

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

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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 1:00PM to 1:30PM 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 waive 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

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

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

Bidder: _____

Street Address: _____

City/State/Zip Code _____

Phone Number: _____

FAX: _____

E- Mail: _____

Signature: _____

Title: _____

Date Certified: _____

Bid Breakdown

Asbestos Abatement Total: _____

Demolition Total: _____

Disposal Total: _____

Fill: _____

Landscaping Total: _____

Total Bid Amount: _____

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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. _____

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**CERTIFICATION REGARDING DEBARMENT, SUSPENSION,
INELIGIBILITY AND VOLUNTARY EXCLUSION**
(Page 3 of Bid Document)

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

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

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

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

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

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

Bidder Signature

Date

Typed or Printed

Company Name

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A. General Bid Conditions/Instruction to Bid

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

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

B. Federal and State Regulation Compliance

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

C. Project Submission Schedule

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

- | | |
|---|-------------------|
| 1. Request for Qualifications and Cost Proposal Available to the Public | 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.

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D. Bidder/Offeror Representation

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

E. Bid / Offer Qualifications

~Proof of qualification must be submitted with bid~

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

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

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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.

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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.

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4. Insurance

All Prime and Subcontractors, working under this contract, must include the Local Governmental Units as co-insured and furnish evidence of comprehensive public liability 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)

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8. Penalty for Unexcused Delays

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

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

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

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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

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

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.

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- 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

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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.

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Section V
Bid Submission

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

- Page 1: Bid certification
- Page 2: Conflict of interest disclosure form
- Page 3: Certification regarding debarment and suspension
- Page 4: Copy of deconstruction and or residential demolition license
- Page 5: Proof of comprehensive liability insurance
- Page 6: Total cost proposal for deconstruction and demolition of 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.

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.

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.

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.

Project No.: 16-1070
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

Project No.: 16-1070
Muskegon County Land Bank
Parcel ID: 61-26-635-269-0002-00

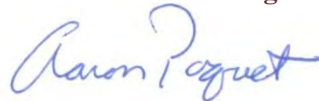
DISCLAIMER

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



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

Red Cedar Consulting

Attachment 1
APEX Research Laboratory Analytical Results

Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)



Project: 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 - 01 Cust. #: LS-HM-01A Material: Asphalt Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 64874 - 01a Cust. #: LS-HM-01A Material: Fibrous Material Location: Appearance: white, fibrous, homogenous Layer: 2 of 2	Asbestos Present: YES Chrysotile - 80%	Other - 20%
Lab ID #: 64874 - 02 Cust. #: LS-HM-01B Material: Asphalt Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 2	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.



NVLAP Lab Code 102118-0

Certificate of Laboratory 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: Appearance: Layer: 2 of 2	Asbestos Present: NOT ANALYZED	
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%

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Robert T. Letarte Jr., Laboratory Director

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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% Other - 70%
Lab ID #: 64874 - 04a Cust. #: LS-HM-02B Material: Flooring Location: Appearance: blue, fibrous, nonhomogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 64874 - 05 Cust. #: LS-HM-03A Material: White Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Fiberglass - 10% Other - 70%

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Robert T. Letarte Jr., Laboratory Director

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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	Non-Asbestos
Lab ID #: 64874 - 06 Cust. #: LS-HM-03B Material: White Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Fiberglass - 10% Other - 70%
Lab ID #: 64874 - 07 Cust. #: LS-HM-04A Material: Grey Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Fiberglass - 10% Other - 70%
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%

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Robert T. Letarte Jr., Laboratory Director

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 Date Reported: 05/20/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
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	Asbestos Present: NO No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 64874 - 11 Cust. #: LS-HM-06A Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%

