/24/16

Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 40%

Other - 60%

Lab ID #: 65032 - 04

Cust. #: RD-HM-02B

Material: Tan Linoleum

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Lab ID #: 65032 - 05 Cust. #: RD-HM-03A

Material: White Linoleum

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 2

Lab ID #: 65032 - 05a

Cust. #: RD-HM-03A

Material: White Linoleum

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: **NO**No Asbestos Observed

Other - 90%

Fiberglass - 10%

Other 7070

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: 2819 Riordan St.

Report To:

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

ARI Report #

16-65032

Date Collected: 05/22/16

Date Received: 05/23/16

Date Analyzed: 05/24/16

Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 65032 - 06

Cust. #: RD-HM-03B

Material: White Linoleum

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 1 of 2

Asbestos Present: **NO**

No Asbestos Observed

Other - 100%

Lab ID #: 65032 - 06a Cust. #: RD-HM-03B

Material: White Linoleum

Location:

Appearance: beige, nonfibrous, homogenous

Layer: 2 of 2

Lab ID #: 65032 - 07

Cust. #: RD-HM-04A

Material: Drywall

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

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: 2819 Riordan St.

Report To:

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

ARI Report #

16-65032

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/24/16

Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 20%

Other - 80%

Lab ID #: 65032 - 08

Cust. #: RD-HM-04B

Material: Drywall

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 2

Asbestos Present: **NO**

No Asbestos Observed

Other - 100%

Lab ID #: 65032 - 08a Cust. #: RD-HM-04B

Material: Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Lab ID #: 65032 - 09

Cust. #: RD-HM-05A

Material: Glazing

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

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

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Test Method, Polarized Light Microscopy (PLM)

Project: 2819 Riordan St.

Report To:

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

ARI Report # 16-65032

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/24/16

Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 2%

Other - 98%

Lab ID #: 65032 - 10

Cust. #: RD-HM-05B

Material: Glazing

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO**

Cellulose - 25%

Cust. #: RD-HM-06A

Lab ID #: 65032 - 11

No Asbestos Observed

Mineral Wool - 25% Other - 50%

Material: White 2x4 Ceiling Tile

Location:

Appearance: grey, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

Cellulose - 25%

Lab ID #: 65032 - 12 Cust. #: RD-HM-06B

No Asbestos Observed

Mineral Wool - 25%

Material: White 2x4 Ceiling Tile

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

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: 2819 Riordan St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-6

16-65032

Date Collected: 05/22/16
Date Received: 05/23/16

Date Received: 05/23/16 Date Analyzed: 05/24/16

Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65032 - 13

Cust. #: RD-HS-01A

Material: Plaster

Location:

Appearance: grey, fibrous, homogenous

Layer: 1 of 2

Lab ID #: 65032 - 13a

Cust. #: RD-HS-01A

Material: Mortar

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 65032 - 14

Cust. #: RD-HS-01B

Material: Plaster

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

bestos Type/Tereent Non-Asbeste

Asbestos Present: NO

No Asbestos Observed

Cellulose - 2%

Other - 98%

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

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 2819 Riordan St.

Report To:

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

ARI Report #

Date Collected: 05/22/16 Date Received: 05/23/16 Date Analyzed: 05/24/16

16-65032

Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65032 - 14a Cust. #: RD-HS-01B

Material: Mortar

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

No Asbestos Observed

Asbestos Present: **NO**

No Asbestos Observed

Other - 98%

Lab ID #: 65032 - 15

Cust. #: RD-HS-01C

Material: Plaster

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 65032 - 15a

Cust. #: RD-HS-01C

Material: Mortar

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 2 of 2

Asbestos Present: NO Cellulose - 2%

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: 2819 Riordan St.

Report To:

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

ARI Report #

16-65032 Date Collected: 05/22/16

Date Received: 05/23/16 Date Analyzed: 05/24/16

Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 65032 - 16

Cust. #: RD-HS-01D

Material: Plaster

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: **NO**

No Asbestos Observed

Other - 100%

Other - 100%

Lab ID #: 65032 - 16a Cust. #: RD-HS0-1D

Material: Mortar

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 65032 - 17

Cust. #: RD-HS-01E

Material: Plaster

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: 2819 Riordan St.

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

ARI Report #

16-65032 Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/24/16

Date Reported: 05/24/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65032 - 17a

Cust. #: RD-HS-01E

Material: Mortar

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.

65032

APEA 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: 5-25-6.	Relinquished by	\ \ \	2	10		9		0	S	£	W	2	-	Lab ID#		Other :	48 hour 72 hour	Kush (24 nous		Turn Aro	Phone: (888) 4	City, St., Zip:	Address:	Client Name:
,	Date : _	Received by MAN	70	2 D- HM - OLA	RD-4m-05B	RU-HM-05A	PD-4m-04B	RD-HM-04A	20-4m-03B	RD-4m-03A	2D-4M-00B	RD- HM-03A	20- HM-01B	RD-HM-OIA	Client ID#	(TTP) All Samples Except Plaster				Around Times: (Circle One)	(888) 449-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
APEX RESEARCH		1155 June 1155	WHILE OX I COMING	いいこ しっし よういっ	Glazina	Glazina	Drywall	Daywall	white Linoleum			Tan Linoleum	Asphalt Shingle	F50halt Shingle	Material/Location	TEM: AHERA 7400	xcept Plaster		Lead: Bulk	Asbestos: Bulk X	(Circle One) PLM EPA	X: (888) 448-8739			ing
	Date:	Relinquished by:		・ナート												.00 Bulk/NOB	lape B ₁		Wipe Air	Wipe Po	600, PC	Contact Person:	Project #:	Project: 2819	. Date of Survey
	Date:	Received by:													Volume Area	EPA Level II	BioSIS Other		Paint	Point Count PCM_	apaquet@redcedarconsulting.net all samples with a detection of <5% ACM.	SOn: Aaron Paquet		>	vey: 5.22.16
		y:									•				Results		Viable		Soil		larconsulting.net of <5% 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



Relinquished by: $-\mathcal{U}$ Rush 48 hour Other: Phone: (888) 449-4566 Turn Around Times: (Circle One) City, St., Zip: Address: Client Name: Lab ID# <u>_</u> 5 Ū 24 hour 72 hour Red Cedar Consulting Lansing, MI 48901 PO Box 13216 RD-45-01A RD-4M-06B 2D-45-01E RD-HS-OIB RD-45-01C 20-45-01D (TTP) All Samples Except Plaster Client ID# Date : _ Received by: Fax: (888) 448-8739 MAY 19 Plaster Plaster Plaster Plaster Plaster White 2x4 Ceiling Tile 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. × Relinquished by: Wipe Wipe Contact Person: Aaron Paquet Date of Survey: 5.22.16 Project #: Project: 2819 Riordan St. Bulk/NOB Air _ Point Count BioSIS Volume EPA Level II Paint Other Received by: Area PCM Viable Results Report_ Log-In_ Lab Use Only

Work Forms: COC

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Red Cedar Consulting

Tables

Table 1 - Summary of Hazardous Materials, 2819 Riordan., Muskegon Heights, Michigan

Hazardous Materials Description and Location										
Location	Material Description	Quantity								
Exterior	Automobile Tire	14								
Garage	Automobile Tire	3								
Living	Television	1								
Basement	Gallon Container Misc. Paint	8								

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2819 Riordan St., Muskegon Heights, Michigan

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
RD-HM-01A	Asphalt Shingle	No	M	Category I	ND	Exterior	NA
RD-HM-01B	Asphalt Shingle	No	M	Category I	ND	Exterior	NA
RD-HM-02A	Tan Linoleum	No	M	Category I	ND	Front Entry	NA
RD-HM-02B	Tan Linoleum	No	M	Category I	ND	Living/Dining	NA
RD-HM-03A	White Linoleum	No	M	Category I	ND/ND	Kitchen	NA
RD-HM-03B	White Linoleum	No	M	Category I	ND/ND	Bath	NA
RD-HM-04A	Drywall	No	M	Category II	ND	Front Entry Ceiling	NA
RD-HM-04B	Drywall	No	M	Category II	ND/ND	NE Bedroom Wall	NA
RD-HM-05A	Glazing	Yes	M	Category II	ND	Living	NA
RD-HM-05B	Glazing	Yes	M	Category II	ND	Kitchen	NA
RD-HM-06A	White 2'x4' Ceiling Tile	Yes	M	Category II	ND	Basement	NA
RD-HM-06B	White 2'x4' Ceiling Tile	Yes	M	Category II	ND	Basement	NA
RD-HS-01A	Plaster	No	S	Category II	ND/ND	Living Wall	NA
RD-HS-01B	Plaster	No	S	Category II	ND/ND	NW Bedroom Wall	NA
RD-HS-01C	Plaster	No	S	Category II	ND/ND	NE Bedroom Wall	NA
RD-HS-01D	Plaster	No	S	Category II	ND/ND	Kitchen Ceiling	NA
RD-HS-01E	Plaster	No	S	Category II	ND/ND	NE Bedroom Ceiling	NA

Notes:

Material Types

M = Miscellaneous building material

TSI = Thermal System Insulation

S = Surfacing Material

PC = Point Count Analysis CH = Chrysotile Asbestos

Abbreviations

NQ = Not quantified NA = Not applicable

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, 2819 Riordan 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	1,150 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, 2819 Riordan St., Muskegon Heights, Michigan

Exterior - Asbestos Containing Mate	rials			
Location	Material Description		Friable	Approx. Quantity
Building Exterior	Transite Siding		No	1,150 sq. ft.
		Total		1,150 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 27, 2016

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 2829 Jefferson St., Muskegon Heights, MI 49444 Parcel ID: 61-26-185-214-0008-00

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 2829 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 .14 acre residential parcel which contains an approximate 1,248 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, and three bedrooms on the first floor.

VISUAL INSPECTION AND SAMPLING

Asbestos Containing Materials Inspection

Mr. Aaron Paquet of Red Cedar Consulting (Red Cedar), an accredited State Of Michigan/EPA Asbestos Building Inspector (Accreditation Number A30955) whom completed training per the Michigan Asbestos Workers Accreditation Act 440 completed an inspection of the Subject Property on May 7, 2016 for suspected asbestos containing building materials.

Project No.: 16-1070 Muskegon County Land Bank

Parcel ID: 61-26-185-214-0008-00

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:

- Asphalt Shingle
- Linoleum
- Drywall
- Glazing
- Plaster

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

Hazardous Materials Inspection

On May 7, 2016 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: 61-26-185-214-0008-00

INSPECTION RESULTS AND RECOMMENDATIONS

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

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

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

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

Presumed Asbestos Containing Material

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

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

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

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

Friable ACM's

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

Category I ACM

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: 61-26-185-214-0008-00

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:

- Smoke Detector (2)
- 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.

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: 61-26-185-214-0008-00

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: 2829 Jefferson St.

Report To:

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

ARI Report # 16-64732

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16 Date Reported: 05/17/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Lab ID #: 64732 - 01

Cust. #: ST-HM-01A

Material: Asphalt Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 1

Lab ID #: 64732 - 02

Cust. #: ST-HM-01B

Material: Asphalt Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64732 - 03

Cust. #: ST-HM-02A

Material: Asphalt Shingle

Location:

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Cellulose - 30%

Cellulose - 30% Other - 70%

Other - 70%

Appearance: black,fibrous,homogenous

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: 2829 Jefferson St.

Report To:

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

ARI Report # 16-64732

Date Collected: 05/07/16 Date Received: 05/11/16 Date Analyzed: 05/17/16

Date Reported: 05/17/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

No Asbestos Observed

Non-Asbestos

Fiberglass - 30%

Other - 70%

Lab ID #: 64732 - 04

Cust. #: ST-HM-02B

Material: Asphalt Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: **NO**

Cellulose - 30%

Other - 70%

Cust. #: ST-HM-03A

Lab ID #: 64732 - 05

Material: White Linoleum

Location:

Appearance: white, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64732 - 06

Cust. #: ST-HM-03B

Material: White Linoleum

Location:

Appearance: grey,fibrous,homogenous

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

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Test Method, Polarized Light Microscopy (PLM)

Project: 2829 Jefferson St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64732

Date Collected: 05/07/16 Date Received: 05/11/16 Date Analyzed: 05/17/16

Date Reported: 05/17/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64732 - 07

Cust. #: ST-HM-04A

Material: Beige Linoleum

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 1 of 2

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Lab ID #: 64732 - 07a Cust. #: ST-HM-04A

Cust. #. 51-111v1-04

Material: Glue Location:

Appearance: yellow,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 64732 - 08

Cust. #: ST-HM-04B

Material: Beige Linoleum

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

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: 2829 Jefferson St.

Report To:

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

ARI Report # 16-64732

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16 Date Reported: 05/17/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64732 - 08a

Cust. #: ST-HM-04B

Material: Glue Location:

Appearance: yellow,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 64732 - 09

Cust. #: ST-HM-05A

Material: Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 64732 - 09a

Cust. #: ST-HM-05A

Material: Drywall

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Other - 100%

Asbestos Present: **NO** No Asbestos Observed

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: 2829 Jefferson St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64732

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16 Date Reported: 05/17/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64732 - 10 Cust. #: ST-HM-05B

Material: Drywall

Location:

Appearance: grey, fibrous, homogenous

Layer: 1 of 2

Asbestos Present: **NO**No Asbestos Observed

Cellulose - 20%

Other - 80%

Other - 100%

Lab ID #: 64732 - 10a

Cust. #: ST-HM-05B

Material: Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Lab ID #: 64732 - 11

Cust. #: ST-HM-06A

Material: Glazing

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 1

Asbestos Present: **NO**

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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



Test Method, Polarized Light Microscopy (PLM)

Project: 2829 Jefferson St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64732

Date Collected: 05/07/16 Date Received: 05/11/16 Date Analyzed: 05/17/16

Date Reported: 05/17/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64732 - 12

Cust. #: ST-HM-06B

Material: 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 #: 64732 - 13 Cust. #: ST-HM-07A

Material: Brown Linoleum

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 1 of 1

Lab ID #: 64732 - 14

Cust. #: ST-HM-07B

Material: Brown Linoleum

Location:

Appearance: grey,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: 2829 Jefferson St.

Report To:

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

ARI Report # 16-64732

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16 Date Reported: 05/17/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64732 - 15

Cust. #: ST-HS-01A

Material: Plaster

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 1 of 1

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 2%

Lab ID #: 64732 - 16 Cust. #: ST-HS-01B

Material: Plaster

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Other - 98%

Lab ID #: 64732 - 17 Cust. #: ST-HS-01C

Material: Plaster

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: 2829 Jefferson St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64732

Date Collected: 05/07/16 Date Received: 05/11/16 Date Analyzed: 05/17/16

Date Reported: 05/17/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64732 - 17a

Cust. #: ST-HS-01C Material: Mortar

Location:

Appearance: grey, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: **NO**No Asbestos Observed

Asbestos Present: **NO**

No Asbestos Observed

No Asbestos Observed

Cellulose - 2%

Other - 98%

Other - 100%

Other - 100%

Lab ID #: 64732 - 18

Cust. #: ST-HS-01D

Material: Plaster

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 1 of 1

Lab ID #: 64732 - 19 Asbestos

Cust. #: ST-HS-01E

Material: Plaster

Location:

Appearance: beige, nonfibrous, homogenous

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

Layer: 1 of 1

Asbestos Present: **NO**

1cm

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research 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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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:	il ST-HM-OLA	10 ST-4m-05B	9 ST-HM-05A	8 ST-HM- 01	7 ST-HM- 04A	6 ST-HM-0	ST-4M-03A	4 ST-HM-00B	3 ST-HM-02A	2 St-HM-OB	1 ST-HM-01A	Lab ID # Client ID #		Other: Social (TTP) all samples Except	48 hour 72 hour	Rush 24 hour	Turn Around Times: (Circle One)	Phone: (888) 449-4566	City, St., Zip: Lansing, MI 48	Address: PO Box 13216	Client Name: Red Cedar Consulting
Received by: US Relinquished by:		 	50 Dawall		Dejae	-HM- OSB White Linoleum					+ Asphalt Shingle	# Material/Location		Mold: Bulk Tape		Asbestos: Bulk Wipe	PLM EPA 600, PC	Fax: (888) 448-8739 Contact	48901 Project #:	Project	
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Rev: 12/03 Work Forms: COC

Date: 5-10-16

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Date:

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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

Red Cedar Consulting

Tables

Table 1 - Summary of Hazardous Materials, 2829 Jefferson St., Muskegon Heights, Michigan

Hazardous Materials Description and Location										
Location	Material Description	Quantity								
Exterior	Automobile Tire	1								
SW Bedroom	Smoke Detector	1								
W Bedroom	Smoke Detector	1								

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2829 Jefferson St., Muskegon Heights, Michigan

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
ST-HM-01A	Asphalt Shingle	No	M	Category I	ND	Exterior	NA
ST-HM-01B	Asphalt Shingle	No	M	Category I	ND	Exterior	NA
ST-HM-02A	Asphalt Shingle	No	M	Category I	ND	Exterior	NA
ST-HM-02B	Asphalt Shingle	No	M	Category I	ND	Exterior	NA
ST-HM-03A	White Linoleum	No	M	Category I	ND	Kitchen	NA
ST-HM-03B	White Linoleum	No	M	Category I	ND	Kitchen	NA
ST-HM-04A	Beige Linoleum	No	M	Category I	ND/ND	Bathroom	NA
ST-HM-04B	Beige Linoleum	No	M	Category I	ND/ND	Bathroom	NA
ST-HM-05A	Drywall	No	M	Category II	ND/ND	Rear Entry Ceiling	NA
ST-HM-05B	Drywall	No	M	Category II	ND/ND	Kitchen Wall	NA
ST-HM-06A	Glazing	Yes	M	Category II	ND	SE Bedroom	NA
ST-HM-06B	Glazing	Yes	M	Category II	ND	SW Bedroom	NA
ST-HM-07A	Brown Linoleum	No	M	Category I	ND	Living/Dining	NA
ST-HM-07B	Brown Linoleum	No	M	Category I	ND	Living Dining	NA
ST-HS-01A	Plaster	No	S	Category II	ND	Living Wall	NA
ST-HS-01B	Plaster	No	S	Category II	ND	SW Bedroom Wall	NA
ST-HS-01C	Plaster	No	S	Category II	ND/ND	Kitchen Wall	NA
ST-HS-01D	Plaster	No	S	Category II	ND	SE Bedroom Ceiling	NA
ST-HS-01E	Plaster	No	S	Category II	ND	SW Bedroom 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, 2829 Jefferson 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

S = Surfacing Material

Abbreviations

lin. ft. = linear feet

sq. ft. = square feet

Table 4 - Summary of All Asbestos Containing Materials, 2829 Jefferson 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 27, 2016

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 2905 Howden St., Muskegon Heights, MI 49444

Parcel ID: 61-26-635-259-0001-00

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 2905 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 residential parcel which contains an approximate 1,392 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 wood lap while the roof was sealed with rolled roofing and asphalt shingles. The Building can be further divided into a living room, dining room, kitchen, bath, bedroom and rear entry on the first floor while the second floor contains a living room, dining room, kitchen, bathroom and two bedrooms.

VISUAL INSPECTION AND SAMPLING

Asbestos Containing Materials Inspection

Mr. Aaron Paquet of Red Cedar Consulting (Red Cedar), an accredited State Of Michigan/EPA Asbestos Building Inspector (Accreditation Number A30955) whom completed training per the Michigan Asbestos

Project No.: 16-1070 Muskegon County Land Bank Parcel ID: 61-26-635-259-0001-00

Workers Accreditation Act 440 completed an inspection of the Subject Property on May 22, 2016 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
- Rolled Roofing
- Linoleum
- 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: 61-26-635-259-0001-00

Hazardous Materials Inspection

On May 22, 2016 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: 61-26-635-259-0001-00

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 twenty five windows at the following locations that would fall into the same homogenous group. The locations of the windows are listed below:

- S Bedroom (2 windows 40" wide x 56" tall)
- Dining (1 window 28" wide x 52" tall)
- Living (1 window 40" wide x 56" tall)
- Living (1 window 32" wide x 52" tall)
- Kitchen (2 windows 28" wide x 52" tall)
- Rear Entry (1 window 24" wide x 32" tall)
- 2nd Fl. Dining (2 windows 34" wide x 52" tall)
- 2nd Fl. Living (4 windows 34" wide x 52" tall)
- 2nd Fl. W Room (10 windows 26" wide x 36" tall)
- 2nd Fl. E Bedroom (1 window 34" wide x 52" 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:

- S Bedroom (1 register, 15 sq. ft.)
- 2nd Fl. Living (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- 2nd Fl. Dining (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- Basement Ceiling (1/4" ACM board, 30 sq. ft.)
- Basement Floor (1/4" ACM board/Debris, 40 sq. ft.)
- Basement (8 in. dia. HVAC Wrapped Ductwork, 9 lin. ft.)

Vermiculite insulation identified in the Building is classified as friable ACM. The visual assessment to quantify the extent of this material identified approximately 648 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.

Muskegon County Land Bank Parcel ID: 61-26-635-259-0001-00

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.

- S Bedroom (1 register, 15 sq. ft.)
- 2nd Fl. Living (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- 2nd Fl. Dining (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- Basement Ceiling (1/4" ACM board, 30 sq. ft.)
- Basement Floor (1/4" ACM board/Debris, 40 sq. ft.)
- Basement (8 in. dia. HVAC Wrapped Ductwork, 9 lin. ft.)

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

- S Bedroom (2 windows 40" wide x 56" tall)
- Dining (1 window 28" wide x 52" tall)
- Living (1 window 40" wide x 56" tall)
- Living (1 window 32" wide x 52" tall)
- Kitchen (2 windows 28" wide x 52" tall)
- Rear Entry (1 window 24" wide x 32" tall)
- 2nd Fl. Dining (2 windows 34" wide x 52" tall)
- 2nd Fl. Living (4 windows 34" wide x 52" tall)
- 2nd Fl. W Room (10 windows 26" wide x 36" tall)
- 2nd Fl. E Bedroom (1 window 34" wide x 52" 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.

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.

Muskegon County Land Bank Parcel ID: 61-26-635-259-0001-00

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 (4)
- Automobile Tire (7)
- Gallon Container Misc. (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: 61-26-635-259-0001-00

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

(Laron Pogwet

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: 2905 Howden St

Report To:

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

ARI Report # 16-65039

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/25/16

Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 30%

Other - 70%

Lab ID #: 65039 - 01

Cust. #: HS-HM-01A

Material: Asphalt Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 1

Lab ID #: 65039 - 02

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 30%

Cellulose - 30%

Other - 70%

Other - 70%

Cust. #: HS-HM-01B

Material: Asphalt Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Cust. #: HS-HM-02A

Lab ID #: 65039 - 03

Material: Rolled Roofing

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

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 2905 Howden St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-65039

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/25/16

Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 5%

Other - 95%

Lab ID #: 65039 - 04

Cust. #: HS-HM-02B

Material: Rolled Roofing

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO**No Asbestos Observed

Other - 100%

Cust. #: HS-HM-03A

Lab ID #: 65039 - 05

Material: Blue 12x12 Vinyl Tile

Location:

Appearance: green, nonfibrous, homogenous

Layer: 1 of 3

Lab ID #: 65039 - 05a

Cust. #: HS-HM-03A

Material: Red Linoleum

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 3

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

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Test Method, Polarized Light Microscopy (PLM)

Project: 2905 Howden St

Report To:

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

ARI Report #

16-65039

Date Collected: 05/22/16 Date Received: 05/23/16

Date Reported: 05/25/16

Date Analyzed: 05/25/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65039 - 05b

Cust. #: HS-HM-03A

Material: Linoleum

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 3 of 3

Lab ID #: 65039 - 06

Cust. #: HS-HM-03B

Material: Blue 12x12 Vinyl Tile

Location:

Appearance: green, nonfibrous, homogenous

Layer: 1 of 3

Lab ID #: 65039 - 06a

Cust. #: HS-HM-03B

Material: Red Linoleum

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 3

Asbestos Present: NO

Other - 100%

Other - 100%

Cellulose - 10%

Fiberglass - 10%

Other - 80%

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: 2905 Howden St

Report To:

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

ARI Report #

16-65039 Date Collected: 05/22/16

Date Received: 05/23/16 Date Analyzed: 05/25/16

Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65039 - 06b

Cust. #: HS-HM-03B

Material: Red Linoleum

Location:

Appearance: beige, fibrous, homogenous

Asbestos Present: NO No Asbestos Observed

Asbestos Present: **NO**

No Asbestos Observed

No Asbestos Observed

Cellulose - 10%

Fiberglass - 10% Other - 80%

Cellulose - 10%

Fiberglass - 10%

Other - 80%

Layer: 3 of 3

Lab ID #: 65039 - 07

Cust. #: HS-HM-04A

Material: Pink 12x12 Vinyl Tile Multilayer/Linoleum

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 2

Asbestos Present: NO

Other - 100%

Lab ID #: 65039 - 07a

Cust. #: HS-HM-04A

Material: Pink 12x12 Vinyl Tile Multilayer

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

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Test Method, Polarized Light Microscopy (PLM)

Project: 2905 Howden St

Report To:

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

ARI Report # Date Collected: 05/22/16

16-65039

Date Received: 05/23/16

Date Analyzed: 05/25/16

Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65039 - 08

Cust. #: HS-HM-04B

Material: Pink 12x12 Vinyl Tile Multilayer/Linoleum

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 2

Lab ID #: 65039 - 08a

Cust. #: HS-HM-04B

Material: Pink 12x12 Vinyl Tile Multilayer

Location:

Appearance: pink,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 65039 - 09

Cust. #: HS-HM-05A

Material: Stone Linoleum

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 10%

Fiberglass - 10%

Other - 80%

Other - 100%

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: 2905 Howden St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-65039

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/25/16 Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 10%

Fiberglass - 10% Other - 80%

Lab ID #: 65039 - 10

Cust. #: HS-HM-05B

Material: Stone Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: **NO**

No Asbestos Observed

Other - 100%

Other - 100%

Lab ID #: 65039 - 11 Cust. #: HS-HM-06A

Cust. #. IIS-IIVI-00A

Material: White 12x12 Vinyl Tile

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 1

Lab ID #: 65039 - 12

Cust. #: HS-HM-06B

Material: White 12x12 Vinyl Tile

Location:

Appearance: yellow,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

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 2905 Howden St

Report To:

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

Lansing, MI 48901

ARI Report # 16-65039

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/25/16

Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

Asbestos Present: YES

Non-Asbestos

Other - 95%

Lab ID #: 65039 - 13

Cust. #: HS-HM-07A

Material: Glazing

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Lab ID #: 65039 - 14

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

Location:

Appearance: Layer:

Asbestos Present:

Chrysotile - 5%

NOT ANALYZED

Lab ID #: 65039 - 15

Cust. #: HS-HM-08A

Material: White Rose 12x12 Vinyl Tile

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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



Test Method, Polarized Light Microscopy (PLM)

Project: 2905 Howden St

Report To:

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

ARI Report # 16-65039

Date Collected: 05/22/16 Date Received: 05/23/16 Date Analyzed: 05/25/16

Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Other - 100%

Lab ID #: 65039 - 16

Cust. #: HS-HM-08B

Material: White Rose 12x12 Vinyl Tile

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 65039 - 17

Cust. #: HS-HM-09A

Material: Old Linoleum

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 65039 - 18

Cust. #: HS-HM-09B

Material: Old Linoleum

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 - 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.



Test Method, Polarized Light Microscopy (PLM)

Project: 2905 Howden St

Report To:

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

ARI Report #

16-65039 Date Collected: 05/22/16

Date Received: 05/23/16

Date Analyzed: 05/25/16 Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 30%

Other - 70%

Other - 40%

Lab ID #: 65039 - 19

Cust. #: HS-HM-10A

Material: Blue Linoleum

Location:

Appearance: blue, fibrous, homogenous

Layer: 1 of 2

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 60%

Lab ID #: 65039 - 19a Cust. #: HS-HM-10A

Material: Tar Paper

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO No Asbestos Observed

Cellulose - 30%

Other - 70%

Lab ID #: 65039 - 20 Cust. #: HS-HM-10B

Material: Blue Linoleum

Location:

Appearance: blue, 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: 2905 Howden St

Report To:

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

ARI Report #

16-65039

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/25/16

Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 60%

Other - 40%

Lab ID #: 65039 - 20a

Cust. #: HS-HM-10B

Material: Tar Paper

Location:

Appearance: black,fibrous,homogenous

Layer: 2 of 2

Lab ID #: 65039 - 21

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 2% Other - 98%

Cust. #: HS-HM-11A

Material: Joint Compound

Location:

Appearance: white, fibrous, homogenous

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

Layer: 1 of 2

Asbestos Present: NO No Asbestos Observed

Cellulose - 20%

Other - 80%

Lab ID #: 65039 - 21a Cust. #: HS-HM-11A

Material: Drywall

Location:

Appearance: grey,fibrous,homogenous

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: 2905 Howden St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-65039

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/25/16 Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 65039 - 22

Cust. #: HS-HM-11B

Material: Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 65039 - 22a

Cust. #: HS-HM-11B

Asbestos Present: NO

No Asbestos Observed

Cellulose - 20%

Other - 80%

Other - 100%

Material: Drywall

Location:

A

Appearance: grey, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 65039 - 23

Cust. #: HS-HS-01A

Material: Plaster

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: 2905 Howden St

Report To:

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

ARI Report # 16-65039

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/25/16

Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Other - 100%

Cellulose - 2%

Other - 98%

Lab ID #: 65039 - 23a

Cust. #: HS-HS-01A

Material: Mortar

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 2 of 2

Asbestos Present: **NO**

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

No Asbestos Observed

Lab ID #: 65039 - 24

Cust. #: HS-HS-01B

Material: Plaster

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 65039 - 24a

Cust. #: HS-HS-01B

Material: Mortar

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

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: 2905 Howden St

Report To:

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

ARI Report # 16-65039

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/25/16 Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 65039 - 25

Cust. #: HS-HS-01C

Material: Plaster

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: **NO** Chrysotile - 0.50%

Other - 99.50%

Other - 100%

Lab ID #: 65039 - 25a Cust. #: HS-HS-01C

Material: Mortar

Location:

Appearance: grey, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

POINT COUNT RESULT

Lab ID #: 65039 - 26

Cust. #: HS-HS-01D

Material: Plaster

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

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 2905 Howden St

Report To:

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

ARI Report #

16-65039

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/25/16

Date Reported: 05/25/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65039 - 26a

Cust. #: HS-HS-01D

Material: Mortar

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Asbestos Present: NO No Asbestos Observed

Cellulose - 20%

Other - 80%

Lab ID #: 65039 - 27

Cust. #: HS-HS-01E

Material: Plaster

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 65039 - 27a

Cust. #: HS-HS-01E

Material: Mortar

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Asbestos Present: **NO**

No Asbestos Observed

Other - 100%

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.

65039

AILA 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 Relinquished by: A holi Phone: City, St., Zip: Address: Client Name: Turn Around Times: (Circle One) Lab ID# (888) 449-4566 24 hour 72 hour L. õ 4 Þ S 1,53 Red Cedar Consulting Lansing, MI 48901 PO Box 13216 HS-4m- 02A B-HM-OGA HS-HM-04A B-4m-013 HS-4m-01A HS-HM-05A HS-HM-04B HS-HM-03A 45-Hm-02B H5.Hm-05B 15-Hm-03B (TTP) All Samples Except Plaster Client ID# Date: Received by: Fax: (888) 448-8739 white laxia Vinul Red Linoleum our Blue 12x12 Viryl Tile Red Lindeum over Blue Stone Lingleum PINK 12XI2 Vinyl Tile Mutilayer PINK 12x12Vinyl Tile Multilayer Stone Linglewon Rolled Roofing Asphalt Shingle Rolled Roofing Asphalt Shingle Asbestos: Bulk TEM: Mold: Lead: Material/Location Bulk Bulk **AHERA 7400** PLM EPA 600, PC all samples with a detection of <5% ACM. × BAID UNITING Date: Relinquished by: Wipe Wipe Tape Contact Person: Aaron Paquet Date of Survey: 5.22 16 Project #: Project: 2905 Howden St. Bulk/NOB Air BioSIS Point Count Volume EPA Level II Paint Other Received by: Date: Area PCM Soil Viable Results Log-In_ Report_ Lab Use Only

Work Forms: COC

APRIX 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

Date: 5-25-16	Relinquished by:	3	7	20	2	B	4	16	51	71	<u>C</u>	Z	Lab ID#	CHICL .	Other:	48 hour 72 hour	Rush 24 hour			Phone: (888) 449-456	City, St., Zip:	Address:	Client Name: _1
Date:	Received by:	HS-14M-11B	HS-HM-11A	HS-HM-10B	15-4M-10A	HS-HM-09B	HS-HM-09A	H5-1-08B	HS-HM-08A	HS-HM-07B	HS-HM-07A	HS- HM-06B	Client ID#	TATI Samples Except	TTP all Samples E				Around Times: (Circle One)	9-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
MAY 2 3 2016 Date:		Daywall	Daywall	Bue Linoleum	Blue Linoleum	old Linoleum	old Lingleum	white hose 12×12 Vinul Tive	White Rose 12 x12 Viny The	6192109	Glazing	White BXID Viny THE	Material/Location	TEM: AHERA 7400		Lead: Bulk Wipe _		Asbestos: Bulk X Wipe	PIM EPA 600, PC	(888) 448-8739	Pro	Pro	
Date:	ed by: Received by:												Volume Area	Bulk/NOB EPA Level II	BioSIS Other	Air Paint		()	apaquet@redo all samples with a detecti	Contact Person: Aaron Paquet	Project #:	Ο \	Date of Survey: 5.22.16
	ed by:												ea Results		Viable	Soil		Š	apaquet@redcedarconsulting.net with a detection of <5% ACM.	Т		Report	Lab Use Only

Rev: 12/03 Work Forms: COC

STEN THOUSE

65039

pg. 30 53

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

E-mail: apexresearch@chartermi.net

Fax: 734-449-9991

A D III X

Date: S/5 16 Date:					27 HS-HS-01E	26 HS-HS-OID	25 H-HS-01C	24 HS-HS-01B	23 HS- HS-01A	Lab ID # Client ID #	Curci		Ę ,	Rustr 24 hour	Turn Around Times: (Circle One)	Phone: (888) 449-4566	City, St., Zip: Lansing, MI 48	Address: PO Box 13216	Client Name: Red Cedar Consulting
Date:	Received by: Relinquished by:	The state of the s			Plaster	Plaster	Plaster	Plaster	Paster	# 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	48901 Project #:	Project:	
Date:	Received by:									Volume Area	IOB EPA Level II	BioSIS Other Via	Air Paint Soil	Point Count PCM	apaquet@redcedarconsulting.net all samples with a detection of <5% ACM.	Person: Aaron Paquet	#:		Date of Survey:
										Results		Viable		•	nsulting.net :5% ACM.	, ,		Report	Lab Use Only Log-In

Rev: 12/03 Work Forms: COC

PERX DESEARCH

Red Cedar Consulting

Tables

Table 1 - Summary of Hazardous Materials, 2905 Howden St., Muskegon Heights, Michigan

Hazardous Materials Description and Location									
Location	Material Description	Quantity							
Living Room	Smoke Detector	1							
Living Room	Gallon Container Misc.	1							
2 nd Fl. Living	Smoke Detector	1							
2 nd Fl. Living	Gallon Container Misc.	1							
Basement	Smoke Detector	2							
Basement	Automobile Tire	7							

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2905 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	Asphalt Shingle	No	M	Category I	ND	Exterior	NA
HS-HM-01B	Asphalt Shingle	No	M	Category I	ND	Exterior	NA
HS-HM-02A	Rolled Roofing	No	M	Category I	ND	Exterior	NA
HS-HM-02B	Rolled Roofing	No	M	Category I	ND	Exterior	NA
HS-HM-03A	Red Linoleum over Blue 12x12 Vinyl Tile	No	М	Category I	ND/ND/ND	Kitchen	NA
HS-HM-03B	Red Linoleum over Blue 12x12 Vinyl Tile	No	M	Category I	ND/ND/ND	Kitchen	NA
HS-HM-04A	Pink 12x12 Vinyl Tile	No	M	Category I	ND/ND	S Bedroom	NA
HS-HM-04B	Pink 12x12 Vinyl Tile	No	M	Category I	ND/ND	S Bedroom	NA
HS-HM-05A	Stone Linoleum	No	M	Category I	ND	Rear Entry	NA
HS-HM-05B	Stone Linoleum	No	M	Category I	ND	Rear Entry	NA
HS-HM-06A	White 12x12 Vinyl Tile	No	M	Category I	ND	Hall	NA
HS-HM-06B	White 12x12 Vinyl Tile	No	M	Category I	ND	Hall	NA
HS-HM-07A	Glazing	Yes	M	Category II	5% CH	Living	25 Windows
HS-HM-07B	Glazing	Yes	M	Category II	NA	2 nd Fl. Living	NA
HS-HM-08A	White Rose 12x12 Vinyl Tile	No	M	Category I	ND	2 nd Fl. Kitchen	NA
HS-HM-08B	White Rose 12x12 Vinyl Tile	No	M	Category I	ND	2 nd Fl. Kitchen	NA
HS-HM-09A	Old Linoleum	No	M	Category I	ND	2 nd Fl. E Bedroom	NA
HS-HM-09B	Old Linoleum	No	M	Category I	ND	2 nd Fl. E Bedroom	NA
HS-HM-10A	Blue Linoleum	No	M	Category I	ND/ND	2 nd Fl. W Room	NA
HS-HM-10B	Blue Linoleum	No	M	Category I	ND/ND	2 nd Fl. W Room	NA
HS-HM-11A	Drywall	Yes	M	Category II	ND/ND	Dining Wall	NA
HS-HM-11B	Drywall	Yes	M	Category II	ND/ND	Dining Ceiling	NA
HS-HS-01A	Plaster	No	S	Category II	ND/ND	Dining Wall	NA
HS-HS-01B	Plaster	No	S	Category II	ND/ND	Living Wall	NA
HS-HS-01C	Plaster	No	S	Category II	ND/0.5%CH	Kitchen Ceiling	NA
HS-HS-01D	Plaster	No	S	Category II	ND/ND	2 nd Fl. Living Wall	NA
HS-HS-01E	Plaster	No	S	Category II	ND/ND	2 nd Fl. Living Ceiling	NA

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2905 Howden St., Muskegon Heights, Michigan

Notes:

N	laterial Types	Abbrev	riations
N	ϵ	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, 2905 Howden St., Muskegon Heights, Michigan

A	Asbestos Containing Material Description a	nd Location			
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity
S Bedroom (1 register, 10 sq. ft.) 2 nd Fl. Living (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) 2 nd Fl. Dining (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	80 sq. ft.
Basement Ceiling (1/4" ACM board, 30 sq. ft.) Basement Floor (1/4" ACM board/Debris, 40 sq. ft.)	¹ / ₄ "ACM Board	Yes	Fair	TSI	70 sq. ft.
Basement (8 in. dia. HVAC Wrapped Ductwork, 9 lin. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	9 lin. ft.
Attic (648 sq. ft. at 4" depth)	Vermiculite	Yes	Fair	M	648 sq. ft. at 4" depth

<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, 2905 Howden St., Muskegon Heights, Michigan

Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
S Bedroom (1 register, 15 sq. ft.) 2 nd Fl. Living (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) 2 nd Fl. Dining (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	Material Description		Friable	Approx. Quantity
Basement Ceiling (¼" ACM board, 30 sq. ft.) Basement Floor (¼" ACM board/Debris, 40 sq. ft.)	1/4" ACM Board		Yes	70 sq. ft.
Dasement Floor (/4 ACIVI board/Debris, 40 sq. 1t.)		Total		70 sq. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Basement (8 in. dia. HVAC Wrapped Ductwork, 9 lin. ft.)	HVAC Duct Wrap		Yes	9 lin. ft.
		Total		9 lin. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
S Bedroom (2 windows 40" wide x 56" tall)	Glazing		Yes	2 Windows
Dining (1 window 28" wide x 52" tall)				1 Window
Living (1 window 40" wide x 56" tall)				1 Window
Living (1 window 32" wide x 52" tall)				1 Window
Kitchen (2 windows 28" wide x 52" tall)				2 Windows
Rear Entry (1 window 24" wide x 32" tall)				1 Window
2 nd Fl. Dining (2 windows 34" wide x 52" tall)				2 Windows
2 nd Fl. Living (4 windows 34" wide x 52" tall)				4 Windows
2 nd Fl. W Room (10 windows 26" wide x 36" tall)				10 Windows
2 nd Fl. E Bedroom (1 window 34" wide x 52" tall)				1 Window
		Total		25 Windows
Interior - Asbestos Containing Materials				

Table 4 - Summary of All Asbestos Containing Materials, 2905 Howden St., Muskegon Heights, Michigan

Location	Material Description	Friable	Approx. Quantity
Building Attic	Vermiculite	Yes	648 sq. ft. at 4" depth
		Γotal	648 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 27, 2016

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 2916 Jefferson St., Muskegon Heights, MI 49444 Parcel ID: 61-26-185-226-0016-00

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 2916 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 .14 acre residential parcel which contains a 440 sq. ft. detached garage and approximate 1,336 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 over wood lap over felt paper 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 side entry on the first floor while the second floor contains a living room, dining room, bath, two bedrooms, rear entry and furnace room.

VISUAL INSPECTION AND SAMPLING

Asbestos Containing Materials Inspection

Mr. Aaron Paquet of Red Cedar Consulting (Red Cedar), an accredited State Of Michigan/EPA Asbestos Building Inspector (Accreditation Number A30955) whom completed training per the Michigan Asbestos

Project No.: 16-1070 Muskegon County Land Bank Parcel ID: 61-26-185-226-0016-00

Workers Accreditation Act 440 completed an inspection of the Subject Property on May 7, 2016 for suspected asbestos containing building materials.

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

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

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

- Asphalt Shingle
- Linoleum
- 1'x1' Ceiling Tile
- 12"x12" Vinyl Tile
- Vinyl Tile
- Glue Pod
- Fiberboard
- Felt Paper
- Drywall
- Glazing
- Plaster

Red Cedar staff collected fifty five samples of suspect ACBM separated into twenty 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 fifty five samples is included as Attachment A.

Muskegon County Land Bank Parcel ID: 61-26-185-226-0016-00

Hazardous Materials Inspection

On May 7, 2016 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, fifty 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 Air-O-Cell Pipe 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: 61-26-185-226-0016-00

Friable ACM's

Air-O-Cell Pipe Wrap identified in the Building in conjunction with the hot water heating system are classified as friable ACM. The visual assessment to quantify the extent of this material identified Friable ACM at the following locations within the basement, first and second floors:

• Basement Air-O-Cell 4" to 6" (124 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 1st fl. N bedroom were found to contain up to 2% asbestos following analysis. The assessment to quantify the extent of this material identified approximately 3,988 sq. ft. of plaster within the Building.

Drywall Compound samples, collected from the sun room were found to contain up to 2% asbestos following analysis. The assessment to quantify the extent of this material identified approximately 2,882 sq. ft. of drywall compound within the Building.

Glue Pod samples, collected from the sun room were each found to contain up to 2% asbestos following analysis. The assessment to quantify the extent of this material identified approximately 110 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.

• Basement Boiler Pipe (Air-O-Cell 4" to 6") (124 lin. ft.)

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.

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.

Muskegon County Land Bank Parcel ID: 61-26-185-226-0016-00

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.

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 (7)
- Television (5)
- Automobile Tire (21)
- 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

Muskegon County Land Bank Parcel ID: 61-26-185-226-0016-00

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: 2916 Jefferson St.

Report To:

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

ARI Report # 16-64729

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16 Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Fiberglass - 20%

Other - 80%

Lab ID #: 64729 - 01

Cust. #: JS-HM-01A

Material: Asphalt Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 4

Asbestos Present: **NO** No Asbestos Observed

Fiberglass - 20%

Other - 80%

Lab ID #: 64729 - 01a Cust. #: JS-HM-01A

Material: Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 4

Asbestos Present: NO

No Asbestos Observed

Cellulose - 30%

Other - 70%

Lab ID #: 64729 - 01b Cust. #: JS-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: 2916 Jefferson St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64729

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16 Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 30%

Other - 70%

Lab ID #: 64729 - 01c

Cust. #: JS-HM-01A

Material: Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 4 of 4

Asbestos Present: NO

No Asbestos Observed

Cellulose - 30%

Other - 70%

Material: Asphalt Shingle

Location:

Lab ID #: 64729 - 02

Cust. #: JS-HM-01B

Location.

Appearance: black, fibrous, homogenous

Layer: 1 of 4

Asbestos Present: NO

Cellulose - 30%

No Asbestos Observed

Other - 70%

Material: Shingle

Lab ID #: 64729 - 02a

Cust. #: JS-HM-01B

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 4

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Project: 2916 Jefferson St.

Report To:

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ARI Report # 16-64729

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16 Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 30% Other - 70%

Lab ID #: 64729 - 02b Cust. #: JS-HM-01B

Material: Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 3 of 4

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 35%

Other - 75%

Other - 100%

Lab ID #: 64729 - 02c Cust. #: JS-HM-01B

Material: Tar Paper

Location:

Appearance: black, fibrous, homogenous

Layer: 4 of 4

Asbestos Present: NO

No Asbestos Observed

Lab ID #: 64729 - 03 Cust. #: JS-HM-02A

Material: Wood Grain Vinyl Tile

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

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Test Method, Polarized Light Microscopy (PLM)

Project: 2916 Jefferson St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64729

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64729 - 03a

Cust. #: JS-HM-02A

Material: Mastic

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 #: 64729 - 04 Cust. #: JS-HM-02B

ust. π. J5-111v1-02B

Material: Wood Grain Vinyl Tile

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 1 of 2

Lab ID #: 64729 - 04a

Cust. #: JS-HM-02B

Material: Mastic

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: 2916 Jefferson St.

Report To:

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

ARI Report #

16-64729

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 20%

Fiberglass - 10%

Other - 70%

Lab ID #: 64729 - 05

Cust. #: JS-HM-03A

Material: Brown Linoleum Multilayer

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 2

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 35%

Other - 65%

Cust. #: JS-HM-03A

Lab ID #: 64729 - 05a

Material: Flooring

Location:

Appearance: orange, fibrous, nonhomogenous

Layer: 2 of 2

Lab ID #: 64729 - 06

Asbestos Present: NO

Cellulose - 20%

Cust. #: JS-HM-03B

Material: Brown Linoleum Multilayer

No Asbestos Observed

Fiberglass - 10%

Other - 70%

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: 2916 Jefferson St.

Report To:

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

ARI Report # 16-64729

Date Collected: 05/07/16 Date Received: 05/11/16 Date Analyzed: 05/17/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64729 - 06a

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

Location:

Appearance: orange, fibrous, nonhomogenous

Layer: 2 of 2

Lab ID #: 64729 - 07

Cust. #: JS-HM-04A

Material: Mottled Beige 12"x12" Vinyl Tile

Location:

Appearance: beige, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 64729 - 07a

Material: Mastic

Location:

Appearance: yellow,nonfibrous,homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Cellulose - 35%

Other - 65%

Other - 100%

Other - 100%

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

Asbestos Present: **NO**

Cust. #: JS-HM-04A

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: 2916 Jefferson St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64729

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16 Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64729 - 08

Cust. #: JS-HM-04B

Material: Mottled Beige 12"x12" Vinyl Tile

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%

Lab ID #: 64729 - 08a

Cust. #: JS-HM-04B

Material: Mastic

Location:

Appearance: yellow,nonfibrous,homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Fiberglass - 10%

Other - 90%

Lab ID #: 64729 - 09 Cust. #: JS-HM-05A

Material: Beige Linoleum Multilayer

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 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: 2916 Jefferson St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64729

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16 Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64729 - 09a

Cust. #: JS-HM-05A

Material: Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 2 of 6

Asbestos Present: NO

No Asbestos Observed

Cellulose - 20%

Fiberglass - 10% Other - 70%

rippearance. be

Lab ID #: 64729 - 09b

Cust. #: JS-HM-05A

Material: Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 3 of 6

Asbestos Present: **NO**No Asbestos Observed

Cellulose - 20%

Fiberglass - 10%

Other - 70%

Other - 100%

Lab ID #: 64729 - 09c

Cust. #: JS-HM-05A

Material: Floor Tile

Location:

Appearance: beige, nonfibrous, homogenous

Layer: 4 of 6

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: 2916 Jefferson St.

Report To:

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Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16 Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64729 - 09d

Cust. #: JS-HM-05A

Material: Mastic

Location:

Appearance: yellow,nonfibrous,homogenous

Layer: 5 of 6

Asbestos Present: NO

No Asbestos Observed

Cellulose - 35%

Other - 65%

Cust. #: JS-HM-05A

Lab ID #: 64729 - 09e

Material: Flooring

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 6 of 6

Lab ID #: 64729 - 10

Cust. #: JS-HM-05B

Material: Beige Linoleum Multilayer

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 6

Asbestos Present: **NO** 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: 2916 Jefferson St.

Report To:

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

ARI Report # 16-64729

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 20%

Fiberglass - 10% Other - 70%

Lab ID #: 64729 - 10a

Cust. #: JS-HM-05B

Material: Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 2 of 6

Asbestos Present: **NO**

Cellulose - 20%

Lab ID #: 64729 - 10b Cust. #: JS-HM-05B

Material: Linoleum

No Asbestos Observed

Fiberglass - 10%

Other - 70%

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 3 of 6

Lab ID #: 64729 - 10c

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Cust. #: JS-HM-05B

Material: Floor Tile

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 4 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: 2916 Jefferson St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64729

Date Collected: 05/07/16 Date Received: 05/11/16 Date Analyzed: 05/17/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64729 - 10d

Cust. #: JS-HM-05B

Material: Mastic

Location:

Appearance: yellow,nonfibrous,homogenous

Layer: 5 of 6

Asbestos Present: NO

No Asbestos Observed

Cellulose - 35%

Other - 65%

Material: Flooring

Lab ID #: 64729 - 10e

Cust. #: JS-HM-05B

Lagation

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 6 of 6

Lab ID #: 64729 - 11

Cust. #: JS-HM-06A

Material: Grey Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 3

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

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Test Method, Polarized Light Microscopy (PLM)

Project: 2916 Jefferson St.

Report To:

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

ARI Report # 16-64729

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16 Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Other - 100%

Other - 100%

Lab ID #: 64729 - 11a

Cust. #: JS-HM-06A

Material: Floor Tile

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 2 of 3

No Asbestos Observed

Asbestos Present: **NO**

No Asbestos Observed

Lab ID #: 64729 - 11b

Cust. #: JS-HM-06A

Material: Mastic

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 3 of 3

Lab ID #: 64729 - 12

Cust. #: JS-HM-06B

Material: Grey Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 3

Asbestos Present: NO

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

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Test Method, Polarized Light Microscopy (PLM)

Project: 2916 Jefferson St.

Report To:

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ARI Report # 16-64729

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16 Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64729 - 12a

Cust. #: JS-HM-06B

Material: Floor Tile

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 2 of 3

Asbestos Present: **NO**

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Lab ID #: 64729 - 12b Cust. #: JS-HM-06B

Material: Mastic

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 3 of 3

Lab ID #: 64729 - 13

Cust. #: JS-HM-07A

Material: Old 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

Cellulose - 35%

Other - 65%

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Test Method, Polarized Light Microscopy (PLM)

Project: 2916 Jefferson St.

Report To:

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

ARI Report # 16-64729

Date Collected: 05/07/16 Date Received: 05/11/16 Date Analyzed: 05/17/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 35%

Other - 65%

Lab ID #: 64729 - 14

Cust. #: JS-HM-07B

Material: Old Linoleum

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 64729 - 15

Cust. #: JS-HM-08A

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 20%

Fiberglass - 10%

Other - 70%

Location:

Appearance: brown, fibrous, nonhomogenous

Material: Stone Linoleum Multilayer

Layer: 1 of 2

Asbestos Present: NO

No Asbestos Observed

Cellulose - 30%

Other - 70%

Material: Flooring

Lab ID #: 64729 - 15a Cust. #: JS-HM-08A

Location:

Appearance: brown, fibrous, nonhomogenous

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: 2916 Jefferson St.

Report To:

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

ARI Report #

16-64729

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 20%

Fiberglass - 10%

Other - 70%

Lab ID #: 64729 - 16

Cust. #: JS-HM-08B

Material: Stone Linoleum Multilayer

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 2

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 30%

Other - 70%

Lab ID #: 64729 - 16a Cust. #: JS-HM-08B

Material: Flooring

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 2 of 2

Asbestos Present: NO

Cellulose - 35%

Lab ID #: 64729 - 17 Cust. #: JS-HM-09A

No Asbestos Observed

Other - 65%

Material: Fiberboard over Linoleum/Flooring

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: 2916 Jefferson St.

Report To:

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ARI Report # 16-64729

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16 Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64729 - 17a

Cust. #: JS-HM-09A

Material: Felt Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 2 of 2

Lab ID #: 64729 - 18

Cust. #: JS-HM-09B

Material: Fiberboard over Linoleum/Flooring

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 2

Lab ID #: 64729 - 18a

Cust. #: JS-HM-09B

Material: Felt

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 85%

Cellulose - 35%

Other - 65%

Other - 15%

Asbestos Present: NO

No Asbestos Observed

Other - 15%

Cellulose - 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: 2916 Jefferson St.

Report To:

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ARI Report # 16-64729

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64729 - 19

Cust. #: JS-HM-10A

Material: Grey Linoleum Multilayer

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 6

No Asbestos Observed

Cellulose - 20%

Other - 70%

Other - 100%

Other - 100%

Lab ID #: 64729 - 19a

Cust. #: JS-HM-10A

Material: Floor Tile

Location:

Appearance: black,nonfibrous,homogenous

Layer: 2 of 6

Lab ID #: 64729 - 19b

Cust. #: JS-HM-10A

Material: Mastic

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 3 of 6

Asbestos Present: NO

Fiberglass - 10%

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: 2916 Jefferson St.

Report To:

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

ARI Report # 16-64729

Date Collected: 05/07/16 Date Received: 05/11/16 Date Analyzed: 05/17/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64729 - 19c

Cust. #: JS-HM-10A

Material: Floor Tile

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 4 of 6

Asbestos Present: **NO**

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Cellulose - 35%

Other - 65%

Lab ID #: 64729 - 19d Cust. #: JS-HM-10A

Material: Mastic

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 5 of 6

Lab ID #: 64729 - 19e

Cust. #: JS-HM-10A

Material: Flooring

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 6 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: 2916 Jefferson St.

Report To:

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ARI Report #

16-64729

Date Collected: 05/07/16

Date Received: 05/11/16

Date Analyzed: 05/17/16 Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 20%

Fiberglass - 10% Other - 70%

Lab ID #: 64729 - 20

Cust. #: JS-HM-10B

Material: Grey Linoleum Multilayer

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 6

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Asbestos Present: **NO**

Other - 100%

Other - 100%

Lab ID #: 64729 - 20a Cust. #: JS-HM-10B

Material: Floor Tile

Location:

Appearance: black,nonfibrous,homogenous

Layer: 2 of 6

Lab ID #: 64729 - 20b

Cust. #: JS-HM-10B

Material: Mastic

Location:

Appearance: clear,nonfibrous,homogenous

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

Layer: 3 of 6

Robert T. Letarte Jr., Laboratory Director

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Test Method, Polarized Light Microscopy (PLM)

Project: 2916 Jefferson St.

Report To:

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ARI Report # 16-64729

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64729 - 20c

Cust. #: JS-HM-10B

Material: Floor Tile

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 4 of 6

Asbestos Present: **NO**

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Cellulose - 35%

Other - 65%

Cust. #: JS-HM-10B

Lab ID #: 64729 - 20d

Material: Mastic

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 5 of 6

Lab ID #: 64729 - 20e

Cust. #: JS-HM-10B

Material: Flooring

Location:

Appearance: beige, fibrous, nonhomogenous

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

Layer: 6 of 6

Robert T. Letarte Jr., Laboratory Director

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Test Method, Polarized Light Microscopy (PLM)

Project: 2916 Jefferson St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64729

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16 Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

Asbestos Present: **NO**

No Asbestos Observed

No Asbestos Observed

Non-Asbestos

Cellulose - 95%

Cellulose - 95%

Other - 98.75%

Other - 5%

Other - 5%

Lab ID #: 64729 - 21

Cust. #: JS-HM-11A

Material: White 1'x1' Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64729 - 22

Cust. #: JS-HM-11B

Material: White 1'x1' Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64729 - 23

Cust. #: JS-HM-12A

Material: Glue Pod

Location:

-

Asbestos Present: YES

POINT COUNT RESULT

Chrysotile - 1.25%

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: 2916 Jefferson St.