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

Robert T. Letarte Jr., Laboratory Director

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ARI Report # 16-64874
 Date Collected: 05/15/16
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 Date Analyzed: 05/20/16
 Date Reported: 05/20/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64874 - 11a Cust. #: LS-HM-06A Material: Joint Compound Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64874 - 12 Cust. #: LS-HM-06B Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
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	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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ARI Report # 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 - 14 Cust. #: LS-HM-07B Material: Glazing Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64874 - 15 Cust. #: LS-HS-01A Material: Plaster Texture Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 3	Asbestos Present: NO No Asbestos Observed	Other - 100%
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	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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



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

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64874 - 15b Cust. #: LS-HS-01A Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 3 of 3	Asbestos Present: YES Chrysotile - 2.25% POINT COUNT RESULT	Cellulose - 2% Other - 95.75%
Lab ID #: 64874 - 16 Cust. #: LS-HS-01B Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
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

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



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ARI Report # 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 - 17 Cust. #: LS-HS-01C Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64874 - 17a Cust. #: LS-HS-01C Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: YES Chrysotile - 2.00% POINT COUNT RESULT	Cellulose - 2% Other - 96%
Lab ID #: 64874 - 18 Cust. #: LS-HS-01D Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 1.50% POINT COUNT RESULT	Cellulose - 2% Other - 96.5%

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.



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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 - 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: NO No Asbestos Observed	Other - 100%
Lab ID #: 64874 - 19b Cust. #: LS-HS-01E Material: Plaster Base Coat Location: Appearance: grey,fibrous,homogenous Layer: 3 of 3	Asbestos Present: YES Chrysotile - 1.50% POINT COUNT RESULT	Cellulose - 2% Other - 96.5%

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

Robert T. Letarte Jr., Laboratory Director

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



NVLAP Lab Code 102118-0

APEX Research, Inc.

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



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

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

Date of Survey: 5-15-16

Project: 25 E. Lincoln St.

Project #:

Contact Person: Aaron Paquet

Lab Use Only
 Log-In _____
 Report _____

Turn Around Times: (Circle One)

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

Rush 24 hour
 48 hour 72 hour

Other: TTP All Samples Except Plaster

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

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	LS-HM-01A	Asphalt Shingle			
2	LS-HM-01B	Asphalt Shingle			
3	LS-HM-02A	Beige Linoleum			
4	LS-HM-02B	Beige Linoleum			
5	LS-HM-03A	White Linoleum			
6	LS-HM-03B	White Linoleum			
7	LS-HM-04A	Grey Linoleum			
8	LS-HM-04B	Grey Linoleum			
9	LS-HM-05A	Floral Linoleum			
10	LS-HM-05B	Floral Linoleum			
11	LS-HM-06A	Drywall			

RECEIVED
 MAY 17 2016

Relinquished by: [Signature] Received by: [Signature] 1523

Date: 5-17-16 Date: _____

Relinquished by: _____ Received by: _____

Date: _____ Date: _____

64874

pg. 2 of 2

APEX Research, Inc.

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



E-mail: apexresearch@charterminet

Fax: 734-449-9991

Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

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

Date of Survey: 5-15-16

Project: 25 E. Lincoln St.

Project #:

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour 72 hour

Other: TTP All Samples Except Plaster

Asbestos: Bulk Wipe Point Count PCM

Lead: Bulk Wipe Air Paint Soil

Mold: Bulk Tape BioSIS Other Viable

TEM: AHERA 7400 Bulk/NOB EPA Level II

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	LS-HM-06B	Drywall			
13	LS-HM-07A	Glazing			
14	LS-HM-07B	Glazing			
15	LS-HS-01A	Plaster			
16	LS-HS-01B	Plaster			
17	LS-HS-01C	Plaster			
18	LS-HS-01D	Plaster			
19	LS-HS-01E	Plaster			

RECEIVED

Relinquished by: *[Signature]*

Received by: *[Signature]*

Date: 5-17-16

Date: MAY 17 2016

Relinquished by: _____

Received by: _____

Date: _____

Date: _____

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

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, 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					

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, 25 E. Lincoln St., Muskegon Heights, Michigan

Exterior - Asbestos Containing Materials			
Location	Material Description	Friable	Approx. Quantity
Building Roof	Asphalt Shingles	No	1,664 sq. ft.
Total			1,664 sq. ft.
Interior - Asbestos Containing Materials			
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.