Report To:

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

Lansing, MI 48901

ARI Report # 16-64729

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64729 - 24

Cust. #: JS-HM-12B Material: Glue Pod

Location: Appearance:

Asbestos Present:

NOT ANALYZED

Layer: of

Lab ID #: 64729 - 25

Cust. #: JS-HM-13A

Material: Drywall

Location:

Location.

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 64729 - 26

Cust. #: JS-HM-13B

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

Asbestos Present: **NO**

No Asbestos Observed

Asbestos Present: NO

Cellulose - 20%

No Asbestos Observed

Other - 80%

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: 2916 Jefferson St.

Report To:

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ARI Report #

16-64729

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Other - 98.50%

Lab ID #: 64729 - 26a

Cust. #: JS-HM-13B

Material: Joint Compound

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 64729 - 27

Cust. #: JS-HM-14A

Material: Glazing

Location:

Appearance: beige, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 64729 - 28

Cust. #: JS-HM-14B

Material: Glazing

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 1

Asbestos Present: YES

Chrysotile - 1.50%

POINT COUNT RESULT

Asbestos Present: **NO**

No Asbestos Observed

Other - 100%

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: 2916 Jefferson St.

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ARI Report # 16-64729

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Fiberglass - 15%

Other - 85%

Other - 100%

Fiberglass - 15%

Other - 85%

Lab ID #: 64729 - 29

Cust. #: JS-HM-15A

Material: Tan Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 2

Asbestos Present: **NO**

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Lab ID #: 64729 - 29a

Cust. #: JS-HM-15B

Material: Mastic

Location:

Appearance: yellow,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 64729 - 30

Cust. #: JS-HM-15B

Material: Tan 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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ARI Report # 16-64729

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Other - 100%

Lab ID #: 64729 - 30a

Cust. #: JS-HM-15B

Material: Mastic

Location:

Appearance: yellow,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 64729 - 31

Cust. #: JS-HM-16A

Material: Rust Linoleum

Location:

Appearance: beige, nonfibrous, homogenous

Layer: 1 of 4

Lab ID #: 64729 - 31a

Cust. #: JS-HM-16A

Material: Mastic

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 4

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)

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ARI Report # 16-64729

Date Collected: 05/07/16 Date Received: 05/11/16 Date Analyzed: 05/17/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Fiberglass - 15%

Other - 85%

Lab ID #: 64729 - 31b

Cust. #: JS-HM-16A Material: Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 3 of 4

Asbestos Present: **NO**

Cellulose - 20%

Lab ID #: 64729 - 31c Cust. #: JS-HM-16A

Material: Linoleum

No Asbestos Observed

Fiberglass - 10% Other - 70%

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 4 of 4

Asbestos Present: NO No Asbestos Observed

Other - 100%

Lab ID #: 64729 - 32 Cust. #: JS-HM-16B

Material: Rust Linoleum

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 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: 2916 Jefferson St.

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ARI Report # 16-64729

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16 Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64729 - 32a

Cust. #: JS-HM-16B

Material: Mastic

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 4

Lab ID #: 64729 - 32b

Cust. #: JS-HM-16B

Material: Linoleum

Asbestos Present: **NO**

Fiberglass - 15%

No Asbestos Observed

Other - 85%

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 3 of 4

Lab ID #: 64729 - 32c

Cust. #: JS-HM-16B

Material: Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 4 of 4

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

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Test Method, Polarized Light Microscopy (PLM)

Project: 2916 Jefferson St.

Report To:

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ARI Report # 16-64729

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16 Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Other - 100%

Other - 100%

Other - 100%

Lab ID #: 64729 - 33

Cust. #: JS-HM-17A

Material: Brown 12"x12" Vinyl Tile over Fiberboard

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 1 of 2

Lab ID #: 64729 - 33a

Cust. #: JS-HM-17A

Material: Mastic

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 64729 - 34

Cust. #: JS-HM-17B

Material: Brown 12"x12" Vinyl Tile over Fiberboard

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: 2916 Jefferson St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64729

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64729 - 34a

Cust. #: JS-HM-17B

Material: Mastic

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

No Asbestos Observed

Asbestos Present: **NO**

Fiberglass - 10%

Other - 90%

Cust. #: JS-HM-18A

Lab ID #: 64729 - 35

Material: Slate Linoleum

material. Stat

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 64729 - 36

Cust. #: JS-HM-18B

Material: Slate Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: NO

110

Fiberglass - 10%

No Asbestos Observed

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: 2916 Jefferson St.

Report To:

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

ARI Report #

16-64729

Date Collected: 05/07/16

Date Received: 05/11/16

Date Analyzed: 05/17/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Lab ID #: 64729 - 37

Cust. #: JS-HM-19A

Material: White Striated 1'x1' Ceiling Tile

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Cellulose - 65% Mineral Wool - 30%

Other - 5%

Lab ID #: 64729 - 38

Cust. #: JS-HM-19B

Material: White Striated 1'x1' Ceiling Tile

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 65%

Mineral Wool - 30%

Other - 5%

Lab ID #: 64729 - 39

Cust. #: JS-HM-20A

Material: White 1'x1' 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

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Test Method, Polarized Light Microscopy (PLM)

Project: 2916 Jefferson St.

Report To:

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

ARI Report # 16-64729

Date Collected: 05/07/16 Date Received: 05/11/16 Date Analyzed: 05/17/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 95%

Other - 5%

Lab ID #: 64729 - 40

Cust. #: JS-HM-20B

Material: White 1'x1' Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 20%

Other - 80%

Cust. #: JS-HM-21A

Material: Drywall

Lab ID #: 64729 - 41

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Lab ID #: 64729 - 42 Cust. #: JS-HM-21B

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

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Test Method, Polarized Light Microscopy (PLM)

Project: 2916 Jefferson St.

Report To:

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

ARI Report # 16-64729

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16 Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64729 - 42a

Cust. #: JS-HM-21B

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 2 of 2

Lab ID #: 64729 - 43

Cust. #: JS-HM-22A

Material: Fiberboard/Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64729 - 44

Cust. #: JS-HM-22B

Material: Fiberboard/Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Cellulose - 20%

Other - 80%

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 95%

Other - 5%

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

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 2916 Jefferson St.

Report To:

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

ARI Report # 16-64729

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16 Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 35%

Other - 65%

Lab ID #: 64729 - 45

Cust. #: JS-HM-23A

Material: Felt Paper

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 35% Other - 65%

Other - 100%

Cust. #: JS-HM-23B

Lab ID #: 64729 - 46

Material: Felt Paper

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Lab ID #: 64729 - 47 Cust. #: JS-HM-24A

Material: Green 12"x12" Vinyl Tile

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: 2916 Jefferson St.

Report To:

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

ARI Report # 16-64729

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64729 - 47a

Cust. #: JS-HM-24A

Material: Mastic

Location:

Appearance: yellow,nonfibrous,homogenous

Layer: 2 of 2

Asbestos Present: **NO**

No Asbestos Observed

Other - 100%

Other - 100%

Lab ID #: 64729 - 48 Cust. #: JS-HM-24B

Material: Green 12"x12" Vinyl Tile

Location:

Appearance: beige, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 64729 - 48a

Cust. #: JS-HM-24B

Material: Mastic

Location:

Appearance: yellow,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: 2916 Jefferson St.

Report To:

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

ARI Report # 16-64729

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16 Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64729 - 49

Cust. #: JS-HM-25A

Material: Glazing

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%

Lab ID #: 64729 - 50 Cust. #: JS-HM-25B

Material: Glazing

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 64729 - 51

Cust. #: JS-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

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Test Method, Polarized Light Microscopy (PLM)

Project: 2916 Jefferson St.

Report To:

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

ARI Report # 16-64729

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16 Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64729 - 51a

Cust. #: JS-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 #: 64729 - 52

Cust. #: JS-HS-01B

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 64729 - 52a

Cust. #: JS-HS-01B

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Cellulose - 2%

Other - 98%

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

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Test Method, Polarized Light Microscopy (PLM)

Project: 2916 Jefferson St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64729

Date Collected: 05/07/16 Date Received: 05/11/16

Date Analyzed: 05/17/16 Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Other - 98.25%

Cellulose - 2%

Other - 98%

Other - 100%

Lab ID #: 64729 - 53

Cust. #: JS-HS-01C

Material: Plaster Texture

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 2

Asbestos Present: **YES** Chrysotile - 1.75%

POINT COUNT RESULT

Asbestos Present: **NO**

No Asbestos Observed

Lab ID #: 64729 - 53a

Cust. #: JS-HS-01C

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Lab ID #: 64729 - 54 Cust. #: JS-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: 2916 Jefferson St.

Report To:

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

ARI Report #

16-64729

Date Collected: 05/07/16

Date Received: 05/11/16 Date Analyzed: 05/17/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

Asbestos Present: **NO**

No Asbestos Observed

No Asbestos Observed

Non-Asbestos

Cellulose - 2%

Other - 98%

Other - 100%

Lab ID #: 64729 - 54a

Cust. #: JS-HS-01D

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Lab ID #: 64729 - 55

Cust. #: JS-HS-01E

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Lab ID #: 64729 - 55a

Cust. #: JS-HS-01E

Material: Plaster Base Coat

Layer: 1 of 2

Asbestos Present: NO

Cellulose - 2%

No Asbestos Observed

Other - 98%

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.

64729

AFEA 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: 5 Day Phone: Address: 48 hour Turn Around Times: (Circle One) City, St., Zip: Client Name: Date: 5-10-16 Relinquished by: Lab ID# (888) 449-4566 72 hour 24 hour 5 CQ2 U S 11 JS- MM-06A | Gray Linoleum Red Cedar Consulting Lansing, MI 48901 PO Box 13216 JS- +m-07A US-HM-OUB Moddled Borge 12"x12" Vinyl Tile JS-HM-05B J5-Hm-05A JS-HM-OOR Wood JS-HM-03A Wood US- +M-013 JS- Am- 03A 15- AM-01 A JS-HM-03BBrown Unaleum Mulli-layer (TTP) All Samples Except Plaster Client ID Received by: (L)S Date: 5-10-16 # Fax: (888) 448-8739 mottled Beige 12"X12" Vmy 1 Tile i umag Beige Linoleum Beige Linaleum Asphalt Shingle Asphalt Mold: Asbestos: Bulk Lead: TEM: Material/Location Grain Ving Grain Linoleum Bulk Bulk **AHERA 7400** PLM EPA 600, PC all samples with a detection of <5% ACM. Shingle Vìny1 × Multi layer Multi layer ーだる Relinquished by Wipe Wipe Multitayer Tape Date of Survey: Contact Person: Project #: Project: 2916 Bulk/NOB APEX RESEARCH Air Point Count **BioSIS** Volume _Aaron Paquet EPA Level II Tefferson 5-7-16 Paint Other Received by: Area PCM Soil Viable Results Report Log-In_ Lab Use Only

Rev: 12/03 Work Forms: COC

APEX Research, Inc. 11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-E-mail: apexresearch@chartermi.net Fax: 734-4

Lab Use Only Log-In

Relinquished by Date: 5-10-16 Rev: 12/03 Work Forms: COC	\(\beta\)	£ 5	17	16	14	(2)	2	Lab ID#	Other:	48 hour 72 hour	Rush 24 hour	Turn Arou	Phone: (888) 4	City, St., Zip:	Address:	Client Name:
	75-4m-11A	JS-4m-10A	JS-4m-093	JS- HM - 08B	OS- HM-07B	α	JS-HM-06B	Client ID#				Around Times: (Circle One)	(888) 449-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
(2/6)	white 1x1 (eiling	Gray Lingleum Multilayer		Stone Linoleum Multilayer		-	Gray Linoleum	Material/Location	Plaster TEM: AHERA 7400	Bulk	Asbestos: Bulk X	EPA MIA				ng
te lin	Tile	Hlayer	Linoleum	Multilayer Multilayer			The Control of the Co	on Volume	Bulk/NOB EPA	Air	Wipe Point Count	C all samples	Contact Person: Aaron	•	وا	Date of Survey: 5
Received by:								Area	EPA Level II viable	Soil	PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	n Paquet		Jeffenen St.	7-110
								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



Rush Date: Other: 5 Day 48 hour Phone: Relinquished bk: Address: Client Name: City, St., Zip: Turn Around Times: (Circle One) Lab ID# 9-10-5 (888) 449-4566 24 hour 72 hour Received by: US 12 7 ر س \mathcal{X} Red Cedar Consulting PO Box 13216 Lansing, MI 48901 JS- HM-14A JS- HM-13B JS-4m-168 JS-HM-110A JS- HM- 15B 15- HM-10E JS-HM-17A Brown 18'x 10" Viny 1 Tile over Fiberboard JS-HM-BA JS-4m-12B JS-HM-15A JS-4m-14B (TTP) All Samples Except Plaster Client ID# Date:__ Fax: 21018 Rust Linoleum Rust Linaleum Tan Linaleum Glue Pod Dunall She Pod (888) 448-8739 2 Dry wall Mold: TEM: Asbestos: Bulk Lead: Material/Location Lino) eum Bulk Bulk **AHERA 7400** PLM EPA 600, PC all samples with a detection of <5% ACM. × Wipe Wipe Relinquished by: Tape Date of Survey: 5-7-16 Contact Person: Aaron Paquet Project #:_ Project: 29116 Bulk/NOB Air Point Count BioSIS Volume EPA Level II Jefferson Paint Other Received by: PCM Area Soil \$ Viable Results Log-In_ Report Lab Use Only

Rev: 12/03 Work Forms: COC

AN ANSWARE

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	S. 408
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Rev: 12/03 Work Forms: COC	Date: 5-10-16	Relinquished by:	40	20	6th	4	40	32	SC 20	37	36	35	ST.	Lab ID#		Jr O	Ĕ	Rush 24 hour	Turn Aro	Phone: (888) 4	City, St., Zip:	Address:	Client Name:
	Date :	Received by:	15-4m-22B	75-4m-20 A	35-HM- 21B	75-HM-01A	JS- 4M- 20B	JS- HM- 20 A	JS-HM-19B	7 JS-HM-19A	JS-HM- 18B	4	(1	Client ID #	ייי (ביי אירבחר) בארבחר הארבחר הא	TTP 11 Camples			Around Times: (Circle One)	(888) 449-4566 F2	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
	5-10-16	à.	A ber board	fiber board	Dawall	Drywall	White 1'x1'		while Striated 1'x1'	D,	Slate Linoleum	Slate Linoleum	15-HM-17BBrown 10"x10" VinyTik over Fiberboard	Material/Location	TEM: AHERA 7400		Lead: Bulk	Asbestos: BulkX	(Circle One) PLM EPA	Fax: (888) 448-8739	1		ing
Š	Date:	Relinquished by:				0		20 1	ا ز	Colling Tile	3	ک ا	over Fiberbourd	ocation	400Bulk/NOB	Tape	Wipe	Wipe	A 600, PC all samples	Contact Person	Project #:	_ Project : এপ।	Date of Survey
APEX RESEARCH	N S	ALL S												Volume	EPA Level II	BioSIS	Air Paint	Point Count		. Aaron		41	irvev: 5-
	Date :	Received by:												Area	31 II	Other Viable	Soil	PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	Paquet		effection St.	7-110
j													And the second s	Results					lting.net ACM.			Report	Lab Use Only

Fax: 734-449-9991

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

52.55

Rev. 12/03 Work Forms: COC	Date: 5-10-16 Date: 5-10	Relinquished by: Received by: 1	S JS-HS-01E	54 JS- HS- 01D	53 JS-HS- 01C	810 -SH -SZ TS- HS- 01B	>/ JS- HS-01A	05 TS- HM- 05B	ig JS- Hm- 35A	She-wh-St 22	THE -WH -ST LY	W JS- HM- 23B	45-HM-33A	Lab ID # Client ID #		Other: 5 Day (TTP) All Samples Except	48 hour 72 hour	Rush 24 hour	Turn Around Times: (Circle One)		City, St., Zip: Lansing, MI 48901	Address: PO Box 13216	Client Name: Red Cedar Consulting
	9.	Relinquished by:	Plaster	Plaster	Plaster	Plaster	Plastore	Glazina	ina	Green 10" x10" Viny Tile	Green 10"x10" Viny 1 Tile	to 1+ Fores	Felt Paper	Material/Location	TEM: AHERA 7400 Bulk/NOB	Mold: Bulk Tape	Lead: Bulk Wipe	Asbestos: Bulk Wipe	PLM EPA 600, PC	: (888) 448-8739 Contact Person	Project # :	Project : <u>29</u>	Date of Survey
APEX RESEARCH	F		SA S											Volume	B EPA Level II	BioSISO	Air Paint	Point Count	apaquete all samples with a det	\Box		ا ا	Survey: 5-7-
	Date:	Received by:												Area F	П	Other Viable	Soil	PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	Paquet		efferson St.	
													And the second s	Results					cing.net			Report	Lab Use Only

Red Cedar Consulting

Tables

Table 1 - Summary of Hazardous Materials, 2916 Jefferson St., Muskegon Heights, Michigan

Haza	ardous Materials Description and Location	
Location	Material Description	Quantity
Exterior	Television	1
Garage	Television	2
Exterior	Automobile Tire	11
Garage	Automobile Tire	10
Sun Room	Smoke Detector	1
SE Bedroom	Smoke Detector	1
SW Bedroom	Smoke Detector	1
Hall	Smoke Detector	1
Front Entry	Gallon Container Misc. Paint	1
SW Bedroom	Television	1
2 nd Fl. Living	Smoke Detector	1
2 nd Fl. SW Bedroom	Smoke Detector	1
2 nd Fl. SE Bedroom	Smoke Detector	1
2 nd Fl. Kitchen	Television	1
Basement	Gallon Container Misc. Paint	2

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2916 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	Asphalt Shingle	No	M	Category I	ND/ND/ND/ND	Exterior	NA
JS-HM-01B	Asphalt Shingle	No	M	Category I	ND/ND/ND/ND	Exterior	NA
JS-HM-02A	Wood Grain Vinyl Tile	No	M	Category I	ND/ND	Sun Room	NA
JS-HM-02B	Wood Grain Vinyl Tile	No	M	Category I	ND/ND	Sun Room	NA
JS-HM-03A	Brown Linoleum Multi-Layer	No	M	Category I	ND/ND	Front Entry	NA
JS-HM-03B	Brown Linoleum Multi-Layer	No	M	Category I	ND/ND	Front Entry	NA
JS-HM-04A	Mottled Beige 12x12 Vinyl Tile	No	M	Category I	ND/ND	Living/Dining	NA
JS-HM-04B	Mottled Beige 12x12 Vinyl Tile	No	M	Category I	ND/ND	Living/Dining	NA
JS-HM-05A	Beige Linoleum Multi-Layer	No	М	Category I	ND/ND/ND/ ND/ND/ND	Kitchen	NA
JS-HM-05B	Beige Linoleum Multi-Layer	No	М	Category I	ND/ND/ND/ ND/ND/ND	Kitchen	NA
JS-HM-06A	Gray Linoleum	No	M	Category I	ND/ND/ND	Bathroom	NA
JS-HM-06B	Gray Linoleum	No	M	Category I	ND/ND/ND	Bathroom	NA
JS-HM-07A	Old Linoleum	No	M	Category I	ND	N Bedroom	NA
JS-HM-07B	Old Linoleum	No	M	Category I	ND	N Bedroom	NA
JS-HM-08A	Stone Linoleum Multi-Layer	No	M	Category I	ND/ND	SE Bedroom	NA
JS-HM-08B	Stone Linoleum Multi-Layer	No	M	Category I	ND/ND	SE Bedroom	NA
JS-HM-09A	Fiberboard over Linoleum	No	M	Category I	ND/ND	SW Bedroom	NA
JS-HM-09B	Fiberboard over Linoleum	No	M	Category I	ND/ND	SW Bedroom	NA
JS-HM-10A	Gray Linoleum Multi-Layer	No	M	Category I	ND/ND/ND/ ND/ND/ND	Hall	NA
JS-HM-10B	Gray Linoleum Multi-Layer	No	M	Category I	ND/ND/ND/ ND/ND/ND	Hall	NA
JS-HM-11A	White 1'x1' Ceiling Tile	Yes	M	Category II	ND	Sun Room	NA
JS-HM-11B	White 1'x1' Ceiling Tile	Yes	M	Category II	ND	Sun Room	NA
JS-HM-12A	Glue Pod	Yes	M	Category II	1.25% CH	Sun Room	110 sq. ft.
JS-HM-12B	Glue Pod	Yes	M	Category II	NA	Sun Room	NA
JS-HM-13A	Drywall	No	M	Category II	ND	Kitchen Ceiling	NA
JS-HM-13B	Drywall	No	M	Category II	ND/1.5% CH	Sun Room Wall	2,882 sq. ft.

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2916 Jefferson St., Muskegon Heights, Michigan

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
JS-HM-14A	Glazing	Yes	M	Category II	ND	Sun Room	NA
JS-HM-14B	Glazing	Yes	M	Category II	ND	Kitchen	NA
JS-HM-15A	Tan Linoleum	No	M	Category I	ND/ND	2 nd Fl. Kitchen	NA
JS-HM-15B	Tan Linoleum	No	M	Category I	ND/ND	2 nd Fl. Kitchen	NA
JS-HM-16A	Rust Linoleum	No	M	Category I	ND/ND/ND/ ND	2 nd Fl. Bathroom	NA
JS-HM-16B	Rust Linoleum	No	М	Category I	ND/ND/ND/ ND	2 nd Fl. Bathroom	NA
JS-HM-17A	Brown 12x12 Vinyl Tile over Fiberboard	No	М	Category I	ND/ND	2 nd Fl. SE Bedroom	NA
JS-HM-17B	Brown 12x12 Vinyl Tile over Fiberboard	No	M	Category I	ND/ND	2 nd Fl. SW Bedroom	NA
JS-HM-18A	Slate Linoleum	No	M	Category I	ND	2 nd Fl. Rear Entry	NA
JS-HM-18B	Slate Linoleum	No	M	Category I	ND	2 nd Fl. Furnace Room	NA
JS-HM-19A	White Striated 1'x1' Ceiling Tile	Yes	M	Category II	ND	2 nd Fl. Living Ceiling	NA
JS-HM-19B	White Striated 1'x1' Ceiling Tile	Yes	M	Category II	ND	2 nd Fl. Living Ceiling	NA
JS-HM-20A	White 1'x1' Ceiling Tile	Yes	M	Category II	ND	2 nd Fl. SW Bedroom Ceiling	NA
JS-HM-20B	White 1'x1' Ceiling Tile	Yes	М	Category II	ND	2 nd Fl. SW Bedroom Ceiling	NA
JS-HM-21A	Drywall	No	M	Category II	ND	2 nd Fl. Kitchen Ceiling	NA
JS-HM-21B	Drywall	No	M	Category II	ND/ND	2 nd Fl. Living Wall	NA
JS-HM-22A	Fiberboard	Yes	M	Category II	ND	2 nd Fl. Kitchen Wall	NA
JS-HM-22B	Fiberboard	Yes	M	Category II	ND	2 nd Fl. Kitchen Wall	NA
JS-HM-23A	Felt Paper	No	M	Category I	ND	Exterior	NA
JS-HM-23B	Felt Paper	No	M	Category I	ND	Exterior	NA
JS-HM-24A	Green 12x12 Vinyl Tile	No	M	Category I	ND/ND	Basement	NA
JS-HM-24B	Green 12x12 Vinyl Tile	No	M	Category I	ND/ND	Basement	NA
JS-HM-25A	Glazing	Yes	M	Category II	ND	Basement	NA
JS-HM-25B	Glazing	Yes	M	Category II	ND	Basement	NA
JS-HS-01A	Plaster	No	S	Category II	ND/ND	Living Wall	NA

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2916 Jefferson St., Muskegon Heights, Michigan

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
JS-HS-01B	Plaster	No	S	Category II	ND/ND	SW Bedroom Wall	NA
JS-HS-01C	Plaster	No	S	Category II	1.75% CH/ND	N Bedroom Ceiling	3, 988 sq. ft.
JS-HS-01D	Plaster	No	S	Category II	ND/ND	2 nd Fl. Living Wall	NA
JS-HS-01E	Plaster	No	S	Category II	ND/ND	2 nd Fl. Kitchen 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, 2916 Jefferson St., Muskegon Heights, Michigan

A	Asbestos Containing Material Description a	nd Location			
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity
Basement Boiler Pipe	Air-O-Cell 4" to 6"	Yes	Fair	TSI	124 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, 2916 Jefferson St., Muskegon Heights, Michigan

Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Basement Boiler Pipe	Air-O-Cell 4" to 6"		Yes	124 lin. ft.
		Total		124 lin. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Sun Room	Glue Pods		No	110 sq. ft.
		Total		110 sq. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
1rst Floor Walls and Ceilings	Drywall Compound		No	2,882 sq. ft.
		Total		2,882 sq. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
1st Floor	Ceiling Plaster		No	732 sq. ft.
1st Floor	Wall Plaster		No	2,516 sq. ft.
2 nd Floor	Ceiling Plaster		No	140 sq. ft.
2 nd Floor	Wall Plaster		No	600 sq. ft.
		Total		3,988 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.

Table 4 - Summary of All Asbestos Containing Materials, 2916 Jefferson St., 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

June 1, 2016

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 3031 Peck St., Muskegon Heights, MI 49444
Parcel ID: 61-26-770-001-0016-00

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 3031 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 a 216 sq. ft. detached garage and approximate 1,152 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 over asphalt lap while the roof was sealed with asphalt shingles. The Building can be further divided into a front apartment and a rear apartment for inspection purposes.

VISUAL INSPECTION AND SAMPLING

Asbestos Containing Materials Inspection

Mr. Aaron Paquet of Red Cedar Consulting (Red Cedar), an accredited State Of Michigan/EPA Asbestos Building Inspector (Accreditation Number A30955) whom completed training per the Michigan Asbestos Workers Accreditation Act 440 completed an inspection of the Subject Property on May 24, 2016 for suspected asbestos containing building materials.

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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
- 12"X12" Vinyl Tile
- Linoleum
- Glazing
- 1'x1' Ceiling Tile
- 9"x9" Vinyl Tile
- Plaster

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

Hazardous Materials Inspection

On May 24, 2016 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

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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" chimney pipe on the Building were classified as PACM due to the age of the structure and samples were not collected.

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

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

Friable ACM's

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

• Basement SW Room (1 register, 15 sq. ft.)

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- Basement N Room (misc. HVAC Paper on Framing, 10 sq. ft.)
- Basement SE Room (misc. HVAC Paper/Debris on Floor, 30 sq. ft.)
- Basement (6 in. dia. HVAC Wrapped Ductwork, 24 lin. ft.)
- Basement (HVAC Wrapped Water Pipe, 10 lin. ft.)

Category I ACM

One type of resilient floor covering (Brown 9"x9" Vinyl Tile) located within the basement SE room was found to contain up to 10% 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" chimney pipe 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 7 lin. ft. of cementatious (Transite) chimney pipe on the Building.

Plaster samples, collected from the front and rear apartment were each found to contain up to 1.5% asbestos following analysis. The assessment to quantify the extent of this material identified approximately 3,833 sq. ft. of plaster within the Building.

RECOMMENDATIONS

Asbestos Containing Materials

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

- Basement SW Room (1 register, 15 sq. ft.)
- Basement N Room (misc. HVAC Paper on Framing, 10 sq. ft.)
- Basement SE Room (misc. HVAC Paper/Debris on Floor, 30 sq. ft.)
- Basement (6 in. dia. HVAC Wrapped Ductwork, 24 lin. ft.)
- Basement (HVAC Wrapped Water Pipe, 10 lin. ft.)

Transite chimney pipe 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.

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The Category I resilient floor coverings (Brown 9"x9" Vinyl Tile) is a non-friable ACM that may be left in place as long as the demolition/renovation activities are completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

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

Hazardous Materials

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

- Automobile Tires (9)
- Thermostat (1)
- Gallon Container Misc. Paint (9)
- Quart 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).

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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: 3031 Peck St

Report To:

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

ARI Report # 16-65110

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/31/16

Date Reported: 06/01/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Fiberglass - 15%

Other - 85%

Lab ID #: 65110 - 01

Cust. #: PS-HM-01A

Material: Asphalt Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 2

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 50%

Other - 50%

Material: Tar Paper

Lab ID #: 65110 - 01a

Cust. #: PS-HM-01A

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 65110 - 02

Asbestos Present: NO

No Asbestos Observed

Fiberglass - 15%

Other - 85%

Cust. #: PS-HM-01B

Material: Asphalt 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: 3031 Peck St

Report To:

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

ARI Report # 16-65110

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/31/16

Date Reported: 06/01/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 50%

Other - 50%

Lab ID #: 65110 - 02a

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

Location:

Appearance: black,fibrous,homogenous

Layer: 2 of 2

Asbestos Present: **NO**

Fiberglass - 15% Other - 85% No Asbestos Observed

Lab ID #: 65110 - 03 Cust. #: PS-HM-02A

Material: Asphalt Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 2

Asbestos Present: NO

Fiberglass - 15%

No Asbestos Observed

Other - 85%

Material: Shingle

Lab ID #: 65110 - 03a

Cust. #: PS-HM-02A

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: 3031 Peck St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-65110

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/31/16 Date Reported: 06/01/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Fiberglass - 15%

Other - 85%

Other - 85%

Other - 100%

Lab ID #: 65110 - 04

Cust. #: PS-HM-02B

Material: Asphalt Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 2

Asbestos Present: **NO**No Asbestos Observed

Fiberglass - 15%

Lab ID #: 65110 - 04a Cust. #: PS-HM-02B

Material: Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Lab ID #: 65110 - 05 Cust. #: PS-HM-03A

M . . 1 D1 12 12 17 17

Material: Blue 12x12 Vinyl Tile

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: 3031 Peck St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-65110

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/31/16 Date Reported: 06/01/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Other - 100%

Lab ID #: 65110 - 05a

Cust. #: PS-HM-03A

Material: Mastic

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

Asbestos Present: **NO**No Asbestos Observed

Lab ID #: 65110 - 06

Cust. #: PS-HM-03B

Material: Blue 12x12 Vinyl Tile

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 2

Lab ID #: 65110 - 06a

Cust. #: PS-HM-03B

Material: Mastic

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

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: 3031 Peck St

Report To:

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

ARI Report # 16-65110

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/31/16

Date Reported: 06/01/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 50%

Other - 50%

Lab ID #: 65110 - 07

Cust. #: PS-HM-04A

Material: Stone Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 65110 - 08

Cust. #: PS-HM-04B

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 50%

Other - 50%

Other - 100%

Material: Stone Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 65110 - 09

Cust. #: PS-HM-05A

Material: White 12x12 Vinyl Tile

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: 3031 Peck St

Report To:

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

ARI Report # 16-65110

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/31/16

Date Reported: 06/01/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 65110 - 09a

Cust. #: PS-HM-05A

Material: Mastic

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 2 of 2

Asbestos Present: **NO** No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Other - 100%

Lab ID #: 65110 - 10 Cust. #: PS-HM-05B

Material: White 12x12 Vinyl Tile

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 65110 - 10a

Cust. #: PS-HM-05B

Material: Mastic

Location:

Appearance: brown,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: 3031 Peck St

Report To:

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

ARI Report # 16-65110

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/31/16

Date Reported: 06/01/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Other - 100%

Lab ID #: 65110 - 11

Cust. #: PS-HM-06A

Material: White Linoleum

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 65110 - 12

Cust. #: PS-HM-06B

Material: White Linoleum

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 65110 - 13

Cust. #: PS-HM-07A

Material: 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%

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: 3031 Peck St

Report To:

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

ARI Report # 16-65110

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/31/16

Date Reported: 06/01/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 65110 - 14

Cust. #: PS-HM-07B

Material: Glazing

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 1

Asbestos Present: **NO**

No Asbestos Observed

Other - 100%

Other - 100%

Lab ID #: 65110 - 15 Cust. #: PS-HM-08A

Material: Black 12x12 Vinyl Tile Multi Layer

Location:

Appearance: black,nonfibrous,homogenous

Layer: 1 of 4

Lab ID #: 65110 - 15a

Cust. #: PS-HM-08A

Material: Mastic

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 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: 3031 Peck St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-65110

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/31/16 Date Reported: 06/01/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 50%

Other - 50%

Lab ID #: 65110 - 15b

Cust. #: PS-HM-08A

Material: Linoleum/Backing

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 3 of 4

Asbestos Present: NO

No Asbestos Observed

Cellulose - 60%

Other - 40%

Other - 100%

Lab ID #: 65110 - 15c Cust. #: PS-HM-08A

Material: Flooring/Backing/Glue

Location:

Appearance: grey,fibrous,nonhomogenous

Layer: 4 of 4

Lab ID #: 65110 - 16

Cust. #: PS-HM-08B

Material: Black 12x12 Vinyl Tile Multi Layer

Location:

Appearance: black,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: 3031 Peck St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-65110

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/31/16

Date Reported: 06/01/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 65110 - 16a

Cust. #: PS-HM-08B

Material: Mastic

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 4

Asbestos Present: **NO**No Asbestos Observed

Cellulose - 50%

Other - 50%

Lab ID #: 65110 - 16b Cust. #: PS-HM-08B

Cust. #. I S-IIVI-00D

Material: Linoleum/Backing

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 3 of 4

Asbestos Present: NO

Cellulose - 90%

No Asbestos Observed

Other - 10%

Cust. #: PS-HM-08B Material: Backing/Glue

Lab ID #: 65110 - 16c

Location:

Appearance: brown, fibrous, nonhomogenous

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: 3031 Peck St

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-65110

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/31/16

Date Reported: 06/01/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65110 - 17

Cust. #: PS-HM-09A

Material: White 1x1 Ceiling Tile

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Cellulose - 40%

Mineral Wool - 2%

Fiberglass - 20%

Other - 38%

Lab ID #: 65110 - 18

Cust. #: PS-HM-09B

Material: White 1x1 Ceiling Tile

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 40%

Mineral Wool - 2%

Fiberglass - 20%

Other - 38%

Lab ID #: 65110 - 19

Lao 1D #. 03110 - 19

Cust. #: PS-HM-10A

Material: Brown 9x9 Vinyl Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 2

Asbestos Present: YES

Chrysotile - 10%

Other - 90%

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

Robert T. Letarte Jr., Laboratory Director

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Test Method, Polarized Light Microscopy (PLM)

Project: 3031 Peck St

Report To:

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ARI Report # 16-65110

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/31/16

Date Reported: 06/01/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 65110 - 19a

Cust. #: PS-HM-10A

Material: Mastic

Location:

Appearance: black,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 65110 - 20

Cust. #: PS-HM-10B

Material: Brown 9x9 Vinyl Tile

Location:

Appearance:

Layer: 1 of 2

Asbestos Present:

NOT ANALYZED

Asbestos Present: NO

No Asbestos Observed

Lab ID #: 65110 - 20a

Cust. #: PS-HM-10B

Material: Mastic

Location:

Appearance: black,nonfibrous,homogenous

Layer: 2 of 2

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: 3031 Peck St

Report To:

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

ARI Report # 16-65110

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/31/16 Date Reported: 06/01/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65110 - 21

Cust. #: PS-HM-11A

Material: Old Linoleum/Backing

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 2

Lab ID #: 65110 - 21a

Cust. #: PS-HM-11A

Material: Backing

Location:

Appearance: black, fibrous, nonhomogenous

Layer: 2 of 2

Lab ID #: 65110 - 22

Cust. #: PS-HM-11B

Material: Old Linoleum/Backing

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 2

Asbestos Present: NO

No Asbestos Observed

Cellulose - 50%

Other - 50%

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 50%

Other - 50%

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: 3031 Peck St

Report To:

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

ARI Report # 16-65110

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/31/16 Date Reported: 06/01/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 50%

Other - 50%

Lab ID #: 65110 - 22a

Cust. #: PS-HM-11B

Material: Backing

Location:

Appearance: black,fibrous,nonhomogenous

Layer: 2 of 2

Asbestos Present: YES

Chrysotile - 1.25%

Other - 98.75%

Lab ID #: 65110 - 23 Cust. #: PS-HS-01A

Material: Plaster Texture

Location:

POINT COUNT RESULT

Appearance: beige, fibrous, homogenous

Layer: 1 of 3

Asbestos Present: NO Chrysotile - 0.50%

Other - 99.50%

Lab ID #: 65110 - 23a Cust. #: PS-HS-01A

Material: Plaster Finish Coat

Location:

POINT COUNT RESULT

Appearance: white, fibrous, 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: 3031 Peck St

Report To:

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

ARI Report # 16-65110

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/31/16

Date Reported: 06/01/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65110 - 23b

Cust. #: PS-HS-01A

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

Layer: 3 of 3

Lab ID #: 65110 - 24 Cust. #: PS-HS-01B

Material: Plaster Texture

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 3

Asbestos Present: YES

Chrysotile - 1.25%

Chrysotile - 1.25%

POINT COUNT RESULT

Asbestos Present: NO

POINT COUNT RESULT

Chrysotile - 0.25%

Lab ID #: 65110 - 24a

Cust. #: PS-HS-01B

Material: Plaster Finish Coat

Location:

Appearance: white, fibrous, homogenous

Layer: 2 of 3

Asbestos Present: YES

Hair - 2%

Other - 96.75%

Other - 98.75%

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: 3031 Peck St

Report To:

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ARI Report # 16-65110

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/31/16

Date Reported: 06/01/16

Sample Information

Asbestos Type/Percent

Asbestos Present: YES

POINT COUNT RESULT

Chrysotile - 1.50%

Non-Asbestos

Other - 96.50%

Hair - 2%

Lab ID #: 65110 - 24b

Cust. #: PS-HS-01B

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

Layer: 3 of 3

Lab ID #: 65110 - 25

Cust. #: PS-HS-01C

Asbestos Present: **NO**

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Vermiculite - 20%

Other - 80%

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 65110 - 25a

Cust. #: PS-HS-01C

Material: Plaster Base Coat

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: 3031 Peck St

Report To:

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ARI Report # 16-65110

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/31/16

Date Reported: 06/01/16

Sample Information

Asbestos Type/Percent

Asbestos Present: YES

POINT COUNT RESULT

Chrysotile - 1.25%

Non-Asbestos

Other - 98.75%

Lab ID #: 65110 - 26

Cust. #: PS-HS-01D

Material: Plaster Finish Coat

Location:

Appearance: white, fibrous, homogenous

Layer: 1 of 2

Asbestos Present: **NO**

Hair - 2%

Lab ID #: 65110 - 26a Cust. #: PS-HS-01D

Material: Plaster Base Coat

Location:

Layer: 2 of 2

Chrysotile - 1.00%

POINT COUNT RESULT

Other - 97.00%

Appearance: beige, fibrous, homogenous

Lab ID #: 65110 - 27

Cust. #: PS-HS-01E

Location:

Material: Plaster Finish Coat

Appearance: white, fibrous, homogenous

Layer: 1 of 2

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: 3031 Peck St

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

ARI Report # 16-65110

Date Collected: 05/24/16 Date Received: 05/26/16

Date Analyzed: 05/31/16 Date Reported: 06/01/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65110 - 27a

Cust. #: PS-HS-01E

Material: Plaster Base Coat

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: YES

POINT COUNT RESULT

Hair - 2%

Other - 96.75%

Lab ID #:

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

Chrysotile - 1.25%

Lab ID #:

Cust. #: Material: Location: Appearance:

Layer:

Asbestos Present:

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

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Robert T. Letarte Jr., Laboratory Director

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65110

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

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

17 PS-HM-06A	+		+	6 35- HM-03B	5 75-HM-03A	4 PS-Hm-03B	460-WH-59	2 PS-Hm-01B	1 PS- HM-01A	Lab ID # Client ID #			48 hour 72 hour	Rush 24 hour	Turn Around Times:	Phone: (888) 449-4566 Fax	City, St., Zip: Lansing, MI 48901	Address: PO Box 13216	Client Name: Red Cedar Consulting
White Lippleum	This loxid Vious The	Stone Cinoleum	Stone Linokum	Blue BXID Vinul Tile	Blue 12x12 Vigul Tire	Asonalt Shingle	Asphalt Shingle	Psohalt Shingle	Asphalt Shingle	Material/Location	TEM: AHERA 7400	Mold: Bulk Tape	Lead: Bulk Wipe	Asbestos: Bulk Wipe	PLM EPA 600, PC	(888) 448-8739	Project	Project	Date of Survey
										Volume A	OB EPA Level II_	BioSIS Other	Air Paint	Point CountP		Aaron		()	Survey: 5-24-16
										Area Results		r Viable	Soil	PCM	edcedarconsulting.net tion of <5% ACM.	ret .			Lab Use Only Log-In
	PS-HM-06A	PS-HM-06P	75-4m-04B 75-4m-05B P5-4m-06B	75-HM-04A 75-HM-05A 75-HM-05A 75-HM-06A	75-HM-04A 75-HM-04A 75-HM-05A 75-HM-06A 75-HM-06A	75-HM-03A 75-HM-03B 75-HM-04B 75-HM-05B 75-HM-05B	95-4m-03B 95-4m-03B 95-4m-04B 95-4m-04B 95-4m-05B 95-4m-05B 95-4m-06B	75-4m-03B 75-4m-03B 75-4m-03B 75-4m-04B 75-4m-05B 75-4m-05B 75-4m-05B 75-4m-05B	75-HM-03B 25-HM-03B 35-HM-03B 25-HM-03B 25-HM-03B 25-HM-03B 25-HM-03B 25-HM-03B 25-HM-03B 25-HM-03B	PS-HM-01B PS-HM-03B PS-HM-03B PS-HM-03B PS-HM-03B PS-HM-03B PS-HM-03B PS-HM-03B PS-HM-03B PS-HM-03B	Client ID# Material/Location Volume Area 1 PS-HM-01A Asphalt Shingle 2 PS-HM-03A Asphalt Shingle 4 PS-HM-03A Blue IaxI2 Viryl Tike 5 PS-HM-03B Blue IaxI2 Viryl Tike 7 PS-HM-04A Shore Linderm 8 PS-HM-05A White IaxI2 Viryl Tike 9 PS-HM-05A White IaxI2 Viryl Tike 9 PS-HM-05A White IaxI2 Viryl Tike 10 PS-HM-06A White IaxI2 Viryl Tike 11 PS-HM-06A White Linderm 11 PS-HM-06A White Linderm 12 PS-HM-06A White Linderm 13 PS-HM-06A White Linderm 14 PS-HM-06A White Linderm 15 PS-HM-06A White Linderm 16 PS-HM-06A White Linderm	Ab ID# Client ID# Material/Location Volume Area / PS-Hm-oib Asphalt Shingle / PS-Hm-oib Asphalt Shingle / PS-Hm-oib Asphalt Shingle / PS-Hm-oib Bhe Iskis Viral The / PS-Hm-oib Bhe Iskis Viral The / PS-Hm-oib Shae Lindeum / PS-Hm-oib Nhite Iskis Viral Title Client ID # Material/Location	T2 hour	Ashestos: Bulk Wipe Point Count PCM	The Around Times: (Circle One) PLM EPA 600, PC all samples with apaquet@reclearconssil Ashestos: Bulk _ x Wipe	(2) (888) 449-4566 Fax: (888) 448-8739 Contact Persor	St., Zip: Lansing, MI 48901 Project #: (888) 449-4566 Fax: (888) 448-8739 Contact Persor The Around Times: (Circle One) 24 hour The Around Times: (Circle One) 24 hour The Around Times: (Circle One) PLM EPA 600, PC all samples Point Chead: Bulk Wipe Point Chead: Bulk Tape Point Chead: Bulk Tape BioSIS TEM: AHERA 7400 Bulk NOB TEM: AHERA 7400 Bulk NOB Air PS-HM-03B ASPARALL Shingle FS-HM-03B ASPARALL Shingle FROM IT HE TO PS-HM-05B ASPARALL Shingle FROM IT HE TO POINT THE TO POINT THE TO THE TAPE TO THE TO THE TO THE TO THE TO THE TO THE TAPE TO T	Project : 303	

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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: 5/15/6	Relinquished by:	7 5	+-	(A)	19	2/	7	8 %	4 5/	4 41	- W	-	Lab ID#		Other:	48 hour 72 hour	Rush 24 hour	Turn Around	Phone: (888) 449-456	City, St., Zip: Lar	Address: Po	Client Name: Red
Date:	Received by:	13-4M-11B	ts-HM-IIA	PS-4M-1013	8-1m-10A	B- 4m-093	PS-HM-09A	75-4m-08B	7-4M-08A	B-4m-078	PS-HM-07A	PS-4m-06B	Client ID #		TTP) All Samples Except			d Times: (Circle One)	1566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
5.28.16 Date:	: Relinquished by:	old Linoleum	Old Linoleum	Bown ard Vinul Tike	Brown 9x9 VINUITILE	White Ixl Ceiling Tile	White Ixl Gilling Tile	Black 12x12 Vimil Tile multi lauer	Black 12x12 VinyTile Multi layer	Glazing	Glazing	White Linoleum	Material/Location	8	Mold: Bulk Tape	Bulk Wipe	os: Bulk Wipe	H WTG	: (888) 448-8739 Contact Person	Project #:	Project : 3031	Date of Survey
													Volume	EPA Level II	BioSIS(Air Paint	Point Count		erson: Aaron Paquet		-) ,	rvey: 5.34.116
Date: MAY 26	Received by:												Area	1 II	Other Viable	Soil	PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	aquet		7	· lla
2016													Results					lting.net ACM.			Report	Lab Use Only

Rev: 12/03 Work Forms: COC

TOTAL CINCINARY

Rush 48 hour

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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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156 Date:	Relinquished by:			13-15-01E				23 75-HS-01A 71	Lab ID # Client ID #	Outcl: All Samples Except	, i i i i i i i i i i i i i i i i i i i	4	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
S-15-16 Date:	(Relinquiched by:			Plaster	Plaster	Plaster	Plaster	Plaster	Material/Location	TEM: AHERA 7400 Bulk/NOB		Lead: Bulk Wipe	Asbestos: Bulk Wipe	$(le\;One)$ PLM EPA 600, PC all samples	(888) 448-8739 Contact Person	Project #:	Project: 3031	Date of Su
Date: MAY 2 6 2016 PEX RESEARCH	PECEVE								Volume Area Results	EPA Level II	BioSIS Other Viable	Air Paint Soil	Point Count PCM	apaquet@redcedarconsulting.netmples with a detection of <5% ACM.	erson: Aaron Paquet			Date of Survey: 5.24.16 Lab Use Only Log-In Log-In

Red Cedar Consulting

Tables

Table 1 - Summary of Hazardous Materials, 3031 Peck St., Muskegon Heights, Michigan

	Hazardous Materials Description and Location								
Location	Material Description	Quantity							
Exterior	Automobile Tires	8							
Garage	Automobile Tires	1							
Living	Thermostat	1							
Bathroom	Gallon Container Misc. Paint	1							
Basement	Gallon Container Misc. Paint	8							
Basement	Quart Container Misc. Paint	4							

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 3031 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 Shingle	No	M	Category I	ND/ND	Exterior	NA
PS-HM-01B	Asphalt Shingle	No	M	Category I	ND/ND	Exterior	NA
PS-HM-02A	Asphalt Shingle	No	M	Category I	ND/ND	Garage Exterior	NA
PS-HM-02B	Asphalt Shingle	No	M	Category I	ND/ND	Garage Exterior	NA
PS-HM-03A	Blue 12"x12" Vinyl Tile	No	M	Category I	ND/ND	Front Entry	NA
PS-HM-03B	Blue 12"x12" Vinyl Tile	No	M	Category I	ND/ND	Front Entry	NA
PS-HM-04A	Stone Linoleum	No	M	Category I	ND	Front Entry	NA
PS-HM-04B	Stone Linoleum	No	M	Category I	ND	Front Entry	NA
PS-HM-05A	White 12"x12" Vinyl Tile	No	M	Category I	ND/ND	Front Apt. Kitchen	NA
PS-HM-05B	White 12"x12" Vinyl Tile	No	M	Category I	ND/ND	Front Apt. Kitchen	NA
PS-HM-06A	White Linoleum	No	M	Category I	ND	Front Apt. Bathroom	NA
PS-HM-06B	White Linoleum	No	M	Category I	ND	Front Apt. Bathroom	NA
PS-HM-07A	Glazing	Yes	M	Category II	ND	Front Entry	NA
PS-HM-07B	Glazing	Yes	M	Category II	ND	Front Apt. Kitchen	NA
PS-HM-08A	Black 12"x12" Vinyl Tile Multilayer	No	M	Category I	ND/ND/ND/ND	Rear Apt. Kitchen	NA
PS-HM-08B	Black 12"x12" Vinyl Tile Multilayer	No	M	Category I	ND/ND/ND/ND	Rear Apt. Kitchen	NA
PS-HM-09A	White 1'x1' Ceiling Tile	Yes	M	Category II	ND	Rear Apt. Living	NA
PS-HM-09B	White 1'x1' Ceiling Tile	Yes	M	Category II	ND	Rear Apt. Living	NA
PS-HM-10A	Brown 9"x9" Vinyl Tile	No	M	Category I	10%CH/ND	Basement SE Room	156 sq. ft.
PS-HM-10B	Brown 9"x9" Vinyl Tile	No	M	Category I	NA/ND	Basement SE Room	NA
PS-HM-11A	Old Linoleum	No	M	Category I	ND/ND	Rear Apt. Living	NA
PS-HM-11B	Old Linoleum	No	M	Category I	ND/ND	Rear Apt. Living	NA
PS-HS-01A	Plaster	No	S	Category II	1.25%CH/0.5%CH/ 1.25%CH	Front Apt. Living Wall	3,833 sq. ft.
PS-HS-01B	Plaster	No	S	Category II	1.25%CH/0.25%CH Front Apt. Kitchen /1.5%CH Wall		NA
PS-HS-01C	Plaster	No	S	Category II	ND/ND	ND/ND Front Apt. Kitchen Ceiling	
PS-HS-01D	Plaster	No	S	Category II	1.25%CH/1%CH	Rear Apt. NW Bedroom Wall	NA

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 3031 Peck St., Muskegon Heights, Michigan

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
PS-HS-01E	Plaster	No	S	Category II	0.25%CH/1.25%CH	Rear Apt. 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, 3031 Peck St., Muskegon Heights, Michigan

	Asbestos Containing Material Description and Location											
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity							
Exterior (6" Transite Chimney Pipe, 7 lin. ft.)	6" Transite Chimney Pipe	No	Fair	M	7 lin. ft.							
Basement SW Room (1 register, 15 sq. ft.) Basement N Room (misc. HVAC Paper on Framing, 10 sq. ft.) Basement SE Room (misc. HVAC Paper/Debris on Floor, 30 sq. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	55 sq. ft.							
Basement (6 in. dia. HVAC Wrapped Ductwork, 24 lin. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	24 lin. ft.							
Basement (HVAC Wrapped Water Pipe, 10 lin. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	10 lin. ft.							

Notes:

Material Types

M = Miscellaneous building material TSI = Thermal System Insulation

= Surfacing Material

Abbreviations

lin. ft. = linear feet

sq. ft. = square feet

Table 4 - Summary of All Asbestos Containing Materials, 3031 Peck St., Muskegon Heights, Michigan

Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Basement SE Room	Brown 9"x9" Vinyl Tile		No	156 sq. ft.
		Total		156 sq. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Basement SW Room (1 register, 15 sq. ft.) Basement N Room (misc. HVAC Paper on Framing, 10 sq. ft.) Basement SE Room (misc. HVAC Paper/Debris on Floor, 30 sq. ft.)	HVAC Duct Wrap		Yes	55 sq. ft.
		Total		55 sq. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Basement (6 in. dia. HVAC Wrapped Ductwork, 24 lin. ft.)	HVAC Duct Wrap		Yes	24 lin. ft.
		Total		24 lin. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Basement (HVAC Wrapped Water Pipe, 10 lin. ft.)	HVAC Duct Wrap		Yes	10 lin. ft.
		Total		10 lin. ft.
Exterior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Exterior (6" Transite Chimney Pipe, 7 lin. ft.)	6" Transite Chimney Pipe		No	3,274 sq. ft.
		Total		3,274 sq. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
1st Floor	Wall Plaster		No	2,890 sq. ft.
1 st Floor	Ceiling Plaster		No	943 sq. ft.
		Total		3,833 sq. ft.

Table 4 - Summary of All Asbestos Containing Materials, 3031 Peck 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 27, 2016

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 3045 Maffett., Muskegon Heights, MI 49444

Parcel ID: 61-26-635-268-0014-00

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 3045 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 .23 acre residential parcel which contains a 816 sq. ft. detached garage and approximate 2,716 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 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 sun room on the first floor while the second floor contains a living room, dining room, kitchen, bathroom and bedroom.

VISUAL INSPECTION AND SAMPLING

Asbestos Containing Materials Inspection

Mr. Aaron Paquet of Red Cedar Consulting (Red Cedar), an accredited State Of Michigan/EPA Asbestos Building Inspector (Accreditation Number A30955) whom completed training per the Michigan Asbestos

Project No.: 16-1070 Muskegon County Land Bank Parcel ID: 61-26-635-268-0014-00

Workers Accreditation Act 440 completed an inspection of the Subject Property on May 22, 2016 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
- Rolled Roofing
- Linoleum
- 12"x12" Vinyl Tile
- 9"x9" Vinyl Tile
- Drywall
- Glazing
- Plaster
- Wallboard/Plaster

Red Cedar staff collected thirty six 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 six samples is included as Attachment A.

Muskegon County Land Bank Parcel ID: 61-26-635-268-0014-00

Hazardous Materials Inspection

On May 22, 2016 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 Air-O-Cell Pipe 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: 61-26-635-268-0014-00

Friable ACM's

Air-O-Cell Pipe Wrap identified in the Building in conjunction with the hot water heating system are classified as friable ACM. The visual assessment to quantify the extent of this material identified Friable ACM at the following locations within the basement:

- Basement Boiler Pipe (Air-O-Cell 4") (91 lin. ft.)
- Basement Boiler Room Floor (Air-O-Cell Debris, 2 lin. ft.)

Category I ACM

Three types of resilient floor covering (9"x9" Light Brown Vinyl Floor Tile, 9"x9" Brown Vinyl Floor Tile and 9"x9" Speckled Vinyl Floor Tile) located within the Basement Bathroom, Sun Room/Hall and Closet/Bathroom, respectively, were found to contain up to 10% Chrysotile asbestos. The assessment to quantify the extent of this material identified approximately 627 sq. ft. of this material within the Building.

Rolled roofing 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 820 sq. ft. of rolled roofing materials on 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 3,348 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.

- Basement Boiler Pipe (Air-O-Cell 4") (91 lin. ft.)
- Basement Boiler Room Floor (Air-O-Cell Debris, 2 lin. 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 roofing materials and resilient floor coverings (9"x9" Light Brown Vinyl Floor Tile, 9"x9" Brown Vinyl Floor Tile and 9"x9" Speckled 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

Muskegon County Land Bank Parcel ID: 61-26-635-268-0014-00

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 (8)
- Thermostat (1)
- 4' Fluorescent Bulb (Fixture and Ballast Only) (3)
- Fuel Oil Tank (1)
- Automobile Tire (3)
- Gallon Container Misc. Paint (1)
- Quart Container Mastic (1)
- 2' Fluorescent Bulb (Fixture and Ballast Only) (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).