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
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.

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.

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:

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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

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

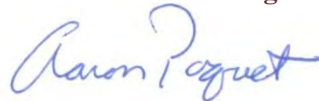
DISCLAIMER

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



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

Red Cedar Consulting

Attachment 1
APEX Research Laboratory Analytical Results

Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)



Project: 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 - 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%
Lab ID #: 64876 - 02 Cust. #: BS-HM-01B Material: Asphalt Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Fiberglass - 20% Other - 80%
Lab ID #: 64876 - 03 Cust. #: BS-HM-02A Material: Green Linoleum Multilayer Location: Appearance: green, 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

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



NVLAP Lab Code 102118-0

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

Sample Information	Asbestos Type/Percent	Non-Asbestos
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	Other - 100%
Lab ID #: 64876 - 03b Cust. #: BS-HM-02A Material: Mastic Location: Appearance: black,fibrous,homogenous Layer: 3 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 5% Other - 95%
Lab ID #: 64876 - 04 Cust. #: BS-HM-02B Material: Green Linoleum Multilayer Location: Appearance: green,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.

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

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64876 - 04a Cust. #: BS-HM-02B Material: Floor Tile Location: Appearance: blue,nonfibrous,homogenous Layer: 2 of 3	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64876 - 04b Cust. #: BS-HM-02B Material: Mastic Location: Appearance: black,fibrous,homogenous Layer: 3 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 5% Other - 95%
Lab ID #: 64876 - 05 Cust. #: BS-HM-03A 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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 Date Analyzed: 05/20/16
 Date Reported: 05/20/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
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	Cellulose - 20% Other - 80%
Lab ID #: 64876 - 06a Cust. #: BS-HM-03B Material: Joint Compound Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64876 - 07 Cust. #: BS-HM-04A Material: Glazing Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Robert T. Letarte Jr., Laboratory Director

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64876 - 08 Cust. #: BS-HM-04B Material: Glazing Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64876 - 09 Cust. #: BS-HM-05A Material: White 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 #: 64876 - 10 Cust. #: BS-HM-05B Material: White 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%

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

Robert T. Letarte Jr., Laboratory Director

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 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 - 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%
Lab ID #: 64876 - 12 Cust. #: BS-HM-06B Material: Fiberboard Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 95% Other - 5%
Lab ID #: 64876 - 13 Cust. #: BS-HS-01A Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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 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	Asbestos Present: NO No Asbestos Observed	Other - 100%
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	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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 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 - 15 Cust. #: BS-HS-01C Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64876 - 15a Cust. #: BS-HS-01C 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 - 16 Cust. #: BS-HS-01D Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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 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 - 16a Cust. #: BS-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%
Lab ID #: 64876 - 17 Cust. #: BS-HS-01E Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64876 - 17a Cust. #: BS-HS-01E Material: Plaster 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.



NVLAP Lab Code 102118-0

APEX Research, Inc.

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



Client Name: Red Cedar Consulting

Date of Survey: 5-15-16

Address: PO Box 13216

Project: 119 W. Barney St.