Muskegon County Land Bank Parcel ID: 61-26-635-268-0014-00

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: 3045 Maffett St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-65045

Date Collected: 05/22/16 Date Received: 05/23/16 Date Analyzed: 05/26/16

Date Reported: 05/26/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 30%

Other - 70%

Lab ID #: 65045 - 01

Cust. #: MS-HM-01A

Material: Asphalt Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 5

Asbestos Present: **NO**No Asbestos Observed

Cellulose - 30%

Other - 70%

Lab ID #: 65045 - 01a Cust. #: MS-HM-01A

Material: Shingle

Location:

Location

Appearance: black, fibrous, homogenous

Layer: 2 of 5

Asbestos Present: NO

No Asbestos Observed

Cellulose - 30% Other - 70%

Lab ID #: 65045 - 01b Cust. #: MS-HM-01A

Material: Shingle

Location:

Appearance: black,fibrous,homogenous

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

Layer: 3 of 5

Colly John

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 3045 Maffett St.

Report To:

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

ARI Report # 16-65045

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/26/16 Date Reported: 05/26/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65045 - 01c

Cust. #: MS-HM-01A

Material: Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 4 of 5

Lab ID #: 65045 - 01d

Cust. #: MS-HM-01A

Material: Tar Paper

Location:

Appearance: black, fibrous, homogenous

Layer: 5 of 5

Lab ID #: 65045 - 02

Cust. #: MS-HM-01B

Material: Asphalt Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 4

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 30%

Other - 70%

Asbestos Present: **NO**

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Cellulose - 35%

Cellulose - 30%

Other - 70%

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: 3045 Maffett St.

Report To:

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

ARI Report #

16-65045 Date Collected: 05/22/16

Date Received: 05/23/16 Date Analyzed: 05/26/16

Date Reported: 05/26/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 30%

Other - 70%

Lab ID #: 65045 - 02a

Cust. #: MS-HM-01B

Material: Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 2 of 4

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 30%

Other - 70%

Material: Shingle

Lab ID #: 65045 - 02b

Cust. #: MS-HM-01B

Location:

Appearance: black, fibrous, homogenous

Layer: 3 of 4

Asbestos Present: NO

No Asbestos Observed

Cellulose - 30%

Other - 70%

Cust. #: MS-HM-01B

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

Material: Shingle

Lab ID #: 65045 - 02c

Location:

Appearance: black,fibrous,homogenous

Layer: 4 of 4

Robert T. Letarte Jr., Laboratory Director

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Test Method, Polarized Light Microscopy (PLM)

Project: 3045 Maffett St.

Report To:

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

ARI Report # 16-65045

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/26/16 Date Reported: 05/26/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65045 - 03

Cust. #: MS-HM-02A

Material: Rolled Roofing

Location:

Appearance: black,fibrous,nonhomogenous

Layer: 1 of 2

Lab ID #: 65045 - 03a

Cust. #: MS-HM-02A

Material: Tar Paper

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 65045 - 04

Material: Rolled Roofing

Appearance:

Layer: 1 of 2

Asbestos Present: YES

Chrysotile - 5%

Cellulose - 10%

Other - 85%

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 35%

Other - 65%

Cust. #: MS-HM-02B

Location:

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: 3045 Maffett St.

Report To:

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

ARI Report # 16-65045

Date Collected: 05/22/16

Date Received: 05/23/16 Date Analyzed: 05/26/16

Date Reported: 05/26/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 35%

Other - 65%

Lab ID #: 65045 - 04a

Cust. #: MS-HM-02B

Material: Tar Paper

Location:

Appearance: black,fibrous,homogenous

Layer: 2 of 2

Asbestos Present: YES Chrysotile - 5%

Asbestos Present: NO

No Asbestos Observed

Other - 95%

Other - 100%

Lab ID #: 65045 - 05 Cust. #: MS-HM-03A

Material: Speckled 9x9 Vinyl Tile

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 2

Lab ID #: 65045 - 05a

Cust. #: MS-HM-03A

Material: Mastic

Location:

Appearance: brown,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: 3045 Maffett St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-65045

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/26/16 Date Reported: 05/26/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65045 - 06

Cust. #: MS-HM-03B

Material: Speckled 9x9 Vinyl Tile

Location:

Appearance: Layer: 1 of 2

Lab ID #: 65045 - 06a

Cust. #: MS-HM-03B

Material: Mastic

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 65045 - 07

Cust. #: MS-HM-04A

Material: Stone Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

destos Type/Percent Non-Asbesi

Asbestos Present:

NOT ANALYZED

Asbestos Present: NO

Asbestos Present: **NO**

No Asbestos Observed

No Asbestos Observed

Cellulose - 35%

Other - 100%

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: 3045 Maffett St.

Report To:

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

ARI Report # 16-65045

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/26/16 Date Reported: 05/26/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65045 - 08

Cust. #: MS-HM-04B

Material: Stone Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 65045 - 09

Cust. #: MS-HM-05A

Material: Brown 9x9 Vinyl Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 2

Lab ID #: 65045 - 09a

Cust. #: MS-HM-05A

Material: Mastic

Location:

Appearance: black,nonfibrous,homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Cellulose - 35%

Other - 65%

Other - 90%

Chrysotile - 10%

Asbestos Present: YES

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: 3045 Maffett St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-65045

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/26/16

Date Reported: 05/26/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Other - 100%

Cellulose - 35%

Other - 65%

Lab ID #: 65045 - 10

Cust. #: MS-HM-05B

Cust. #. MS-IIM-03B

Material: Brown 9x9 Vinyl Tile

Location:

NOT ANALYZED

Asbestos Present: **NO**

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

Asbestos Present:

Appearance: Layer: 1 of 2

Lab ID #: 65045 - 10a

Cust. #: MS-HM-05B

Material: Mastic

Location:

A

Appearance: black,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 65045 - 11

Cust. #: MS-HM-06A

Material: Grey Linoleum

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: 3045 Maffett St.

Report To:

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

ARI Report # 16-65045

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/26/16 Date Reported: 05/26/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 35%

Other - 65%

Lab ID #: 65045 - 12

Cust. #: MS-HM-06B

Material: Grey Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 65045 - 13

Cust. #: MS-HM-07A

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 15%

Fiberglass - 5%

Other - 80%

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 1

Material: Drywall

Asbestos Present: NO

Cellulose - 15%

Cust. #: MS-HM-07B

Material: Drywall

Lab ID #: 65045 - 14

No Asbestos Observed

Fiberglass - 10% Other - 75%

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: 3045 Maffett St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-65045

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/26/16 Date Reported: 05/26/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 65045 - 15

Cust. #: MS-HM-08A

Material: Glazing

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 1 of 1

Asbestos Present: **NO**No Asbestos Observed

Other - 100%

Cust. #: MS-HM-08B

Material: Glazing

Lab ID #: 65045 - 16

Location:

Location.

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 1

Lab ID #: 65045 - 17

Cust. #: MS-HM-09A

Material: Tan Linoleum

Location:

Appearance: grey,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

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Test Method, Polarized Light Microscopy (PLM)

Project: 3045 Maffett St.

Report To:

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

ARI Report # 16-65045

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/26/16 Date Reported: 05/26/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 35%

Other - 65%

Lab ID #: 65045 - 18

Cust. #: MS-HM-09B

Material: Tan Linoleum

Location:

Appearance: grey,fibrous,nonhomogenous

Layer: 1 of 1

Lab ID #: 65045 - 19

Asbestos Present: **NO**

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Cust. #: MS-HM-10A

Material: Tan 9x9 Vinyl Tile

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 1 of 2

Lab ID #: 65045 - 19a

Cust. #: MS-HM-10A

Material: Adhesive

Location:

Appearance: brown,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: 3045 Maffett St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-65045

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/26/16

Date Reported: 05/26/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 65045 - 20

Cust. #: MS-HM-10B

Material: Tan 9x9 Vinyl Tile

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 1 of 2

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Lab ID #: 65045 - 20a Cust. #: MS-HM-10B

Material: Adhesive

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 65045 - 21

Cust. #: MS-HM-11A

Material: Red/White 12x12 Vinyl Tile

Location:

Appearance: red,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%

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Test Method, Polarized Light Microscopy (PLM)

Project: 3045 Maffett St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-65045

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/26/16

Date Reported: 05/26/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 65045 - 21a

Cust. #: MS-HM-11A

Material: Mastic

Location:

Appearance: yellow,nonfibrous,nonhomogenous

Layer: 2 of 2

Asbestos Present: **NO**No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Lab ID #: 65045 - 22 Cust. #: MS-HM-11B

Material: Red/White 12x12 Vinyl Tile

Location:

Appearance: red,nonfibrous,homogenous

Layer: 1 of 2

Lab ID #: 65045 - 22a

Cust. #: MS-HM-11B

Material: Mastic

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

Other - 100%

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Test Method, Polarized Light Microscopy (PLM)

Project: 3045 Maffett St.

Report To:

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

ARI Report # 16-65045

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/26/16 Date Reported: 05/26/16

Sample Information

Asbestos Type/Percent

Asbestos Present: YES

Non-Asbestos

Other - 90%

Lab ID #: 65045 - 23

Cust. #: MS-HM-12A

Material: Light Brown 9x9 Vinyl Tile

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 2

Asbestos Present: **NO**

No Asbestos Observed

Chrysotile - 10%

Other - 100%

Lab ID #: 65045 - 23a Cust. #: MS-HM-12A

Material: Mastic

Location:

Appearance: black,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 65045 - 24

Asbestos Present:

Cust. #: MS-HM-12B

Material: Light Brown 9x9 Vinyl Tile

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

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Test Method, Polarized Light Microscopy (PLM)

Project: 3045 Maffett St.

Report To:

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

ARI Report # 16-65045

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/26/16 Date Reported: 05/26/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65045 - 24a

Cust. #: MS-HM-12B

Material: Mastic

Location:

Appearance: black,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 65045 - 25

Cust. #: MS-HS-01A

Material: Plaster

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Lab ID #: 65045 - 26

Cust. #: MS-HS-01B

Material: Plaster

Location:

Appearance: grey,fibrous,homogenous

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 - 2%

Other - 98%

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: 3045 Maffett St.

Report To:

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

ARI Report # 16-65045

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/26/16

Date Reported: 05/26/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 2%

Other - 98%

Lab ID #: 65045 - 27

Cust. #: MS-HS-01C

Material: Plaster

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 2% Other - 98%

Lab ID #: 65045 - 28 Cust. #: MS-HS-01D

Material: Plaster

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: NO

Cellulose - 2%

Lab ID #: 65045 - 29 Cust. #: MS-HS-01E

No Asbestos Observed

Other - 98%

Material: Plaster

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: 3045 Maffett St.

Report To:

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

ARI Report # 16-65045

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/26/16 Date Reported: 05/26/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Other - 100%

Lab ID #: 65045 - 30

Cust. #: MS-HS-02A

Material: Wallboard/Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 65045 - 30a

Cust. #: MS-HS-02A

Material: Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Lab ID #: 65045 - 31

Cust. #: MS-HS-02B

Material: Wallboard/Plaster Finish Coat

Location:

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%

Other - 98%

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: 3045 Maffett St.

Report To:

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

ARI Report # 16-65045

Date Collected: 05/22/16

Date Received: 05/23/16 Date Analyzed: 05/26/16

Date Reported: 05/26/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65045 - 31a

Cust. #: MS-HS-02B Material: Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Asbestos Present: NO No Asbestos Observed

Cellulose - 2%

Other - 98%

Other - 100%

Lab ID #: 65045 - 32

Cust. #: MS-HS-02C

Material: Wallboard/Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 65045 - 32a

Cust. #: MS-HS-02C

Material: Base Coat

Location:

Appearance: grey, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: **NO**

No Asbestos Observed

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.



Test Method, Polarized Light Microscopy (PLM)

Project: 3045 Maffett St.

Report To:

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

ARI Report # 16-65045

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/26/16 Date Reported: 05/26/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 65045 - 33

Cust. #: MS-HS-02D

Material: Wallboard/Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: **NO**

Cellulose - 2%

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 98%

Other - 100%

Material: Base Coat

Lab ID #: 65045 - 33a

Cust. #: MS-HS-02D

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Lab ID #: 65045 - 34

Cust. #: MS-HS-02E

Material: Wallboard/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: 3045 Maffett St.

Report To:

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

ARI Report #

16-65045 Date Collected: 05/22/16

Date Received: 05/23/16 Date Analyzed: 05/26/16

Date Reported: 05/26/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 65045 - 34a

Cust. #: MS-HS-02E

Material: 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 #: 65045 - 35

Cust. #: MS-HS-02F

Material: Wallboard/Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 65045 - 35a

Cust. #: MS-HS-02F

Material: Base Coat

Location:

Appearance: grey, 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

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 3045 Maffett St.

Report To:

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

ARI Report # 16-65045

Date Collected: 05/22/16 Date Received: 05/23/16

Date Analyzed: 05/26/16

Date Reported: 05/26/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 65045 - 36

Cust. #: MS-HS-02G

Material: Wallboard/Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 2%

Other - 98%

Cust. #: MS-HS-02G

Material: Base Coat

Lab ID #: 65045 - 36a

Location:

Appearance: grey,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

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

65045

ALLA Mesearch, 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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48 hour Other: Rush Address: Phone: City, St., Zip: Client Name: Turn Around Times: (Circle One) Lab ID# (888) 449-4566 24 hour % hou 10 8 1 S CP Lansing, MI 48901 Red Cedar Consulting PO Box 13216 MS-HM-01B MS- HM-01A MS-4M-06A MS-HM-00A MS-HM-0aB MS-HM-05B MS-HM-03B MS-HM-03A W2-HW-04A MS-HM-64B MS-HM-05A TTP) All Samples Except Plaster Client ID# Fax: (888) 448-8739 by: The lyss Brown 9x9 Vinul Tile Rolled Roofing Rolled Roofing
Speckled 9x9 Vinul Tite Brown 9x9 Viny Tile Asphalt Shingle Asphalt Shingle may Linoleum Stone Linoleum Stare Linoleum Speckled 9x9 VinylTive Mold: Asbestos: Bulk Lead: TEM: Material/Location Bulk Bulk **AHERA 7400** apaquet@redcedarconsulting.net PLM EPA 600, PC all samples with a detection of <5% ACM. × Wipe Wipe Tape Date of Survey: 5.22.16 Contact Person: Aaron Paquet Project #: Project: 3045 maffett Bulk/NOB Air Point Count BioSIS Volume EPA Level II Paint Other Area PCM Soil 4 Viable Results Lab Use Only
Log-In ____ Report.

Date:

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Relinquished by:

Received by:

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Relinquished by:

Received by:

Date:

Date:

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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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				Tan Linoleum	MS-HM-09B	14
				Jan Linder	MS-HM-09A	4)
				Glazing	MS-HM-08B	16
				Glazing	M5-HM-08A	/5
				Daywall	MS-4M-073	14
				Dogwall	MS-HM-07A	21
				Gray Linoleum	MS-HM-OLOB	2
Results	Area	Volume	ocation	Material/Location	Client ID#	Lab ID#
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	Paint Soil	AirPai	Wipe	Lead: Bulk		48 hour 72 hour
	PCM	Point Count	Wipe	Aspesios: Dulk		Rush 24 hour
consultir f <5% ACM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	all samples with a	Ã	PLM	Around Times: (Circle One)	Turn Arou
	Aaron Paquet	1.	_ Contact Person:	(888) 448-8739	9-4566 Fax:	Phone: (888) 449-456
		#:	_ Project # :		Lansing, MI 48901	City, St., Zip:
Report	RH St.	Project: 3045 Maffett St.	Project		PO Box 13216	Address:
	97. K	Date of Survey: 5.22.16	Date of t	ing	Red Cedar Consulting	Client Name: R

Rev: 12/03 Work Forms: COC

ATEX 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: 5/15-14	Kelinquished by:		3		2	06	29	38	75	26	25	24	رړو	Lab ID#		Other:	48 hour 72 hour	Rush 24 hour	Turn Aroun	Phone: (888)449-456	., Zip: _	Address: PO	Client Name: Red
Date:	Received by:		000 -SH-SM	MS-HS-02C	MS-HS- 02B	M5-H5-02A	MS-HS-OIE	MS-HS-010	MS-HS- OIC	MS-HS-OIR	MS-HS-OIA	MS-HM1-10B	481-WH-SM	Client ID#	שירבה מעווה בפי מערבה בירבה ב	TTP all camples Ed			Around Times: (Circle One)	4566 Fax:	Lansing, MI 48901	Box 13216	d Cedar Consulting
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APEX RESEARCH

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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: 59316 Date:	Relinquished by: Received by:					36 WS-HS- 096	35 MS-HS-00F	54 MS-HS-08E	Lab ID# Client ID#	TEM:		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 :	y:Relinquished by:					Wallboard / Plaster	Wallboard/Plaster	Wallboard /Plaster	Material/Location	Except Plaster TEM: AHERA 7400 Bulk/NOB	Mold: Bulk Tape	Lead: Bulk Wipe	Asbestos: Bulk Wipe	PLM EPA 60	(888) 448-8739		Project: 3 ₀ 45	ing Date of Survey
Date:	Received by:								Volume Area	DB EPA Level II	BioSIS Other V	Air Paint Soil	Point Count PCM	apaquet@redcedarconsulting.net	Person: Aaron Paquet		7	Survey: 5.29.116
									Results		Viable		1	onsulting.net <5% ACM.			Report	Lab Use Only Log-In

Rev: 12/03 Work Forms: COC

Red Cedar Consulting

Tables

Table 1 - Summary of Hazardous Materials, 3045 Maffett St., Muskegon Heights, Michigan

	Hazardous Materials Description and Location	
Location	Material Description	Quantity
Garage	4' Fluorescent Bulb (Fixture and Ballast Only)	3
Garage	Fuel Oil Tank	1
Exterior	Automobile Tire	3
Living	Smoke Detector	1
S Bedroom	Smoke Detector	1
N Bedroom	Smoke Detector	1
Living	Thermostat	1
Pantry	Gallon Container Misc. Paint	1
Garage	Quart Container Mastic	1
2 nd Fl. Living	Smoke Detector	1
2 nd Fl. Bath	Smoke Detector	1
2 nd Fl. Bedroom	Smoke Detector	2
2 nd Fl. Bath	2' Fluorescent Bulb (Fixture and Ballast Only)	2
2 nd Fl. Bedroom	2' Fluorescent Bulb (Fixture and Ballast Only)	2
Basement	Smoke Detector	1

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 3045 Maffett St., Muskegon Heights, Michigan

61Sample 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/ND/ND/ND/ ND	Exterior	NA
MS-HM-01B	Asphalt Shingle	No	M	Category I	ND/ND/ND/ND	Exterior	NA
MS-HM-02A	Rolled Roofing	No	M	Category I	5%/ND	Garage Exterior	820 sq. ft.
MS-HM-02B	Rolled Roofing	No	M	Category I	NA/ND	Garage Exterior	NA
MS-HM-03A	Speckled 9"x9" Vinyl Tile	No	M	Category I	5% CH/ND	Closet/Bath	38 sq. ft.
MS-HM-03B	Speckled 9"x9" Vinyl Tile	No	M	Category I	ND	Closet/Bath	NA
MS-HM-04A	Stone Linoleum	No	M	Category I	ND	N Bedroom Closet	NA
MS-HM-04B	Stone Linoleum	No	M	Category I	ND	N Bedroom Closet	NA
MS-HM-05A	Brown 9"x9" Vinyl Tile	No	M	Category I	10% CH/ND	Sun Room/Hall	418 sq. ft.
MS-HM-05B	Brown 9"x9" Vinyl Tile	No	M	Category I	NA/ND	Sun Room/Hall	NA
MS-HM-06A	Gray Linoleum	No	M	Category I	ND	2 nd Fl. Kitchen	NA
MS-HM-06B	Gray Linoleum	No	M	Category I	ND	2 nd . Fl. Kitchen	NA
MS-HM-07A	Drywall	Yes	M	Category II	ND	S Bedroom Ceiling	NA
MS-HM-07B	Drywall	Yes	M	Category II	ND	S Bedroom Wall	NA
MS-HM-08A	Glazing	Yes	M	Category II	ND	Living/Dining	NA
MS-HM-08B	Glazing	Yes	M	Category II	ND	2 nd Fl. W Bedroom	NA
MS-HM-09A	Tan Linoleum	No	M	Category I	ND	2 nd Fl. Dining	NA
MS-HM-09B	Tan Linoleum	No	M	Category I	ND	2 nd Fl. Dining	NA
MS-HM-10A	Tan 9"x9" Vinyl Tile	No	M	Category I	ND/ND	2 nd Fl. Rear Hall	NA
MS-HM-10B	Tan 9"x9" Vinyl Tile	No	M	Category I	ND/ND	2 nd Fl. Rear Hall	NA
MS-HM-11A	Red & White 12x12 Vinyl Tile	No	M	Category I	ND/ND	Basement Dining	NA
MS-HM-11B	Red & White 12x12 Vinyl Tile	No	M	Category I	ND/ND	Basement Dining	NA
MS-HM-12A	Light Brown 9"x9" Vinyl Tile	No	M	Category I	10%/ND	Basement Bath	171 sq. ft.
MS-HM-12B	Light Brown 9"x9" Vinyl Tile	No	M	Category I	NA/ND	Basement Bath	NA
MS-HS-01A	Plaster	No	S	Category II	ND/ND	Living Wall	NA
MS-HS-01B	Plaster	No	S	Category II	ND/ND	N Bedroom Wall	NA
MS-HS-01C	Plaster	No	S	Category II	ND/ND	N Bedroom Ceiling	NA

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 3045 Maffett St., Muskegon Heights, Michigan

61Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
MS-HS-01D	Plaster	No	S	Category II	ND/ND	2 nd Fl. Living Ceiling	NA
MS-HS-01E	Plaster	No	S	Category II	ND/ND	2 nd Fl. Living Wall	NA
MS-HS-02A	Wallboard/Plaster	No	S	Category II	ND/ND	Kitchen Ceiling	NA
MS-HS-02B	Wallboard/Plaster	No	S	Category II	ND/ND	Sun Room Ceiling	NA
MS-HS-02C	Wallboard/Plaster	No	S	Category II	ND/ND	Living Wall	NA
MS-HS-02D	Wallboard/Plaster	No	S	Category II	ND/ND	N Bedroom Wall	NA
MS-HS-02E	Wallboard/Plaster	No	S	Category II	ND/ND	2 nd Fl. Living Ceiling	NA
MS-HS-02F	Wallboard/Plaster	No	S	Category II	ND/ND	2 nd Fl. E Bedroom Wall	NA
MS-HS-02G	Wallboard/Plaster	No	S	Category II	ND/ND	2 nd Fl. Kitchen Wall	NA

Abbreviations

Notes:

Material Types

 $\begin{array}{lll} M &= \mbox{Miscellaneous building material} & \mbox{NQ} &= \mbox{Not quantified} \\ TSI &= \mbox{Thermal System Insulation} & \mbox{NA} &= \mbox{Not applicable} \\ \end{array}$

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, 3045 Maffett St., Muskegon Heights, Michigan

	Asbestos Containing Material Description a	nd Location			
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity
Building Exterior	Transite Siding	No	Fair	M	3,348 sq. ft.
Basement Boiler Pipe	Air-O-Cell 4"	Yes	Fair	TSI	91 lin. ft.
Basement Boiler Room Floor	Air-O-Cell Debris	Yes	Fair	TSI	2 lin. ft.

Notes:

Material Types

M = Miscellaneous building material TSI = Thermal System Insulation

S = Surfacing Material

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

Abbreviations

Table 4 - Summary of All Asbestos Containing Materials, 3045 Maffett St., Muskegon Heights, Michigan

Exterior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Garage Roof	Rolled Roofing		No	820 sq. ft.
		Total		820 sq. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Basement Bath	Light Brown 9"x9" Vinyl Tile		No	171 sq. ft.
Sun Room/Hall	Brown 9"x9" Vinyl Tile		No	418 sq. ft.
Closet/Bath	Speckled 9"x9" Vinyl Tile		No	38 sq. ft.
		Total		627 sq. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Basement Boiler Pipe	Air-O-Cell 4"		Yes	91 lin. ft.
Basement Boiler Room Floor	Air-O-Cell Debris		Yes	2 lin. ft.
		Total		93 lin. ft.
Exterior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Building Exterior	Transite Siding		No	3,348 sq. ft.
		Total		3,348 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.

Table 4 - Summary of All Asbestos Containing Materials, 3045 Maffett St., 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 27, 2016

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 3100 9th St., Muskegon Heights, MI 49444
Parcel ID: 61-26-770-038-0039-00

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 3100 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 a 400 sq. ft. attached garage and approximate 1,120 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 living room, dining room, kitchen, bath, bedroom and hallway on the first floor while the second floor contains two bedrooms.

VISUAL INSPECTION AND SAMPLING

Asbestos Containing Materials Inspection

Mr. Aaron Paquet of Red Cedar Consulting (Red Cedar), an accredited State Of Michigan/EPA Asbestos Building Inspector (Accreditation Number A30955) whom completed training per the Michigan Asbestos

Project No.: 16-1070 Muskegon County Land Bank Parcel ID: 61-26-770-038-0039-00

Workers Accreditation Act 440 completed an inspection of the Subject Property on May 8, 2016 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
- Drywall
- Glazing
- Plaster

Red Cedar staff collected thirteen 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 thirteen samples is included as Attachment A.

Hazardous Materials Inspection

On May 8, 2016 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

Muskegon County Land Bank Parcel ID: 61-26-770-038-0039-00

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, thirteen 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: 61-26-770-038-0039-00

Friable ACM's

A window glazing sample collected from a window in the Basement was found to contain up to 10% 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 32" wide x 12" 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:

• Bathroom (1 register, 20 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.

• Bathroom (1 register, 20 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 32" wide x 12" 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: 61-26-770-038-0039-00

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:

- Television (3)
- Automobile Tire (3)
- 5-Gallon Container Misc. Paint (1)
- Pint Container Misc. Paint/Adhesive (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: 61-26-770-038-0039-00

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

Caron 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: 3100 Ninth St.

Report To:

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

ARI Report # 16-64719

Date Collected: 05/08/16 Date Received: 05/11/16 Date Analyzed: 05/16/16

Date Reported: 05/16/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Fiberglass - 30%

Other - 70%

Lab ID #: 64719 - 01

Cust. #: ST-HM-01A Material: Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 4

Asbestos Present: **NO**

No Asbestos Observed

Fiberglass - 30%

Other - 70%

Cust. #: ST-HM-01A

Material: Shingle

Lab ID #: 64719 - 01a

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 4

Lab ID #: 64719 - 01b

Cust. #: ST-HM-01A

Material: Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 3 of 4

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: 3100 Ninth St.

Report To:

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

ARI Report # 16-64719

Date Collected: 05/08/16 Date Received: 05/11/16

Date Analyzed: 05/16/16 Date Reported: 05/16/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 50%

Other - 50%

Lab ID #: 64719 - 01c

Cust. #: ST-HM-01A

Material: Tar Paper

Location:

Appearance: black,fibrous,homogenous

Layer: 4 of 4

Asbestos Present: **NO** No Asbestos Observed

Fiberglass - 30% Other - 70%

Cust. #: ST-HM-01B

Material: Shingle

Lab ID #: 64719 - 02

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 4

Asbestos Present: NO

No Asbestos Observed

Fiberglass - 30%

Other - 70%

Lab ID #: 64719 - 02a Cust. #: ST-HM-01B

Material: Shingle

Location:

Appearance: black,fibrous,homogenous

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

Layer: 2 of 4

Robert T. Letarte Jr., Laboratory Director

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Test Method, Polarized Light Microscopy (PLM)

Project: 3100 Ninth St.