City, St., Zip: Lansing, MI 48901

Project #:

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

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush 24 hour

Asbestos: Bulk Wipe Point Count PCM

48 hour 72 hour

Lead: Bulk Wipe Air Paint Soil

Other: **TTP** All Samples Except Plaster

Mold: Bulk Tape BioSIS Other Viable
 TEM: AHERA 7400 Bulk/NOB EPA Level II

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	BS-HM-01A	Asphalt Shingle			
2	BS-HM-01B	Asphalt Shingle			
3	BS-HM-02A	Green Linoleum Multilayer			
4	BS-HM-02B	Green Linoleum Multilayer			
5	BS-HM-03A	Drywall			
6	BS-HM-03B	Drywall			
7	BS-HM-04A	Glazing			
8	BS-HM-04B	Glazing			
9	BS-HM-05A	White 1'x1' Ceiling Tile			
10	BS-HM-05B	White 1'x1' Ceiling Tile			
11	BS-HM-06A	Fiberboard			

Relinquished by:

Received by: **RECEIVED**
 Date: 5-17-16

Relinquished by: _____

Received by: _____

64876

pg. 2 of 2

APEX Research, Inc.

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



Client Name: Red Cedar Consulting

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

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush 24 hour

Asbestos: Bulk Wipe _____ Point Count _____ PCM _____

~~48 hour~~ 72 hour

Lead: Bulk _____ Wipe _____ Air _____ Paint _____ Soil _____

Other: All Samples Except Plaster

Mold: Bulk _____ Tape _____ Biosis _____ Other _____ Viable _____

TEM: AHERA 7400 Bulk/NOB _____ EPA Level II _____

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	BS-HM-D16B	Fiberboard			
13	BS-HS-01A	Plaster			
14	BS-HS-01B	Plaster			
15	BS-HS-01C	Plaster			
16	BS-HS-01D	Plaster			
17	BS-HS-01E	Plaster			

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

Relinquished by: _____ Received by: _____

Date: 5-17-16 Date: MAY 17 2016

Date: _____ Date: _____

Lab Use Only
Log-In _____
Report _____

Tables

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

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

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, 119 W Barney Ave., Muskegon Heights, Michigan

Asbestos Containing Material Description and Location					
Location	Material Description	Friable	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.

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, 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.)	HVAC Duct Wrap	Yes	110 sq. ft.
2 nd Fl. SW Bedroom (1 register, 10 sq. ft. and vertical chase to basement, 25 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.

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
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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.

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.

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)

Project No.: 16-1070
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.

Project No.: 16-1070
Muskegon County Land Bank
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- Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations.

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

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

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

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

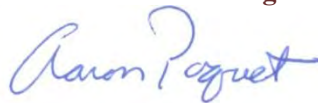
DISCLAIMER

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

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

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

Sincerely,
Red Cedar Consulting



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

Red Cedar Consulting

Attachment 1
APEX Research Laboratory Analytical Results



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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 - 01 Cust. #: BD-HM-01A Material: Rolled Roofing Location: Appearance: black, fibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Fiberglass - 40% Other - 60%
Lab ID #: 65111 - 01a Cust. #: BD-HM-01A Material: Rolled Roofing Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Fiberglass - 40% Other - 60%
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.



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 160 E Sherman Blvd

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 65111 - 02a Cust. #: BD-HM-01B Material: Rolled Roofing Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Fiberglass - 40% Other - 60%
Lab ID #: 65111 - 03 Cust. #: BD-HM-02A 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 - 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%

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Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 160 E Sherman Blvd

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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 - 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	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 65111 - 05 Cust. #: BD-HM-03A Material: Brick Linoleum 2 Layer Location: Appearance: beige, fibrous, nonhomogenous 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

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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 - 05a Cust. #: BD-HM-03A Material: Linoleum Location: Appearance: red, fibrous, nonhomogenous Layer: 2 of 2	Asbestos Present: YES Chrysotile - 20%	Other - 80%
Lab ID #: 65111 - 06 Cust. #: BD-HM-03B Material: Brick Linoleum 2 Layer Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
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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NVLAP Lab Code 102118-0



Certificate of Laboratory 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	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	Cellulose - 15% Fiberglass - 2% Other - 83%
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	Synthetic - 2% Other - 98%
Lab ID #: 65111 - 07b Cust. #: BD-HM-04A Material: Glue Location: Appearance: clear, nonfibrous, homogenous Layer: 3 of 9	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Robert T. Letarte Jr., Laboratory Director