Report To:

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

ARI Report # 16-64719

Date Collected: 05/08/16 Date Received: 05/11/16

Date Analyzed: 05/16/16

Date Reported: 05/16/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 40%

Other - 60%

Lab ID #: 64719 - 02b

Cust. #: ST-HM-01B

Material: Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 3 of 4

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 50%

Other - 50%

Lab ID #: 64719 - 02c Cust. #: ST-HM-01B

Material: Tar Paper

Location:

Appearance: black, fibrous, homogenous

Layer: 4 of 4

Lab ID #: 64719 - 03

Asbestos Present: NO

No Asbestos Observed

Cellulose - 15%

Cust. #: ST-HM-02A

Fiberglass - 15%

Material: Yellow Linoleum

Other - 70%

Location:

Appearance: yellow,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: 3100 Ninth St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64719

Date Collected: 05/08/16 Date Received: 05/11/16 Date Analyzed: 05/16/16

Date Reported: 05/16/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 15%

Fiberglass - 15%

Other - 70%

Lab ID #: 64719 - 04

Cust. #: ST-HM-02B

Material: Yellow Linoleum

Location:

Appearance: yellow,fibrous,nonhomogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Cellulose - 20%

Other - 80%

Material: Drywall

Lab ID #: 64719 - 05

Cust. #: ST-HM-03A

Location:

Location

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

Lab ID #: 64719 - 05a

Cust. #: ST-HM-03A

Material: Joint Compound

Location:

Appearance: white,nonfibrous,homogenous

Layer: 2 of 2

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: 3100 Ninth St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64719

Date Collected: 05/08/16 Date Received: 05/11/16 Date Analyzed: 05/16/16

Date Reported: 05/16/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 20%

Other - 80%

Lab ID #: 64719 - 06

Cust. #: ST-HM-03B

Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

. - 37

No Asbestos Observed

Asbestos Present: **NO**

Cellulose - 1% Other - 99%

Cust. #: ST-HM-03B

Lab ID #: 64719 - 06a

Material: Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Lab ID #: 64719 - 07

Cust. #: ST-HM-04A

Material: Glazing

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: YES

Other - 90%

Chrysotile - 10%

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

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 3100 Ninth St.

Report To:

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

Lansing, MI 48901

ARI Report # 16-64719

Date Collected: 05/08/16 Date Received: 05/11/16

Date Analyzed: 05/16/16 Date Reported: 05/16/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64719 - 08

Cust. #: ST-HM-04B Material: Glazing

Location: Appearance: Layer: of Asbestos Present:

NOT ANALYZED

Asbestos Present: **NO**

No Asbestos Observed

Lab ID #: 64719 - 09

Cust. #: ST-HS-01A

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 64719 - 09a

Cust. #: ST-HS-01A

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Cellulose - 2%

Other - 100%

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: 3100 Ninth St.

Report To:

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

ARI Report # 16-64719

Date Collected: 05/08/16 Date Received: 05/11/16 Date Analyzed: 05/16/16

Date Reported: 05/16/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64719 - 10

Cust. #: ST-HS-01B

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 64719 - 10a

Cust. #: ST-HS-01B

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Lab ID #: 64719 - 11

Cust. #: ST-HS-01C

Material: Plaster

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Asbestos Present: **NO**

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

Cellulose - 2%

Cellulose - 5%

Other - 95%

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: 3100 Ninth St.

Report To:

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

ARI Report # 16-64719

Date Collected: 05/08/16 Date Received: 05/11/16 Date Analyzed: 05/16/16

Date Reported: 05/16/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

Asbestos Present: **NO**

No Asbestos Observed

No Asbestos Observed

Non-Asbestos

Cellulose - 5%

Cellulose - 5%

Other - 95%

Other - 95%

Lab ID #: 64719 - 12

Cust. #: ST-HS-01D

Material: Plaster

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Lab ID #: 64719 - 13

Cust. #: ST-HS-01E

Material: Plaster

Location:

Appearance: grey,fibrous,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.

Apex # 64719

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



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

Date: 5-16-16. Rev. 12/03 Work Forms: COC	Relinquished by:					Ū	12	Lab ID#		Other:	ŭ.	Rush 24 hour	Turn Around Times: (Circle One)	Phone: (888) 449-4566	, Zip: _	Address: P	Client Name: R
Date:	Received by:					ST-HS-OLE	ST-145-01D	Client ID#		(TTP) All Samples Except plaster			nd Times:	-4566 Fax:	Lansing, MI 48901	PO Box 13216	Red Cedar Consulting
Date: APEX RESEARCH Date:	Relinquished by:					Plaster	Plasto	Material/Location Volu	TEM: AHERA 7400 Bulk/NOB	Mold: Bulk Tape BioSIS	Lead: Bulk Wipe Air	os: Bulk Wipe Point C	PLM EPA 600, PC all samples	(888) 448-8739	Project #:	Project: 21 m	Date of Survey
Date :	Received by:						The second secon	ume Area Results	EPA Level II	Other Viable	Paint Soil	ount PCM	apaque ith a de	Aaron Paquet	Report	The state of	·

Red Cedar Consulting

Tables

 $Table\ 1\ -\ Summary\ of\ Hazardous\ Materials,\ 3100\ 9^{th}\ St.,\ Muskegon\ Heights,\ Michigan$

	Hazardous Materials Description and Location	
Location	Material Description	Quantity
Garage	Television	2
Garage	Automobile Tire	1
Exterior	Automobile Tire	2
Kitchen	Television	1
Basement	5 Gallon Container Misc. Paint	1
Basement	Pint Container Misc. Paint/Adhesive	2

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results 3100 9th St., Muskegon Heights, Michigan

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
ST-HM-01A	Asphalt Shingle	No	M	Category I	ND/ND/ND/ND	Exterior	NA
ST-HM-01B	Asphalt Shingle	No	M	Category I	ND/ND/ND/ND	Exterior	NA
ST-HM-02A	Yellow Linoleum	No	M	Category I	ND	Hall	NA
ST-HM-02B	Yellow Linoleum	No	M	Category I	ND	Hall	NA
ST-HM-03A	Drywall	No	M	Category II	ND/Trace	Living	NA
ST-HM-03B	Drywall	No	M	Category II	ND/ND	Kitchen	NA
ST-HM-04A	Glazing	Yes	M	Category II	10% CH	Basement	6 windows
ST-HM-04B	Glazing	Yes	M	Category II	NA	Basement	NA
ST-HS-01A	Plaster	No	S	Category II	ND/ND	Kitchen	NA
ST-HS-01B	Plaster	No	S	Category II	ND/ND	SW Bedroom	NA
ST-HS-01C	Plaster	No	S	Category II	ND	Living	NA
ST-HS-01D	Plaster	No	S	Category II	ND	2 nd Fl. N Bedroom	NA
ST-HS-01E	Plaster	No	S	Category II	ND	2 nd Fl. Landing	NA

Notes:

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, 3100 9th St., Muskegon Heights, Michigan

A	Asbestos Containing Material Description a	nd Location			
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity
Bathroom (1 register, 20 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, 3100 9th St., Muskegon Heights, Michigan

Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Bathroom (1 register, 20 sq. ft.)	HVAC Duct Wrap		Yes	20 sq. ft.
		Total		20 sq. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Basement (6 windows 32" wide x 12" 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 27, 2016

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 3109 Glendale St., Muskegon Heights, MI 49444

Parcel ID: 61-26-770-019-0005-00

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 3109 Glendale., 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 .30 acre residential parcel which contains a 352 sq. ft. detached garage and approximate 1,170 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 living room, dining room, kitchen, and bedroom on the first floor while the second floor contains a bath and three bedrooms.

VISUAL INSPECTION AND SAMPLING

Asbestos Containing Materials Inspection

Mr. Aaron Paquet of Red Cedar Consulting (Red Cedar), an accredited State Of Michigan/EPA Asbestos Building Inspector (Accreditation Number A30955) whom completed training per the Michigan Asbestos

Project No.: 16-1070 Muskegon County Land Bank Parcel ID: 61-26-770-019-0005-00

Workers Accreditation Act 440 completed an inspection of the Subject Property on May 15, 2016 for suspected asbestos containing building materials.

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

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

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

- Asphalt Shingle
- Linoleum
- 1'x1' Striated Ceiling Tile
- 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.

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Hazardous Materials Inspection

On May 15, 2016 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.

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Friable ACM's

A window glazing sample collected from a window in the Living Room was found to contain up to 2.5% asbestos following analysis. The assessment to quantify the extent of this material identified twenty windows at the following locations that would fall into the same homogenous group. The locations of the windows are listed below:

- Living (2 windows 40" wide x 56" tall)
- Living (1 window 34" wide x 56" tall)
- Living (2 windows 22" wide x 56" tall)
- SE Bedroom (1 window 28" wide x 56" tall)
- SE Bedroom (1 window 40" wide x 28" tall)
- Dining (2 windows 28" wide x 56" tall)
- Kitchen (1 window 28" wide x 52" tall)
- Kitchen (1 window 40" wide x 20" tall)
- 2nd Fl. E Bedroom (2 windows 28" wide x 56" tall)
- 2nd Fl. N Bedroom (1 window 28" wide x 56" tall)
- 2nd Fl. W Bedroom (2 windows 28" wide x 56" tall)
- 2nd Fl. Bathroom (1 window 28" wide x 56" tall)
- Basement (3 windows 28" 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, 10 sq. ft.)
- Living (1 register, 10 sq. ft.)
- Dining (1 register, 10 sq. ft.)
- SE Bedroom (1 register, 10 sq. ft.)
- 2nd Fl. Bath (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.)
- 2nd Fl. N Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- 2nd Fl. W Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- Basement (Misc. HVAC wrap on Cold Air Ductwork, 5 sq. ft.)

Category I ACM

One type of resilient floor covering (Tan Linoleum) located within the Dining Room 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

Plaster samples, collected from the Living Room, 1st Fl. Bedroom, 2nd Fl. E Bedroom and 2nd Fl. W Bedroom were each found to contain up to 1.75% asbestos following analysis. The assessment to quantify the extent of this material identified approximately 6,814 sq. ft. of plaster within the Building.

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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.)
- Living (1 register, 10 sq. ft.)
- Dining (1 register, 10 sq. ft.)
- SE Bedroom (1 register, 10 sq. ft.)
- 2nd Fl. Bath (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.)
- 2nd Fl. N Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- 2nd Fl. W Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)
- Basement (Misc. HVAC wrap on Cold Air Ductwork, 5 sq. ft.)

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

- Living (2 windows 40" wide x 56" tall)
- Living (1 window 34" wide x 56" tall)
- Living (2 windows 22" wide x 56" tall)
- SE Bedroom (1 window 28" wide x 56" tall)
- SE Bedroom (1 window 40" wide x 28" tall)
- Dining (2 windows 28" wide x 56" tall)
- Kitchen (1 window 28" wide x 52" tall)
- Kitchen (1 window 40" wide x 20" tall)
- 2nd Fl. E Bedroom (2 windows 28" wide x 56" tall)
- 2nd Fl. N Bedroom (1 window 28" wide x 56" tall)
- 2nd Fl. W Bedroom (2 windows 28" wide x 56" tall)
- 2nd Fl. Bathroom (1 window 28" wide x 56" tall)
- Basement (3 windows 28" 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.

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.

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The Category I resilient floor coverings (Tan 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.

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 (7)
- Thermostat (1)
- Automobile Tire (12)

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).

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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: 3109 Glendale St.

Report To:

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

ARI Report # 16-64879

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 30%

Other - 70%

Lab ID #: 64879 - 01

Cust. #: GS-HM-01A

Material: Asphalt Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 5

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 30%

Other - 70%

Material: Shingle

Lab ID #: 64879 - 01a

Cust. #: GS-HM-01A

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 5

Lab ID #: 64879 - 01b

Cust. #: GS-HM-01A

Material: Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 3 of 5

Asbestos Present: NO

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: 3109 Glendale St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64879

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 30%

Other - 70%

Lab ID #: 64879 - 01c

Cust. #: GS-HM-01A

Material: Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 4 of 5

Asbestos Present: **NO**No Asbestos Observed

Cellulose - 35% Other - 65%

Lab ID #: 64879 - 01d Cust. #: GS-HM-01A

Material: Tar Paper

Location:

Appearance: black, fibrous, homogenous

Layer: 5 of 5

Asbestos Present: NO

Cellulose - 30%

Lab ID #: 64879 - 02 Cust. #: GS-HM-01B

Material: Asphalt Shingle

No Asbestos Observed

Other - 70%

Location:

Appearance: black, fibrous, homogenous

Layer: 1 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: 3109 Glendale St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64879

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 30%

Other - 70%

Lab ID #: 64879 - 02a

Cust. #: GS-HM-01B

Material: Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 2 of 5

Lab ID #: 64879 - 02b

Cust. #: GS-HM-01B

Asbestos Present: NO

No Asbestos Observed

Cellulose - 30%

Other - 70%

Material: Shingle

Location:

A

Appearance: black, fibrous, homogenous

Layer: 3 of 5

Lab ID #: 64879 - 02c

Cust. #: GS-HM-01B

Material: Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 4 of 5

Asbestos Present: NO

No Asbestos Observed

Cellulose - 30%

Other - 70%

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

Robert T. Letarte Jr., Laboratory Director

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Test Method, Polarized Light Microscopy (PLM)

Project: 3109 Glendale St.

Report To:

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

ARI Report # 16-64879

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 35%

Other - 65%

Lab ID #: 64879 - 02d

Cust. #: GS-HM-01B

Material: Tar Paper

Location:

Appearance: black,fibrous,homogenous

Layer: 5 of 5

Asbestos Present: YES Chrysotile - 30%

Asbestos Present: NO

No Asbestos Observed

Other - 70%

Lab ID #: 64879 - 03 Cust. #: GS-HM-02A

Material: Tan Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 2

Lab ID #: 64879 - 03a

Cust. #: GS-HM-02A

Material: Flooring

Location:

Appearance: beige, fibrous, nonhomogenous

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

Layer: 2 of 2

Other - 65%

Cellulose - 35%

Robert T. Letarte Jr., Laboratory Director

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Test Method, Polarized Light Microscopy (PLM)

Project: 3109 Glendale St.

Report To:

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

ARI Report # 16-64879

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Cellulose - 35%

Other - 65%

Other - 100%

Lab ID #: 64879 - 04

Cust. #: GS-HM-02B Material: Tan Linoleum

Location:

NOT ANALYZED

Asbestos Present:

Appearance: Layer: 1 of 2

Lab ID #: 64879 - 04a

Cust. #: GS-HM-02B

Material: Flooring

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 2 of 2

Lab ID #: 64879 - 05

Cust. #: GS-HM-03A

Material: White 12"x12" Vinyl Tile

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 2

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: 3109 Glendale St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64879

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64879 - 05a

Cust. #: GS-HM-03A

Material: Mastic

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 #: 64879 - 06 Cust. #: GS-HM-03B

Material: White 12"x12" Vinyl Tile

Location:

Appearance: beige, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 64879 - 06a

Cust. #: GS-HM-03B

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

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 3109 Glendale St.

Report To:

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

ARI Report # 16-64879

Date Collected: 05/15/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 35%

Other - 65%

Lab ID #: 64879 - 07

Cust. #: GS-HM-04A

Material: Yellow Linoleum

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 35%

Other - 65%

Cust. #: GS-HM-04B Material: Yellow Linoleum

Lab ID #: 64879 - 08

Location:

Appearance: beige, fibrous, nonhomogenous

Layer: 1 of 1

Lab ID #: 64879 - 09

Cust. #: GS-HM-05A

Material: White Striated 1'x1' 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

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Test Method, Polarized Light Microscopy (PLM)

Project: 3109 Glendale St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64879

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 95%

Other - 97.50%

Other - 5%

Lab ID #: 64879 - 10

Cust. #: GS-HM-05B

Material: White Striated 1'x1' Ceiling Tile

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64879 - 11

Cust. #: GS-HM-06A

Material: Glazing

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: YES

Chrysotile - 2.50%

Asbestos Present:

POINT COUNT RESULT

Lab ID #: 64879 - 12

Cust. #: GS-HM-06B

of

Material: Glazing

T. ...

Location: NOT ANALYZED

Appearance: Layer:

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

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 3109 Glendale St.

Report To:

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

ARI Report # 16-64879

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64879 - 13

Cust. #: GS-HM-07A

Material: Texture

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: **NO**

Cellulose - 15%

Lab ID #: 64879 - 13a Cust. #: GS-HM-07A

Material: Drywall

No Asbestos Observed

Fiberglass - 5%

Other - 80%

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Lab ID #: 64879 - 14 Cust. #: GS-HM-07B

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: 3109 Glendale St.

Report To:

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

ARI Report # 16-64879

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 15%

Fiberglass - 5%

Other - 80%

Lab ID #: 64879 - 14a

Cust. #: GS-HM-07B Material: Drywall

Location:

Appearance: white, fibrous, nonhomogenous

Material: White Linoleum Multi Layer

Layer: 2 of 2

Lab ID #: 64879 - 15

Cust. #: GS-HM-08A

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 20%

Fiberglass - 10%

Other - 70%

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

Asbestos Present: NO

Cellulose - 30%

No Asbestos Observed

Other - 70%

Cust. #: GS-HM-08A Material: Flooring

Lab ID #: 64879 - 15a

Location:

Appearance: green, fibrous, nonhomogenous

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: 3109 Glendale St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64879

Date Collected: 05/15/16 Date Received: 05/17/16 Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 20%

Fiberglass - 10%

Other - 70%

Other - 70%

Lab ID #: 64879 - 16

Cust. #: GS-HM-08B

Material: White Linoleum Multi Layer

Location:

Appearance: white, fibrous, nonhomogenous

Layer: 1 of 2

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 30%

Lab ID #: 64879 - 16a Cust. #: GS-HM-08B

Material: Flooring

Location:

Appearance: green, fibrous, nonhomogenous

Layer: 2 of 2

Asbestos Present: **NO**No Asbestos Observed

Other - 100%

Cust. #: GS-HM-09A

Lab ID #: 64879 - 17

Material: Brown 12"x12" Vinyl Tile

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: 3109 Glendale St.

Report To:

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

ARI Report # 16-64879

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64879 - 17a

Cust. #: GS-HM-09A

Material: Mastic

Location:

Appearance: clear,nonfibrous,homogenous

Layer: 2 of 2

Asbestos Present: **NO** No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Lab ID #: 64879 - 18 Cust. #: GS-HM-09B

Material: Brown 12"x12" Vinyl Tile

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 1 of 2

Lab ID #: 64879 - 18a

Cust. #: GS-HM-09B

Material: Mastic

Location:

Appearance: clear,nonfibrous,homogenous

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

Layer: 2 of 2

Other - 100%

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 3109 Glendale St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64879

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64879 - 19

Cust. #: GS-HS-01A

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: **YES**

ES Cellulose - 2%

Chrysotile - 1.50%

Other - 96.50%

Other - 100%

Material: Plaster Base Coat

Lab ID #: 64879 - 19a

Cust. #: GS-HS-01A

Location:

Appearance: grey,fibrous,homogenous Layer: 2 of 2 POINT COUNT RESULT

_ . ___. ..

Lab ID #: 64879 - 20

Cust. #: GS-HS-01B

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: 3109 Glendale St.

Report To:

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

ARI Report # 16-64879

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/20/16

Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64879 - 20a

Cust. #: GS-HS-01B

Material: Plaster Base Coat

Location:

Layer: 2 of 2

Asbestos Present: YES

POINT COUNT RESULT

Asbestos Present: YES

POINT COUNT RESULT

Chrysotile - 1.75%

Chrysotile - 1.50%

Other - 96.50%

Appearance: grey,fibrous,homogenous

Lab ID #: 64879 - 21

Cust. #: GS-HS-01C

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 64879 - 21a

Cust. #: GS-HS-01C

Material: Plaster Base Coat

Location:

Appearance: grey, fibrous, homogenous

Layer: 2 of 2

Cellulose - 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

Cellulose - 2%

Other - 96.25%

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 3109 Glendale St.

Report To:

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

ARI Report # 16-64879

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64879 - 22

Cust. #: GS-HS-01D

Material: Plaster Finish Coat

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 64879 - 22a

Cust. #: GS-HS-01D

Material: Plaster Base Coat

Location:

Layer: 2 of 2

Asbestos Present: YES

POINT COUNT RESULT

Chrysotile - 1.50%

Cellulose - 2%

Other - 100%

Other - 96.50%

Appearance: grey,fibrous,homogenous

Lab ID #: 64879 - 23

Cust. #: GS-HS-01E

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: 3109 Glendale St.

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

ARI Report # 16-64879

Date Collected: 05/15/16 Date Received: 05/17/16

Date Analyzed: 05/20/16 Date Reported: 05/20/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64879 - 23a

Cust. #: GS-HS-01E

Material: Plaster Base Coat

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Asbestos Present: YES

POINT COUNT RESULT

Chrysotile - 1.25%

Cellulose - 2%

Other - 96.75%

Lab ID #:

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

Lab ID #:

Cust. #:

Asbestos Present:

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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64879

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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Date: S/C/N Date: NAY	Relinquished by: Received by: Received by:	1 65- HM-OUA Glazing	O GS-HM-05B White S	9 GS-HM-OSA White S	6 GS-HM-04B Yellow	65-4m-04A	6 GS-HM-03B White 1	S GS-HM-03A White	4 GS-AM-02B Tan L	3 GS-HM-08A Tan L	GS-4M-01B	GS- HM-OIA ASPIRAL	Lab ID # Client ID # 1	Out:All Samples Except Plaster TEM:		48 hour 72 hour Lead:	Rush 24 hour Asber	Turn Around Times: (Circle One)	449-4566 Fax: (888)	City, St., Zip: Lansing, MI 48901	Address: PO Box 13216	- 4 4
2016 Date:	Relinquished by:		white Stricted I'x I' Ceiling Tile	white Striated I'x1' Geiling Tite	Yellow Linoleum	Yellow Linoleum	White 10" x10" Vingl Tile	White 10" XID" Vinyl Tile	Tan Linoleum	Tan Linoleum	Asphalt Shingle	Asphalt Shingle	Material/Location	1: AHERA 7400 Bulk/NOB	Bulk Tape	d: Bulk Wipe Air	Wipe	PLM EPA 600, PC all sam	448-8739 Contact Perso	Project # :	Project : 3	
Date :	Received by:												Volume Area	EPA Level II	BioSIS Other Viable	ir Paint Soil	Point Count PCM	apaquet@r with a detec	SOn: Aaron Paquet		109 Glendale St.	
								of opposite the control of the contr					Results)le			sulting.net 5% ACM.			Report	

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



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	Date:		MAY 1 2016 Date:	Date :	Date: 4 (17)
	Received by		Relinquished by:	Received by:	Relinquished by:
			Plaster	GS- HS-010 7	2
			Plaster	65-H5-01C) <u>\</u>
			Haster	65-HS-018	30
			Plaster	63-H5-61A	
			Bown 12"x12" Vinyl Tile	65-HM-09B	75
			BOWN 19"x18" VING! TILE	GS-HM-OGA	7
			white Linoleum Multi-Layer	GS-HM-08B	16
			White Linoleyn Multi-Layer	GS-HM-08A	S. College
			Dywall	G5-MM-07B	71
			Daywall	G5-HM-07A	:(2)
			nlazina	635-HM-06B	पि
Results	Area	Volume	Material/Location	Client ID#	Lab ID #
	vel II)B EPA Level II			
	Other Viable	BioSIS	Mold: Bulk Tape	(TTP) All Samples Except	Other:
1	ıt Soil	Air Paint			48 hour 72 hour
	PCM	Point Count	Asbestos: Bulk Wipe		Rush 24 hour
llting.net		apaque samples with a d	PLM EPA 600,	Around Times: (Circle One)	Turn Aro
	Paquet	Person: Aaron	(888) 448-8739 Contact Person	(888) 449-4566 Fax:	Phone: (888) 4
Report	STRIUGHT (A.		Project # :	Lansing, MI 48901	City, St., Zip:
Log-In	2010	⊶ '	Project: 310a	PO Box 13216	Address:
Lab Use Only	, · · · · · · · · · · · · · · · · · · ·	Survev: ハースール。	Date of Survey	Red Cedar Consulting	Client Name:

Rev: 12/03 Work Forms: COC

RESERVE

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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	
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Relinquished by: Received by: Received by: Date: Styles Date: Rev: 12/03						23 GS-HS-01=	Lab ID # Client ID #		Other: (TTP) All Samples Except	Ē,	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
by: MAY 17 2018 Relinquished by:						Plaster	Material/Location	TEM: AHERA 7400 Bulk/NOB	Mold: Bulk Tape	Lead: Bulk Wipe	Asbestos: Bulk X Wipe	PLM I	148-8739		Project: 3/09	
							Volume	OB EPA Level II	BioSIS	Air Paint	Point Count		Person: Aaron		_ 1	Date of Survey: 5-15
Received by:						at the state of th	Area	/el II	Other Viable	Soil	PCM	apaquet@redcedarconsulting.net with a detection of <5% ACM.	Paquet		Glendale St.	5-15-16
							Results			1		ilting.net ACM.			Report	Lab Use Only

Rev: 12/03 Work Forms: COC

Red Cedar Consulting

Tables

Table 1 - Summary of Hazardous Materials, 3109 Glendale St., Muskegon Heights, Michigan

	Hazardous Materials Description and Location	
Location	Material Description	Quantity
Exterior	Automobile Tire	11
Living	Smoke Detector	1
Dining	Smoke Detector	1
Bedroom	Smoke Detector	1
Living	Thermostat	1
2 nd Fl. E Bedroom	Smoke Detector	1
2 nd Fl. N Bedroom	Smoke Detector	1
2 nd Fl. W Bedroom	Smoke Detector	1
2 nd Fl. Hall	Smoke Detector	1
Basement	Automobile Tire	1

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 3109 Glendale St., Muskegon Heights, Michigan

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
GS-HM-01A	Asphalt Shingle	No	M	Category I	ND/ND/ND/ ND/ND	Exterior	NA
GS-HM-01B	Asphalt Shingle	No	M	Category I	ND/ND/ND/ ND/ND	Exterior	NA
GS-HM-02A	Tan Linoleum	No	M	Category I	30% CH/ND	Dining	156 sq. ft.
GS-HM-02B	Tan Linoleum	No	M	Category I	NA/ND	Dining	NA
GS-HM-03A	White 12x12 Vinyl Tile	No	M	Category I	ND/ND	Kitchen	NA
GS-HM-03B	White 12x12 Vinyl Tile	No	M	Category I	ND/ND	Kitchen	NA
GS-HM-04A	Yellow Linoleum	No	M	Category I	ND/ND	SE Bedroom Closet	NA
GS-HM-04B	Yellow Linoleum	No	M	Category I	ND	SE Bedroom Closet	NA
GS-HM-05A	White Striated 1'x1' Ceiling Tile	Yes	M	Category II	ND	Living	NA
GS-HM-05B	White Striated 1'x1' Ceiling Tile	Yes	M	Category II	ND	Living	NA
GS-HM-06A	Glazing	Yes	M	Category II	2.5% CH	Living	20 Windows
GS-HM-06B	Glazing	Yes	M	Category II	NA	2 nd Fl. W Bedroom	NA
GS-HM-07A	Drywall	Yes	M	Category II	ND/ND	Kitchen Ceiling	NA
GS-HM-07B	Drywall	Yes	M	Category II	ND/ND	Kitchen Ceiling	NA
GS-HM-08A	White Linoleum Multilayer	No	M	Category I	ND/ND	2 nd Fl. Bath	NA
GS-HM-08B	White Linoleum Multilayer	No	M	Category I	ND/ND	2 nd Fl. Bath	NA
GS-HM-09A	Brown 12x12 Vinyl Tile	No	M	Category I	ND/ND	Basement	NA
GS-HM-09B	Brown 12x12 Vinyl Tile	No	M	Category I	ND/ND	Basement	NA
GS-HS-01A	Plaster	No	S	Category II	ND/1.5% CH	Living Wall	6,814 sq. ft.
GS-HS-01B	Plaster	No	S	Category II	ND/1.5% CH	Bedroom Wall	NA
GS-HS-01C	Plaster	No	S	Category II	ND/1.75% CH	Living Ceiling	NA
GS-HS-01D	Plaster	No	S	Category II	ND/1.5% CH	2 nd Fl. E Bedroom Wall	NA
GS-HS-01E	Plaster	No	S	Category II	ND/1.25% CH	2 nd Fl. W Bedroom Ceiling	NA

Notes:

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 3109 Glendale St., Muskegon Heights, Michigan

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

= Miscellaneous building material = Not quantified NQ TSI = Thermal System Insulation = Not applicable NA = Surfacing Material S ND = Not detected. Laboratory result is less than 1 % asbestos = Point Count Analysis PC lin. ft. = linear feet CH = 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, 3109 Glendale St., Muskegon Heights, Michigan

. A	Asbestos Containing Material Description	and Location			
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity
Living (1 register, 10 sq. ft.) Living (1 register, 10 sq. ft.) Dining (1 register, 10 sq. ft.) SE Bedroom (1 register, 10 sq. ft.) 2nd Fl. Bath (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.) 2nd Fl. N Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) 2nd Fl. N Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) 2nd Fl. W Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) Basement (Misc. HVAC wrap on Cold Air Ductwork, 5 sq. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	185 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, 3109 Glendale St., Muskegon Heights, Michigan

Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Dining	Tan Linoleum		No	156 sq. ft.
		Total		156 sq. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Living (2 windows 40" wide x 56" tall)	Glazing		Yes	2 Windows
Living (1 window 34" wide x 56" tall)	Glazing		Yes	1 Window
Living (2 windows 22" wide x 56" tall)	Glazing		Yes	2 Windows
SE Bedroom (1 window 28" wide x 56" tall)	Glazing		Yes	1 Window
SE Bedroom (1 window 40" wide x 28" tall)	Glazing		Yes	1 Window
Dining (2 windows 28" wide x 56" tall)	Glazing		Yes	2 Windows
Kitchen (1 window 28" wide x 52" tall)	Glazing		Yes	1 Window
Kitchen (1 window 40" wide x 20" tall)	Glazing		Yes	1 Window
2 nd Fl. E Bedroom (2 windows 28" wide x 56" tall)	Glazing		Yes	2 Window
2 nd Fl. N Bedroom (1 window 28" wide x 56" tall)	Glazing		Yes	1 Window
2 nd Fl. W Bedroom (2 windows 28" wide x 56" tall)	Glazing		Yes	2 Window
2 nd Fl. Bathroom (1 window 28" wide x 56" tall)	Glazing		Yes	1 Window
Basement (3 windows 28" wide x 20" tall)	Glazing		Yes	3 Windows
		Total		20 Windows
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Living (1 register, 10 sq. ft.) Living (1 register, 10 sq. ft.) Dining (1 register, 10 sq. ft.) SE Bedroom (1 register, 10 sq. ft.) 2 nd Fl. Bath (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) 2 nd Fl. E Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) 2 nd Fl. N Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) 2 nd Fl. N Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)	HVAC Duct Wrap		Yes	185 sq. ft.

Table 4 - Summary of All Asbestos Containing Materials, 3109 Glendale St., Muskegon Heights, Michigan

2nd Fl. W Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.) Basement (Misc. HVAC wrap on Cold Air Ductwork, 5 sq. ft.) **Total** 185 sq. ft. **Interior - Asbestos Containing Materials Material Description** Location Friable Approx. Quantity 1st Floor No Wall Plaster 2,484 sq. ft. 1st Floor Ceiling Plaster No 832 sq. ft. 2nd Floor Wall Plaster No 2,768 sq. ft. No 2nd Floor Ceiling Plaster 730 sq. ft. **Total** 6,814 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 27, 2016

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 3113 5th St., Muskegon Heights, MI 49444
Parcel ID: 61-26-770-022-0006-00

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 3113 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 a 576 sq. ft. attached garage and approximate 2,706 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 fiber lap siding over fiberboard while the roof was sealed with asphalt shingles. The Building can be further divided into a living room/dining room, kitchen, bath, three bedrooms, laundry room and rear entry on the first floor while the second floor contains a kitchen, bath, three bedrooms, a storage room and a landing.

VISUAL INSPECTION AND SAMPLING

Asbestos Containing Materials Inspection

Mr. Aaron Paquet of Red Cedar Consulting (Red Cedar), an accredited State Of Michigan/EPA Asbestos Building Inspector (Accreditation Number A30955) whom completed training per the Michigan Asbestos

Project No.: 16-1070 Muskegon County Land Bank Parcel ID: 61-26-770-022-0006-00

Workers Accreditation Act 440 completed an inspection of the Subject Property on May 8, 2016 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
- Fiber lap Siding
- Fiberboard
- Linoleum
- 12"x12" Vinyl Tile
- 9"x9" Vinyl Tile
- Drywall
- Glazing
- Plaster

Red Cedar staff collected thirty three 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 three samples is included as Attachment A.

Muskegon County Land Bank Parcel ID: 61-26-770-022-0006-00

Hazardous Materials Inspection

On May 8, 2016 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: 61-26-770-022-0006-00

Friable ACM's

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

Category I ACM

Four types of resilient floor covering (Stone 12x12 Vinyl Tile/Red 9"x9" Vinyl Tile, Tan Linoleum/ White 9"x9" Vinyl Tile, Brown 6"x6" Vinyl Tile/2-Layer Linoleum) located within the front entry, laundry room and 2nd fl. Landing, respectively, were found to contain up to 45% Chrysotile asbestos. The assessment to quantify the extent of this material identified approximately 345 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 resilient floor coverings (Stone 12x12 Vinyl Tile/Red 9"x9" Vinyl Tile, Tan Linoleum/ White 9"x9" Vinyl Tile, Brown 6"x6" Vinyl Tile/2-Layer 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.

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 (4)
- 4' Fluorescent Light (Fixture and Ballast Only) (1)
- 4' Fluorescent Bulb (4)
- 2' Fluorescent Light (Fixture and Ballast Only) (1)
- 2' Fluorescent Bulb (4)
- 5-Gallon Container Misc. Roof Cement (1)

Muskegon County Land Bank Parcel ID: 61-26-770-022-0006-00

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: 61-26-770-022-0006-00

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

Caron 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: 3113 Fifth St.

Report To:

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

ARI Report # 16-64736

Date Collected: 05/08/16 Date Received: 05/11/16

Date Analyzed: 05/17/16 Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 20%

Other - 80%

Lab ID #: 64736 - 01

Cust. #: FS-HM-01A

Material: Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 20%

Other - 80%

Material: Shingle

Cust. #: FS-HM-01B

Lab ID #: 64736 - 02

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64736 - 03

Cust. #: FS-HM-02A

Material: Fiberlap Siding

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Cellulose - 50%

Other - 50%

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

Robert T. Letarte Jr., Laboratory Director

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



Test Method, Polarized Light Microscopy (PLM)

Project: 3113 Fifth St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64736

Date Collected: 05/08/16 Date Received: 05/11/16

Date Analyzed: 05/17/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: **NO**

No Asbestos Observed

Non-Asbestos

Cellulose - 50%

Other - 50%

Lab ID #: 64736 - 04

Cust. #: FS-HM-02B

Material: Fiberlap Siding

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO**No Asbestos Observed

Cellulose - 80%

Cust. #: FS-HM-03A

Lab ID #: 64736 - 05

Material: Fiberboard

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

Cellulose - 80%

Lab ID #: 64736 - 06 Cust. #: FS-HM-03B

Material: Fiberboard

No Asbestos Observed

Other - 20%

Other - 20%

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: 3113 Fifth St.

Report To:

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

ARI Report # 16-64736

Date Collected: 05/08/16 Date Received: 05/11/16

Date Analyzed: 05/17/16 Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: YES

POINT COUNT RESULT

No Asbestos Observed

Chrysotile - 1.75%

Non-Asbestos

Other - 98.25%

Lab ID #: 64736 - 07

Cust. #: FS-HM-04A

Material: Stone 12x12 Vinyl Tile/Linoleum

Location:

Appearance: red,fibrous,homogenous

Layer: 1 of 2

Asbestos Present: **NO**

Other - 100%

Lab ID #: 64736 - 07a Cust. #: FS-HM-04A

Material: Red 9x9 Vinyl Tile

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Lab ID #: 64736 - 08

Asbestos Present:

Cust. #: FS-HM-04B

Material: Stone 12x12 Vinyl Tile, Red 9x9 Vinyl Tile

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

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Test Method, Polarized Light Microscopy (PLM)

Project: 3113 Fifth St.

Report To:

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

ARI Report # 16-64736

Date Collected: 05/08/16 Date Received: 05/11/16

Date Analyzed: 05/17/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

No Asbestos Observed

Non-Asbestos

Lab ID #: 64736 - 08a

Cust. #: FS-HM-04B

Material: Stone 12x12 Vinyl Tile, Red 9x9 Vinyl Tile

Location:

Appearance: white, nonfibrous, homogenous

Layer: 2 of 2

Lab ID #: 64736 - 09

Cust. #: FS-HM-05A

Material: Brown Linoleum

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64736 - 10

Cust. #: FS-HM-05B

Material: Brown Linoleum

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

Other - 100%

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

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 3113 Fifth St.

Report To:

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

ARI Report # 16-64736

Date Collected: 05/08/16

Date Received: 05/11/16 Date Analyzed: 05/17/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: YES

Chrysotile - 5%

Non-Asbestos

Other - 95%

Lab ID #: 64736 - 11

Cust. #: FS-HM-06A

Material: Tan Linoleum

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 3

Cellulose - 60%

Lab ID #: 64736 - 11a Cust. #: FS-HM-06A

Material: Tar Paper

Location:

Appearance: black, fibrous, homogenous

Asbestos Present: **NO** No Asbestos Observed

Other - 40%

Layer: 2 of 3

Lab ID #: 64736 - 11b

Cust. #: FS-HM-06A

Asbestos Present: YES Chrysotile - 45%

Other - 55%

Material: White 9x9 Vinyl Tile

Location:

Appearance: beige, 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: 3113 Fifth St.

Report To:

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

ARI Report # 16-64736

Date Collected: 05/08/16 Date Received: 05/11/16

Date Analyzed: 05/17/16 Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present:

Non-Asbestos

Other - 100%

Other - 100%

Lab ID #: 64736 - 12

Cust. #: FS-HM-06B

Material: Tan Linoleum/White 9x9 Vinyl Tile

Location:

NOT ANALYZED

Appearance:

Layer: of

Lab ID #: 64736 - 13

Cust. #: FS-HM-07A

Material: Speckled Linoleum

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 64736 - 14

Asbestos Present: NO No Asbestos Observed

Asbestos Present: **NO**

No Asbestos Observed

Cust. #: FS-HM-07B

Material: Speckled Linoleum

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: 3113 Fifth St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64736

Date Collected: 05/08/16 Date Received: 05/11/16 Date Analyzed: 05/17/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64736 - 15

Cust. #: FS-HM-08A

Material: Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 64736 - 15a

Cust. #: FS-HM-08A

Asbestos Present: NO

No Asbestos Observed

Cellulose - 20%

Other - 80%

Other - 100%

Material: Drywall

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Lab ID #: 64736 - 16

Cust. #: FS-HM-08B

Material: Drywall/Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

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

Layer: 1 of 1

Asbestos Present: **NO**No Asbestos Observed

Cut

Robert T. Letarte Jr., Laboratory Director

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Test Method, Polarized Light Microscopy (PLM)

Project: 3113 Fifth St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64736

Date Collected: 05/08/16 Date Received: 05/11/16

Date Analyzed: 05/17/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64736 - 17

Cust. #: FS-HM-09A

Material: Glazing

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

No Asbestos Observed

Asbestos Present: **NO**

Cellulose - 20%

Other - 80%

Other - 100%

Lab ID #: 64736 - 17a Cust. #: FS-HM-09A

Material: Glazing

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Asbestos Present: **NO**No Asbestos Observed

Lab ID #: 64736 - 18 Cust. #: FS-HM-09B

Material: 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: 3113 Fifth St.

Report To:

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

ARI Report # 16-64736

Date Collected: 05/08/16 Date Received: 05/11/16

Date Analyzed: 05/17/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64736 - 19

Cust. #: FS-HM-10A

Material: Brown 6x6 Vinyl Tile

Location:

Appearance: brown,nonfibrous,homogenous

Layer: 1 of 2

Asbestos Present: NO No Asbestos Observed

Other - 100%

Lab ID #: 64736 - 19a

Cust. #: FS-HM-10A

Material: 2 Layer Linoleum

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: **NO**

Chrysotile - 0.50%

Other - 99.50%

Other - 100%

POINT COUNT RESULT

Lab ID #: 64736 - 20

Cust. #: FS-HM-10B

Material: Brown 6x6 Vinyl Tile

Location:

Appearance: brown,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: 3113 Fifth St.

Report To:

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

ARI Report # 16-64736

Date Collected: 05/08/16 Date Received: 05/11/16

Date Analyzed: 05/17/16 Date Reported: 05/18/16

Sample Information

Non-Asbestos

Lab ID #: 64736 - 20a

Cust. #: FS-HM-10B

Material: 2 Layer Linoleum

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: YES

Chrysotile - 1.50%

POINT COUNT RESULT

Asbestos Present: **NO**

No Asbestos Observed

Lab ID #: 64736 - 21

Cust. #: FS-HM-11A

Material: White 12x12 Vinyl Tile

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 64736 - 22

Cust. #: FS-HM-11B

Material: White 12x12 Vinyl Tile

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Asbestos Type/Percent

Other - 98.50%

No Asbestos Observed

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: 3113 Fifth St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64736

Date Collected: 05/08/16 Date Received: 05/11/16

Date Analyzed: 05/17/16 Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64736 - 23

Cust. #: FS-HM-12A

Material: Glazing

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Cust. #: FS-HM-12B

Material: Glazing

Lab ID #: 64736 - 24

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 1

Lab ID #: 64736 - 25

Cust. #: FS-HM-13A

Material: White Linoleum

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

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: 3113 Fifth St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64736

Date Collected: 05/08/16 Date Received: 05/11/16 Date Analyzed: 05/17/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 20%

Other - 80%

Lab ID #: 64736 - 26

Cust. #: FS-HM-13B

Material: White Linoleum

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Lab ID #: 64736 - 27 Cust. #: FS-HS-01A

Material: Plaster

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Location:

Appearance: grey,nonfibrous,homogenous

Layer: 1 of 1

Lab ID #: 64736 - 28

Cust. #: FS-HS-01B

Material: Plaster

Location:

Appearance: white, 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: 3113 Fifth St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64736

Date Collected: 05/08/16 Date Received: 05/11/16

Date Analyzed: 05/17/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64736 - 29

Cust. #: FS-HS-01C

Material: Plaster

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO**No Asbestos Observed

Other - 100%

Other - 100%

Lab ID #: 64736 - 30 Cust. #: FS-HS-01D

Material: Plaster

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Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 64736 - 30a

Cust. #: FS-HS-01D

Material: Mortar

Location:

Appearance: grey,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: 3113 Fifth St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64736

Date Collected: 05/08/16 Date Received: 05/11/16

Date Analyzed: 05/17/16 Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64736 - 31

Cust. #: FS-HS-01E

Material: Plaster

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: NO

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

Other - 100%

Other - 100%

Lab ID #: 64736 - 31a Cust. #: FS-HS-01E

Material: Mortar

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 64736 - 32

Cust. #: FS-HS-01F

Material: Plaster

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: 3113 Fifth St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64736

Date Collected: 05/08/16 Date Received: 05/11/16

Date Analyzed: 05/17/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64736 - 32a

Cust. #: FS-HS-01F Material: Mortar

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 2 of 2

Asbestos Present: **NO**

No Asbestos Observed

Other - 100%

Lab ID #: 64736 - 33 Cust. #: FS-HS-01G

Material: Plaster

Location:

Location.

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 64736 - 33a

Cust. #: FS-HS-01G

Material: Mortar

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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

Apex # 64736

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



Phone: Address: Client Name: City, St., Zip: (888)449-4566 Red Cedar Consulting Lansing, MI 48901 PO Box 13216 Fax: (888) 448-8739 E-mail: apexresearch@chartermi.net Contact Person: Aaron Paquet Date of Survey: 5-3-16 Project #: Project: 31135544 Fax: 734-449-9991 Report_ Log-In_ Lab Use Only

Iuri Arou	Turn Around Times: (Circle One)	$(\operatorname{CircleOne})$ PLM EPA 600, PC all samples wi	apaque samples with a d	apaquet@redcedarconsulting.net ith a detection of <5% ACM.	nsulting.net <5% ACM.
		os: B	Point Count	PCM	
tush 24 hour					1
.8 hour 77 hour		Lead: Bulk Wipe	Air Paint	Soil_	
八	Trib	Mold: Bulk Tape	BioSIS	Other Vi	Viable
	All Samples Except Plaster TEM:	TEM: AHERA 7400 Bulk/NOB	NOB EPA Level II	vel II	
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q	F5-Hm 213	Shingle			
در	FS-42-02A	Fibelow Siding			
ナ	PS-HM-028	Fiberlan Siding			
5	FS 142-03A	Fiberboard			
6	FS-Hm 33	Fiber board			
7	F5-4m-049	Stone 12x12 vingstile Red 9x9 vingstile.	inul Tile		
S	FS-4m-04B	Stone BX2 vina Tile Red 9x9 vina Ti	9 Viny/The		
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lo	FS-HM-05B	Brown Lindleum.			
	F5-4m-06A.	Tanling (cum/ white gxq viny Tile	ytrile		
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Date:

APEX RESEARCH

Date:

Relinquished by:

Received by:

Date:

Rev: 12/03 Work Forms: COC

64736 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 Relinquished by Other: 48 hour Phone: Address: Client Name: City, St., Zip: Turn Around Times: (Circle One) Lab ID# 500 5-10-16 (888) 449-4566 72 hour 24 hour fund D5 Red Cedar Consulting PO Box 13216 Lansing, MI 48901 ナシートアーしのろ 401-22-10A FS-HM-09B 15-km-088 18-4m-11A アンナマーノス 75-4m-094 180-24 ST 12-4m-078 13- Fr-07A 180-m4-08B TTP) All Samples Except Plaster Received by: Client ID# Date: Fax: Chazing white 12×12 viny(Tile Clacin Drywal Brown 6x6 Viny/Tile Brown 600 vingTile Too Line leur white gra ving tike Drywall Speckfool Lind eum Speekled Liveleum white 12×12 vingTile (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 Tape Contact Person: Aaron Paquet Date of Survey: Project #: Project: 313 Fifth & Bulk/NOB 2 haveo Loro leur Layer Lugleum Ą. Point Count BioSIS Volume EPA Level II 3-8-6 Paint Other Received by: Area PCM Soil Viable 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

Date: 5-10-6 Date:	Relinquished by Received by:	33 FS-HS-016.	32 FS-75-01F	31 FS-HS-01E	30 FS-1+S -01D	29 FS-45-01C	\$10-SH-ST	87 FS-HS-01A	26 FS-Hm-13B	25 B-4m-13A	841-m4-87 4B	23 FS+m-12A	Lab ID# Client ID#	Office: 30 cm (117) All Samples Except	n f	48 hour 72 hour	Rush 24 hour	Turn Around Times: (Circle One)	449-4566	City, St., Zip: Lansing, MI 48901	Address: PO Box 13216	Client Name: Red Cedar Consulting
ADEX DESEARCH Date:	by: Melinquished by:							Plaster	1)	Unite Liveleum	Clarin	a laring	Material/Location	Except Plaster TEM: AHERA 7400 Bulk/NOB		Lead: Bulk Wipe	Asbestos: Bulk Wipe	PLM EPA 600, PC	Fax: (888) 448-8739 Contact Perso		Project	Date of Survey
Date:	Received by:												Volume Area	OB EPA Level II	BioSIS Other Viable	_ Air Paint Soil	Point Count PCM	apaquet@r with a detec	5	#:	Project: 3113 FIFTH St.	Survey: 5-8-16
													Results		e	Ĭ		ulting.net k ACM.			Report	Lab Use Only

Rev: 12/03 Work Forms: COC

Red Cedar Consulting

Tables

 $Table\ 1-Summary\ of\ Hazardous\ Materials,\ 3113\ 5^{th}\ St.,\ Muskegon\ Heights,\ Michigan$

	Hazardous Materials Description and Location	
Location	Material Description	Quantity
Hall	Smoke Detector	1
E Bedroom	Smoke Detector	1
NW Bedroom	Smoke Detector	1
Kitchen	4' Fluorescent Light (Fixture and Ballast Only)	1
Kitchen	4' Fluorescent Bulb	4
Kitchen	2' Fluorescent Light (Fixture and Ballast Only)	1
Kitchen	2' Fluorescent Bulb	4
Basement	Smoke Detector	1

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 3113 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	Asphalt Shingle	No	M	Category I	ND	Exterior	NA
FS-HM-01B	Asphalt Shingle	No	M	Category I	ND	Exterior	NA
FS-HM-02A	Fiber Lap Siding	Yes	M	Category II	ND	Exterior	NA
FS-HM-02B	Fiber Lap Siding	Yes	M	Category II	ND	Exterior	NA
FS-HM-03A	Fiberboard	Yes	M	Category II	ND	Exterior	NA
FS-HM-03B	Fiberboard	Yes	M	Category II	ND	Exterior	NA
FS-HM-04A	Stone 12x12 Vinyl Tile/ Red 9"x9" Vinyl Tile	No	M	Category I	1.75% CH/ND	Front Entry	48 sq. ft.
FS-HM-04B	Stone 12x12 Vinyl Tile/ Red 9"x9" Vinyl Tile	No	M	Category I	NA/ND	Front Entry	NA
FS-HM-05A	Brown Linoleum	No	M	Category I	ND	Living/Dining	NA
FS-HM-05B	Brown Linoleum	No	M	Category I	ND	Living/Dining	NA
FS-HM-06A	Tan Linoleum/ White 9"x9" Vinyl Tile	No	M	Category I	5% CH/ND/ 45% CH	Laundry	90 sq. ft.
FS-HM-06B	Tan Linoleum/ White 9"x9" Vinyl Tile	No	M	Category I	NA	Laundry	NA
FS-HM-07A	Speckled Linoleum	No	M	Category I	ND	Rear Entry	NA
FS-HM-07B	Speckled Linoleum	No	M	Category I	ND	Rear Entry	NA
FS-HM-08A	Drywall	No	M	Category II	ND/ND	NW Bedroom Ceiling	NA
FS-HM-08B	Drywall	No	M	Category II	ND	NW Bedroom Wall	NA
FS-HM-09A	Glazing	Yes	M	Category II	ND/ND	Living	NA
FS-HM-09B	Glazing	Yes	M	Category II	ND	2 nd Fl. W Bedroom	NA
FS-HM-10A	Brown 6"x6" Vinyl Tile/ 2-Layer Linoleum	No	M	Category I	ND/0.5% CH	2 nd Fl. Landing	NA
FS-HM-10B	Brown 6"x6" Vinyl Tile/ 2-Layer Linoleum	No	M	Category I	ND/1.5% CH	2 nd Fl. Landing	207 sq. ft.
FS-HM-11A	White 12x12 Vinyl Tile	No	M	Category I	ND	2 nd Fl. Bathroom	NA
FS-HM-11B	White 12x12 Vinyl Tile	No	M	Category I	ND	2 nd Fl. Bathroom	NA
FS-HM-12A	Glazing	Yes	M	Category II	ND	Basement	NA
FS-HM-12B	Glazing	Yes	M	Category II	ND	Basement	NA
FS-HM-13A	White Linoleum	No	M	Category I	ND	2 nd Fl. Storage	NA

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 3113 5th St., Muskegon Heights, Michigan

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
FS-HM-13B	White Linoleum	No	M	Category I	ND	2 nd Fl. Storage	NA
FS-HS-01A	Plaster	No	S	Category II	ND	Living Wall	NA
FS-HS-01B	Plaster	No	S	Category II	ND	E Bedroom Wall	NA
FS-HS-01C	Plaster	No	S	Category II	ND	SW Bedroom Wall	NA
FS-HS-01D	Plaster	No	S	Category II	ND/ND	E Bedroom Ceiling	NA
FS-HS-01E	Plaster	No	S	Category II	ND/ND	2 nd Fl. S Bedroom Wall	NA
FS-HS-01F	Plaster	No	S	Category II	ND/ND	2 nd Fl. Hall Wall	NA
FS-HS-01G	Plaster	No	S	Category II	ND/ND	2 nd Fl. Kitchen	NA

Notes:

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

 $\begin{array}{lll} M &= \mbox{Miscellaneous building material} & \mbox{NQ} &= \mbox{Not quantified} \\ TSI &= \mbox{Thermal System Insulation} & \mbox{NA} &= \mbox{Not applicable} \\ \end{array}$

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, 3113 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, 3113 5th St., Muskegon Heights, Michigan

Interior - Asbestos Containing Mat	terials		
Location	Material Description	Friable	Approx. Quantity
Front Entry	Stone 12x12 Vinyl Tile/ Red 9"x9" Vinyl Tile	No	48 sq. ft.
Laundry	Tan Linoleum/ White 9"x9" Vinyl Tile	No	90 sq. ft.
2 nd Fl. Landing	Brown 6"x6" Vinyl Tile/ 2-Layer Linoleum	No	25 sq. ft.
2 nd Fl. Kitchen	Brown 6"x6" Vinyl Tile/ 2-Layer Linoleum	No	182 sq. ft.
	Total		345 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 27, 2016

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 3129 5th St., Muskegon Heights, MI 49444
Parcel ID: 61-26-770-022-0015-00

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 3129 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 .12 acre residential parcel which contains a 484 sq. ft. detached garage and approximate 912 square foot residential building (the Building) constructed in 1930. The Building was constructed on a cement 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 porch, living room/dining room, kitchen, bath, and three bedrooms on the first floor.

VISUAL INSPECTION AND SAMPLING

Asbestos Containing Materials Inspection

Mr. Aaron Paquet of Red Cedar Consulting (Red Cedar), an accredited State Of Michigan/EPA Asbestos Building Inspector (Accreditation Number A30955) whom completed training per the Michigan Asbestos

Project No.: 16-1070 Muskegon County Land Bank Parcel ID: 61-26-770-022-0015-00

Workers Accreditation Act 440 completed an inspection of the Subject Property on May 8, 2016 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
- 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: 61-26-770-022-0015-00

Hazardous Materials Inspection

On May 8, 2016 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: 61-26-770-022-0015-00

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:

- Front Porch (1 register, 15 sq. ft.)
- Kitchen (1 register, 15 sq. ft.)
- NW Bedroom (1 register, 15 sq. ft.)
- Central Bedroom (1 register, 15 sq. ft.)
- NE Bedroom (1 register, 15 sq. ft.)
- Basement (misc. HVAC wrap on Ductwork, 20 sq. ft.)
- Basement (12 in. dia. HVAC Wrapped Ductwork, 6 lin. ft.)

Category I ACM

One type of resilient floor covering (9"x9" Red Vinyl Floor Tile) located within the front porch was found to contain up to 5% Chrysotile asbestos. The assessment to quantify the extent of this material identified approximately 154 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.

- Front Porch (1 register, 15 sq. ft.)
- Kitchen (1 register, 15 sq. ft.)
- NW Bedroom (1 register, 15 sq. ft.)
- Central Bedroom (1 register, 15 sq. ft.)
- NE Bedroom (1 register, 15 sq. ft.)
- Basement (misc. HVAC wrap on Ductwork, 20 sq. ft.)
- Basement (12 in. dia. HVAC Wrapped Ductwork, 6 lin. ft.)

The Category I resilient floor covering (9"x9" Red Vinyl Floor Tile) 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

Muskegon County Land Bank Parcel ID: 61-26-770-022-0015-00

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 (4)
- Thermostat (1)
- Television (1)
- Automobile Tire (16)

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: 61-26-770-022-0015-00

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

(Laron Pogwet

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: 3129 Fifth St.

Report To:

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

ARI Report # 16-64734

Date Collected: 05/08/16 Date Received: 05/11/16 Date Analyzed: 05/17/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64734 - 01

Cust. #: FH-HM-01A

Material: Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 1

Lab ID #: 64734 - 02

Cust. #: FH-HM-01B

Material: Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64734 - 03

Cust. #: FH-HM-02A

Material: Glazing

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Cellulose - 30%

Cellulose - 30% Other - 70%

Other - 70%

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

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 3129 Fifth St.

Report To:

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

ARI Report # 16-64734

Date Collected: 05/08/16 Date Received: 05/11/16

Date Analyzed: 05/17/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64734 - 04

Cust. #: FH-HM-02B

Material: Glazing

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 1

Asbestos Present: YES Chrysotile - 5%

Other - 95%

Other - 100%

Cust. #: FH-HM-03A

Lab ID #: 64734 - 05

Material: Red 9x9 Vinyl Tile

Location:

Appearance: red,fibrous,homogenous

Layer: 1 of 2

Lab ID #: 64734 - 05a

Cust. #: FH-HM-03A

Material: Mastic

Location:

Appearance: black,nonfibrous,homogenous

Layer: 2 of 2

No Asbestos Observed

Asbestos Present: NO

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Test Method, Polarized Light Microscopy (PLM)

Project: 3129 Fifth St.

Report To:

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

ARI Report # 16-64734 Date Collected: 05/08/16

Date Received: 05/11/16 Date Analyzed: 05/17/16 Date Reported: 05/18/16

Lansing, MI 48901

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64734 - 06

Cust. #: FH-HM-03B

Sample Information

Material: Red 9x9 Vinyl Tile

Location:

NOT ANALYZED

Asbestos Present:

Appearance: Layer: 1 of 2

Lab ID #: 64734 - 06a

Cust. #: FH-HM-03B

Material: Mastic

Location:

Appearance: black,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 64734 - 07

Cust. #: FH-HM-04A

Material: White 12x12 Vinyl Tile

Location:

Appearance: green, fibrous, homogenous

Layer: 1 of 2

Asbestos Present: **NO**

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Cellulose - 30%

Other - 70%

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: 3129 Fifth St.

Report To:

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

ARI Report # 16-64734

Date Collected: 05/08/16 Date Received: 05/11/16

Date Analyzed: 05/17/16 Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 2%

Other - 98%

Lab ID #: 64734 - 07a

Cust. #: FH-HM-04A

Material: White 12x12 Vinyl Tile

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: **NO**

No Asbestos Observed

Other - 100%

Lab ID #: 64734 - 08 Cust. #: FH-HM-04B

Material: White 12x12 Vinyl Tile

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 3

Lab ID #: 64734 - 08a

Cust. #: FH-HM-04B

Material: White 12x12 Vinyl Tile

Location:

Appearance: beige, fibrous, homogenous

Layer: 2 of 3

Asbestos Present: NO

No Asbestos Observed

Cellulose - 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: 3129 Fifth St.

Report To:

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

ARI Report # 16-64734

Date Collected: 05/08/16 Date Received: 05/11/16

Date Analyzed: 05/17/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 30%

Other - 70%

Lab ID #: 64734 - 08b

Cust. #: FH-HM-04B

Material: White 12x12 Vinyl Tile

Location:

Appearance: green, fibrous, homogenous

Layer: 3 of 3

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 70%

Lab ID #: 64734 - 09 Cust. #: FH-HM-05A

Material: Beige Linoleum

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64734 - 10

Cust. #: FH-HM-05B

Material: Beige Linoleum

Location:

Appearance: brown, fibrous, nonhomogenous

Layer: 1 of 1

Asbestos Present: NO

Cellulose - 40%

Other - 30%

No Asbestos Observed

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: 3129 Fifth St.

Report To:

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

ARI Report # 16-64734

Date Collected: 05/08/16 Date Received: 05/11/16

Date Analyzed: 05/17/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64734 - 11

Cust. #: FH-HM-06A

Material: Brown Linoleum

Location:

Appearance: black,nonfibrous,homogenous

Layer: 1 of 2

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 60%

Other - 40%

Material: Backing

Lab ID #: 64734 - 11a

Cust. #: FH-HM-06A

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Cellulose - 2% Other - 98%

Lab ID #: 64734 - 12 Cust. #: FH-HM-06B

Material: Brown Linoleum

Location:

Appearance: black,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: 3129 Fifth St.

Report To:

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

ARI Report # 16-64734

Date Collected: 05/08/16 Date Received: 05/11/16

Date Analyzed: 05/17/16 Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 80%

Other - 20%

Lab ID #: 64734 - 12a

Cust. #: FH-HM-06B Material: Backing

Location:

Appearance: brown, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 64734 - 13

Cust. #: FH-HM-07A

Asbestos Present: **NO**

No Asbestos Observed

Cellulose - 35%

Other - 65%

Material: Speckled 9x9 Vinyl Tile

Location:

Appearance: grey, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64734 - 14

Asbestos Present: NO

No Asbestos Observed

Cellulose - 35%

Other - 65%

Cust. #: FH-HM-07B

Material: Speckled 9x9 Vinyl Tile

Location:

Appearance: beige, 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)

Project: 3129 Fifth St.

Report To:

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ARI Report # 16-64734 Date Collected: 05/08/16

Date Received: 05/11/16 Date Analyzed: 05/17/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 25%

Other - 75%

Lab ID #: 64734 - 15 Cust. #: FH-HM-08A

Material: Drywall

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 30%

Other - 70%

Other - 100%

Cust. #: FH-HM-08B

Material: Drywall

Lab ID #: 64734 - 16

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Cust. #: FH-HM-09A

Lab ID #: 64734 - 17

Material: 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: 3129 Fifth St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64734

Date Collected: 05/08/16 Date Received: 05/11/16

Date Analyzed: 05/17/16 Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64734 - 18

Cust. #: FH-HM-09B

Material: 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 #: 64734 - 19 Cust. #: FH-HM-10A

Material: Glazing

Location:

Appearance: beige, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 64734 - 20

Cust. #: FH-HM-10B

Material: 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: 3129 Fifth St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16-64734

Date Collected: 05/08/16 Date Received: 05/11/16

Date Analyzed: 05/17/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64734 - 21

Cust. #: FH-HM-11A

Material: Glazing

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 1 of 1

Asbestos Present: **NO**No Asbestos Observed

Other - 100%

Lab ID #: 64734 - 22 Cust. #: FH-HM-11B

Material: Glazing

Location:

Appearance: grey,nonfibrous,homogenous

Layer: 1 of 1

Lab ID #: 64734 - 23

Cust. #: FH-HS-01A

Material: Plaster

Location:

Appearance: grey,fibrous,homogenous

Layer: 1 of 1

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: 3129 Fifth St.

Report To:

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

ARI Report # 16-64734

Date Collected: 05/08/16 Date Received: 05/11/16

Date Analyzed: 05/17/16 Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Other - 100%

Lab ID #: 64734 - 24

Cust. #: FH-HS-01B

Material: Plaster

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Asbestos Present: **NO**

No Asbestos Observed

Material: Plaster

Lab ID #: 64734 - 25

Cust. #: FH-HS-01C

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 64734 - 25a

Cust. #: FH-HS-01C

Material: Mortar

Location:

Appearance: grey,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: 3129 Fifth St.

Report To:

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

ARI Report # 16-64734

Date Collected: 05/08/16 Date Received: 05/11/16

Date Analyzed: 05/17/16 Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64734 - 26

Cust. #: FH-HS-01D

Material: Plaster

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 2% Other - 98%

Other - 100%

Lab ID #: 64734 - 26a Cust. #: FH-HS-01D

Material: Mortar

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Asbestos Present: NO

No Asbestos Observed

Lab ID #: 64734 - 27 Cust. #: FH-HS-01E

Material: Plaster

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: 3129 Fifth St.

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

ARI Report # 16-64734

Date Collected: 05/08/16 Date Received: 05/11/16

Date Analyzed: 05/17/16

Date Reported: 05/18/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64734 - 27a

Cust. #: FH-HS-01E

Material: Mortar

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

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

Phone: 48 hour Rush Other: 50m Address: Client Name: Date: 5-10-16 Relinquished by City, St., Zip: Turn Around Times: (Circle One) Lab ID# (888) 449-4566 24 hour 72 hour Q (1) 15 9 Red Cedar Consulting Lansing, MI 48901 PO Box 13216 FH-42-01A FH-HM-OHA アオーオペー054 アボーナベーのスタ FA-HM-OLB FH-4m-06/ FH- HM .053 ケスースペーのころ FH-HM-03B FK-Hm-03A FX-78-028 Received by (TTP) All Samples Except Plaster
TEM: Client ID# Fax: TO THE PROPERTY OF THE PROPERT Beige Line eum Beige Linden Coloring Shirale whitesone simplifile multilayer Grania unite 12x2 Uny (Tive mattage Shingle Red gra vingl Tile Red gra ving (888) 448-8739 Asbestos: Bulk Mold: Lead: Material/Location John June Bulk Bulk AHERA 7400 apaquet@redcedarconsulting.net PLM EPA 600, PC all samples with a detection of <5% ACM. 17/16 Wipe Relinquished by: Wipe Tape Contact Person: Date of Survey: 5-8-16 Project #: Project: 309 Fifth St Bulk/NOB Air Point Count BioSIS Volume Aaron Paquet EPA Level II Paint Other Received by: Area PCM Soil Viable Results Log-In_ Report_ Lab Use Only

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

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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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Rev: 12/03 Work Forms: COC

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Red Cedar Consulting

Tables

 $Table\ 1-Summary\ of\ Hazardous\ Materials,\ 3129\ 5^{th}\ St.,\ Muskegon\ Heights,\ Michigan$

Hazardous Materials Description and Location								
Location	Material Description	Quantity						
Exterior	Automobile Tire	15						
Garage	Automobile Tire	1						
Living	Thermostat	1						
NW Bedroom	Smoke Detector	1						
Central Bedroom	Smoke Detector	1						
Hall	Smoke Detector	1						
Basement	Smoke Detector	1						
Basement	Television	1						

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 3129 5th St., Muskegon Heights, Michigan

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
FH-HM-01A	Asphalt Shingle	No	М	Category I	ND	Exterior	NA
FH-HM-01B	Asphalt Shingle	No	М	Category I	ND	Exterior	NA
FH-HM-02A	Glazing	Yes	M	Category II	ND	Garage	NA
FH-HM-02B	Glazing	Yes	М	Category II	ND	Garage	NA
FH-HM-03A	Red 9"x9" Vinyl Tile	No	М	Category I	5% CH/ND	Front Porch	154 sq. ft.
FH-HM-03B	Red 9"x9" Vinyl Tile	No	М	Category I	NA/ND	Front Porch	NA
FH-HM-04A	White 12x12 Vinyl Tile	No	M	Category I	ND/ND	Kitchen	NA
FH-HM-04B	White 12x12 Vinyl Tile	No	М	Category I	ND/ND/ND	Kitchen	NA
FH-HM-05A	Beige Linoleum	No	M	Category I	ND	NW Bedroom	NA
FH-HM-05B	Beige Linoleum	No	М	Category I	ND	NW Bedroom	NA
FH-HM-06A	Brown Linoleum	No	M	Category I	ND/ND	NE Bedroom	NA
FH-HM-06B	Brown Linoleum	No	М	Category I	ND/ND	NE Bedroom	NA
FH-HM-07A	Speckled 9"x9" Vinyl Tile	No	M	Category I	ND	Basement Stairs	NA
FH-HM-07B	Speckled 9"x9" Vinyl Tile	No	M	Category I	ND	Basement Stairs	NA
FH-HM-08A	Drywall	No	М	Category II	ND	Kitchen Ceiling	NA
FH-HM-08B	Drywall	No	M	Category II	ND	Kitchen Ceiling	NA
FH-HM-09A	Glazing	Yes	M	Category II	ND	Front Porch	NA
FH-HM-09B	Glazing	Yes	M	Category II	ND	Front Porch	NA
FH-HM-10A	Glazing	Yes	М	Category II	ND	Living/Dining	NA
FH-HM-10B	Glazing	Yes	M	Category II	ND	NE Bedroom	NA
FH-HM-11A	Glazing	Yes	M	Category II	ND	Basement	NA
FH-HM-11B	Glazing	Yes	М	Category II	ND	Basement	NA
FH-HS-01A	Plaster	No	S	Category II	ND	Living Wall	NA
FH-HS-01B	Plaster	No	S	Category II	ND	NW Bedroom Wall	NA
FH-HS-01C	Plaster	No	S	Category II	ND/ND	Central Bedroom Wall	NA
FH-HS-01D	Plaster	No	S	Category II	ND/ND	Living Ceiling	NA
FH-HS-01E	Plaster	No	S	Category II	ND/ND	NE Bedroom Ceiling	NA

Notes:

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 3129 5th St., Muskegon Heights, Michigan

M= Miscellaneous building materialNQ= Not quantifiedTSI= Thermal System InsulationNA= Not applicableS= Surfacing MaterialND= Not detected. Laboratory result is less than 1 % asbestorPC= Point Count Analysislin. ft.= linear feetCH= Chrysotile Asbestossq. ft.= square feet	Mate	rial Types	Abbrev	<u>riations</u>
	TSI S	= Thermal System Insulation = Surfacing Material	NA ND	Not applicableNot detected. Laboratory result is less than 1 % asbestos

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, 3129 5th St., Muskegon Heights, Michigan

A	Asbestos Containing Material Description a	nd Location			
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity
Front Porch (1 register, 15 sq. ft.) Kitchen (1 register, 15 sq. ft.) NW Bedroom (1 register, 15 sq. ft.) Central Bedroom (1 register, 15 sq. ft.) NE Bedroom (1 register, 15 sq. ft.) Basement (misc. HVAC wrap on Ductwork, 20 sq. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	95 sq. ft.
Basement (12 in. dia. HVAC Wrapped Ductwork, 6 lin. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	6 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, 3129 5th St., Muskegon Heights, Michigan

Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Front Porch	Red 9x9 Vinyl Tile		No	154 sq. ft.
		Total		154 sq. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Front Porch (1 register, 15 sq. ft.) Kitchen (1 register, 15 sq. ft.) NW Bedroom (1 register, 15 sq. ft.) Central Bedroom (1 register, 15 sq. ft.) NE Bedroom (1 register, 15 sq. ft.) Basement (misc. HVAC wrap on Ductwork, 20 sq. ft.)	HVAC Duct Wrap		Yes	95 sq. ft.
Basement (misc. HVAC wrap on Ductwork, 20 sq. it.)		Total		95 sq. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Basement (12 in. dia. HVAC Wrapped Ductwork, 6 lin. ft.)	HVAC Duct Wrap		Yes	6 lin. ft.
		Total		6 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 27, 2016

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 3332 9th St., Muskegon Heights, MI 49444

Parcel ID: 61-26-400-009-0014-00

Dear Mr. Burgess:

Red Cedar Consulting has completed an asbestos-containing material (ACM) and hazardous materials inspection at 3332 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 .09 acre residential parcel which contains an approximate 984 square foot residential building (the Building) constructed in 1950. 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, closet and two bedrooms.

VISUAL INSPECTION AND SAMPLING

Asbestos Containing Materials Inspection

Mr. Aaron Paquet of Red Cedar Consulting (Red Cedar), an accredited State Of Michigan/EPA Asbestos Building Inspector (Accreditation Number A30955) whom completed training per the Michigan Asbestos Workers Accreditation Act 440 completed an inspection of the Subject Property on May 8, 2016 for suspected asbestos containing building materials.

Muskegon County Land Bank Parcel ID: 61-26-400-009-0014-00

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
- Fiberboard
- Linoleum
- 12"x12" Vinyl Tile
- 9"x9" Vinyl Tile
- Drywall
- Glazing

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

Hazardous Materials Inspection

On May 8, 2016 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

Muskegon County Land Bank Parcel ID: 61-26-400-009-0014-00

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.

Vermiculite insulation and Cementatious "Transite" pipe were identified during the completion of this inspection and were classified as PACM due to the age of the structure and samples were not collected.

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

Table 4 provides a summary all ACM documented at the Subject Property which includes the material location, description, and approximate quantity.

Friable ACM's

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 nine windows at the following locations that would fall into the same homogenous group. The locations of the windows are listed below:

Muskegon County Land Bank Parcel ID: 61-26-400-009-0014-00

- Living (2 windows 28" wide x 34" tall)
- Kitchen (1 window 28" wide x 34" tall)
- NW Bedroom (2 windows 28" wide x 34" tall)
- Bathroom (1 window 28" wide x 34" tall)
- NE Bedroom (1 window 28" wide x 34" tall)
- Utility Room (1 window 28" wide x 34" tall)
- Landing (1 window 28" wide x 34" tall)

Vermiculite insulation identified in the Building is classified as friable ACM. The visual assessment to quantify the extent of this material identified approximately 792 sq. ft. at a depth of 4" within the Buildings attic.

Category I ACM

One type of resilient floor covering (9"x9" Beige Vinyl Floor Tile) located within the Living/Dining room were found to contain up to 10% Chrysotile asbestos. The assessment to quantify the extent of this material identified approximately 174 sq. ft. of this material within the Building.

Category II ACM

The cementatious "Transite" pipe located in the utility room was classified as PACM and no samples were collected. The visual assessment to quantify the extent of this material identified 6 lin. ft. of cementatious (Transite) pipe within the Building.

RECOMMENDATIONS

Asbestos Containing Materials

Friable asbestos containing window glazing was identified on nine windows throughout the Building. The location of the window that should be abated prior to demolition/renovation activities is listed below:

- Living (2 windows 28" wide x 34" tall)
- Kitchen (1 window 28" wide x 34" tall)
- NW Bedroom (2 windows 28" wide x 34" tall)
- Bathroom (1 window 28" wide x 34" tall)
- NE Bedroom (1 window 28" wide x 34" tall)
- Utility Room (1 window 28" wide x 34" tall)
- Landing (1 window 28" 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.

Vermiculite insulation identified in the Building attic is classified as friable ACM and should be removed prior to any renovation/demolition activities.

Muskegon County Land Bank Parcel ID: 61-26-400-009-0014-00

The Category I resilient floor covering (9"x9" Beige Vinyl Floor Tile) 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:

• 5 Gallon Container Drywall Compound (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.

Project No.: 16-1070

Muskegon County Land Bank Parcel ID: 61-26-400-009-0014-00

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: 3332 Ninth St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901

ARI Report #

16-64727

Date Collected: 05/08/16 Date Received: 05/11/16

Date Analyzed: 05/16/16

Date Reported: 05/16/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 30%

Other - 70%

Lab ID #: 64727 - 01

Cust. #: NS-HM-01A

Material: Shingle

Location:

Appearance: black,fibrous,homogenous

Layer: 1 of 1

Asbestos Present: **NO** No Asbestos Observed

Fiberglass - 30%

Other - 70%

Cust. #: NS-HM-01AB

Lab ID #: 64727 - 02

Material: Shingle

Location:

Appearance: black, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: YES Chrysotile - 10%

Other - 90%

Lab ID #: 64727 - 03

Cust. #: NS-HM-02A

Material: 9x9 Beige Vinyl Tile

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

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 3332 Ninth St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901

ARI Report # 16-64727

Date Collected: 05/08/16 Date Received: 05/11/16 Date Analyzed: 05/16/16

Date Reported: 05/16/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Lab ID #: 64727 - 04

Cust. #: NS-HM-02B

Location:

Material: 9x9 Beige Vinyl Tile

Appearance:

NOT ANALYZED

Asbestos Present:

Layer: of

Lab ID #: 64727 - 05

Cust. #: NS-HM-03A

Material: White Linoleum

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64727 - 06 Cust. #: NS-HM-03B

Material: White Linoleum

Asbestos Present: NO

Asbestos Present: **NO**

No Asbestos Observed

No Asbestos Observed

Cellulose - 5% Fiberglass - 5%

Cellulose - 5%

Fiberglass - 5%

Other - 90%

Other - 90%

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

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the 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: 3332 Ninth St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901 ARI Report # 16

16-64727

Date Collected: 05/08/16 Date Received: 05/11/16

Date Analyzed: 05/16/16

Date Reported: 05/16/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

Asbestos Present: **NO**

No Asbestos Observed

No Asbestos Observed

Non-Asbestos

Cellulose - 10%

Fiberglass - 10%

Cellulose - 20%

Fiberglass - 20%

Other - 60%

Other - 100%

Other - 80%

Lab ID #: 64727 - 07

Cust. #: NS-HM-04A

Material: White & Black Linoleum

Location:

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64727 - 08 Cust. #: NS-HM-04B

Material: White & Black Linoleum

Location:

Appearance: grey, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Cust. #: NS-HM-05A

Lab ID #: 64727 - 09

Material: 12x12 Beige Vinyl Tile

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: 3332 Ninth St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901

ARI Report # 16-64727

Date Collected: 05/08/16 Date Received: 05/11/16

Date Analyzed: 05/16/16 Date Reported: 05/16/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Other - 100%

Lab ID #: 64727 - 10

Cust. #: NS-HM-05B

Material: 12x12 Beige Vinyl Tile

Location:

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 1

Asbestos Present: **NO** No Asbestos Observed

Cellulose - 80%

Other - 20%

Cust. #: NS-HM-06A

Lab ID #: 64727 - 11

Material: Fiberboard

Location:

Appearance: brown, fibrous, homogenous

Layer: 1 of 1

Asbestos Present: NO

No Asbestos Observed

Cellulose - 80%

Other - 20%

Cust. #: NS-HM-06B Material: Fiberboard

Lab ID #: 64727 - 12

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: 3332 Ninth St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901

ARI Report # 16-64727

Date Collected: 05/08/16 Date Received: 05/11/16 Date Analyzed: 05/16/16

Date Reported: 05/16/16

Sample Information

Asbestos Type/Percent

Non-Asbestos

Other - 100%

Lab ID #: 64727 - 13

Cust. #: NS-HM-07A

Material: Joint Compound

Location:

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

Lab ID #: 64727 - 13a

Cust. #: NS-HM-07A

Material: Drywall

Location:

Appearance: grey, fibrous, homogenous

Layer: 2 of 2

Lab ID #: 64727 - 14

Cust. #: NS-HM-07B

Material: Joint Compound

Location:

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 - 20%

Other - 80%

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: 3332 Ninth St.

Report To:

Mr. Aaron Paquet Red Cedar Consulting P.O. Box 13216 Lansing, MI 48901

ARI Report #

16-64727

Date Collected: 05/08/16 Date Received: 05/11/16

Date Analyzed: 05/16/16

Date Reported: 05/16/16

Sample Information

Asbestos Type/Percent

Asbestos Present: NO

No Asbestos Observed

Non-Asbestos

Cellulose - 20%

Other - 80%

Lab ID #: 64727 - 14a

Cust. #: NS-HM-07B

Material: Drywall

Location:

Appearance: grey,fibrous,homogenous

Layer: 2 of 2

Asbestos Present: YES Chrysotile - 5%

Other - 95%

Lab ID #: 64727 - 15 Cust. #: NS-HM-08A

Material: Glazing

Location:

Appearance: grey, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 64727 - 16

Cust. #: NS-HM-08B

Material: Glazing

Location:

Appearance: Layer:

of

Asbestos Present:

NOT ANALYZED

For Layered Samples, each component will be analyzed and reported separately

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.

Apex # 64727

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: Other:_ Rush 48 hour Phone: Turn Around Times: (Circle One) City, St., Zip: Address: Client Name: Lab ID# of Day (888) 449-4566 Q 0 91 6 -72 hour 24 hour 2-10-16 Red Cedar Consulting Lansing, MI 48901 PO Box 13216 US- Frank B-Frn-04B US-HM-03A レスーチャーコス レスーチベーのBA DS-FR-OHA US-4m-03B アナローを出しSC フツキで しら3 SIG-WA-SUS スーチスーのこれ (TTP) All Samples Except Plaster Client ID# Received by: Date: Hax: (888) 448-8739 では、世間の四名の Beige FILEFBOURD Shingle Beize GUG VINYTILLE Beige 12×12 vinyl Tile white & Black Linoleum white Lindleam white & Block Londlean Shingle Mold: Asbestos: Bulk Lead: TEM: 200 Material/Location The ear 12×12 VIAY 1-16 Bulk Bulk **AHERA 7400** PLM EPA 600, PC all samples with a detection of <5% ACM. windty × Relinquished by: Wipe Wipe Tape Date of Survey: 5-8-16 Contact Person: Aaron Paquet Project: 3332 Project #: Bulk/NOB Air BioSIS Point Count Volume EPA Level II お子がけ Paint Other Received by: Area PCM Soil Results Report_ Log-In Lab Use Only

Rev: 12/03
Work Forms: COC

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

Received by: Date:	Relinquished by:	APEX RESEARCH	Date: APEX	Relinquished by
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		6 lazina	US-4m-08B	2
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		Drywall	18-45-07B	الر
		Drywall	N8-4-07A	50
		Fiberboard	18-HM-06B	12
Area	Location Volume	Material/Location	Client ID#	Lab ID#
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nt Soil	Wipe Air Paint	Lead: Bulk		48 hour 72 hour
PCM	Wipe Point Count	Asbestos: Bulk		Rush 24 hour
apaquet@redcedarconsulting.net with a detection of <5% ACM.	EPA 600, PC all samples	MTđ	Turn Around Times: (Circle One)	Turn Arou
. Paquet	Contact Person: Aaron	(888) 448-8739	49-4566 Fax:	Phone: (888) 449-4566
			Lansing, MI 48901	
Winth St.	,- 		PO Box 13216	Address:
2-8-16	Date of Survey: 5-	ing	Red Cedar Consulting	ame:

Rev: 12/03 Work Forms: COC

Red Cedar Consulting

Tables

Table 1 - Summary of Hazardous Materials, 3332 9th St., Muskegon Heights, Michigan

	Hazardous Materials Description and Location					
Location	Material Description	Quantity				
NW Bedroom	5-Gallon Container Drywall Compound	1				

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 3332 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	Asphalt Shingle	No	M	Category I	ND	Exterior	NA
NS-HM-01B	Asphalt Shingle	No	M	Category I	ND	Exterior	NA
NS-HM-02A	Beige 9x9 Vinyl Tile	No	M	Category I	10% CH	Living/Dining	174 sq. ft.
NS-HM-02B	Beige 9x9 Vinyl Tile	No	M	Category I	NA	Living/Dining	NA
NS-HM-03A	White Linoleum	No	M	Category I	ND	Kitchen	NA
NS-HM-03B	White Linoleum	No	M	Category I	ND	Kitchen	NA
NS-HM-04A	White & Black Linoleum	No	M	Category I	ND	Bathroom	NA
NS-HM-04B	White & Black Linoleum	No	M	Category I	ND	Bathroom	NA
NS-HM-05A	Beige 12x12 Vinyl Tile	No	M	Category I	ND	Hall/Closet	NA
NS-HM-05B	Beige 12x12 Vinyl Tile	No	M	Category I	ND	Hall/Closet	NA
NS-HM-06A	Fiberboard	No	M	Category II	ND	Kitchen	NA
NS-HM-06B	Fiberboard	No	M	Category II	ND	NW Bedroom	NA
NS-HM-07A	Drywall	No	M	Category II	ND/ND	Kitchen	NA
NS-HM-07B	Drywall	No	M	Category II	ND/ND	E Bedroom	NA
NS-HM-08A	Glazing	Yes	M	Category II	5% CH	Kitchen	9 Windows
NS-HM-08B	Glazing	Yes	M	Category II	NA	NW Bedroom	NA

Notes:

Material Types

= Miscellaneous building material TSI = Thermal System Insulation

= Surfacing Material S

PC = Point Count Analysis

= Chrysotile Asbestos

Abbreviations

= Not quantified NQ = Not applicable NA

= 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, 3332 9th St., Muskegon Heights, Michigan

Asbestos Containing Material Description and Location					
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity
Utility Room Ceiling (4 in. dia. 6 lin. ft.)	Transite Pipe	No	Fair	M	6 lin. ft.
Attic (792 sq. ft. at 4" depth)	Vermiculite	Yes	Fair	M	792 sq. ft. at 4" depth

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, 3332 9th St., Muskegon Heights, Michigan

Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Living/Dining	Beige 9"x9" Vinyl Tile		No	154 sq. ft.
Hallway Closet	Beige 9"x9" Vinyl Tile		No	10 sq. ft.
NE Bedroom Closet	Beige 9"x9" Vinyl Tile		No	10 sq. ft.
		Total		174 sq. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Living (2 windows 28" wide x 34" tall)	Glazing		Yes	2 Windows
Kitchen (1 window 28" wide x 34" tall)	Glazing		Yes	1Window
NW Bedroom (2 windows 28" wide x 34" tall)	Glazing		Yes	2 Windows
Bathroom (1 window 28" wide x 34" tall)	Glazing		Yes	1 Window
NE Bedroom (1 window 28" wide x 34" tall)	Glazing		Yes	1 Window
Utility Room (1 window 28" wide x 34" tall)	Glazing		Yes	1 Window
Landing (1 window 28" wide x 34" tall)	Glazing		Yes	1 Window
		Total		9 Windows
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Utility Room	Transite Pipe		No	6 lin. ft.
		Total		6 lin. ft.
Interior - Asbestos Containing Materials				
Location	Material Description		Friable	Approx. Quantity
Building Attic	Vermiculite		Yes	792 sq. ft. at 4" dept
		Total		792 sq. ft. at 4" dept

Notes:

Abbreviations

lin. ft. = linear feet

sq. ft. = square feet

Table 4 - Summary of All Asbestos Containing Materials, 3332 9th St., Muskegon Heights, Michigan

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.