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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 - 07c Cust. #: BD-HM-04A Material: Floor Tile Location: Appearance: brown,nonfibrous,homogenous Layer: 4 of 9	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65111 - 07d Cust. #: BD-HM-04A Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 5 of 9	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65111 - 07e Cust. #: BD-HM-04A Material: Floor Tile Location: Appearance: green,nonfibrous,homogenous Layer: 6 of 9	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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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 - 07f Cust. #: BD-HM-04A Material: Glue Location: Appearance: clear, nonfibrous, homogenous Layer: 7 of 9	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65111 - 07g Cust. #: BD-HM-04A Material: Floor Tile Location: Appearance: beige, fibrous, homogenous Layer: 8 of 9	Asbestos Present: NO No Asbestos Observed	Cellulose - 5% Other - 95%
Lab ID #: 65111 - 07h Cust. #: BD-HM-04A Material: Glue Location: Appearance: brown, fibrous, homogenous Layer: 9 of 9	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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NVLAP Lab Code 102118-0



Certificate of Laboratory 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	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	Cellulose - 15% Fiberglass - 2% Other - 83%
Lab ID #: 65111 - 08a Cust. #: BD-HM-04B Material: Floor Tile Location: Appearance: brown, fibrous, homogenous Layer: 2 of 9	Asbestos Present: NO No Asbestos Observed	Synthetic - 2% Other - 98%
Lab ID #: 65111 - 08b Cust. #: BD-HM-04B Material: Glue Location: Appearance: clear, nonfibrous, homogenous Layer: 3 of 9	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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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: Appearance: clear,nonfibrous,homogenous Layer: 5 of 9	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65111 - 08e Cust. #: BD-HM-04B Material: Floor Tile Location: Appearance: green,nonfibrous,homogenous Layer: 6 of 9	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Robert T. Letarte Jr., Laboratory Director

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ARI Report # 16-65111
Date Collected: 05/24/16
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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	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65111 - 08g Cust. #: BD-HM-04B Material: Floor Tile Location: Appearance: beige, fibrous, homogenous Layer: 8 of 9	Asbestos Present: NO No Asbestos Observed	Cellulose - 5% Other - 95%
Lab ID #: 65111 - 08h Cust. #: BD-HM-04B Material: Glue Location: Appearance: brown, fibrous, homogenous Layer: 9 of 9	Asbestos Present: NO No Asbestos Observed	Cellulose - 2% Other - 98%

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Robert T. Letarte Jr., Laboratory Director

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ARI Report # 16-65111
Date Collected: 05/24/16
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Date Analyzed: 05/31/16
Date Reported: 05/31/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 65111 - 09 Cust. #: BD-HM-05A Material: White 1x1 Smooth Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 65111 - 10 Cust. #: BD-HM-05B Material: White 1x1 Smooth Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 65111 - 11 Cust. #: BD-HM-06A Material: White 1x1 Swirl Ceiling Tile Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Fiberglass - 20% Perlite - 20% Other - 30%

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Robert T. Letarte Jr., Laboratory Director

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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 Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Fiberglass - 20% Perlite - 20% Other - 30%
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%

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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	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 65111 - 16 Cust. #: BD-HM-08B Material: Drywall Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 65111 - 17 Cust. #: BD-HM-09A Material: Glazing Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 1.25% POINT COUNT RESULT	Other - 98.75%

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

Robert T. Letarte Jr., Laboratory Director

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Project: 160 E Sherman Blvd

Report To:
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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 - 18 Cust. #: BD-HM-09B Material: Glazing Location: Appearance: Layer: of	Asbestos Present: NOT ANALYZED	
Lab ID #: 65111 - 19 Cust. #: BD-HS-01A Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65111 - 19a Cust. #: BD-HS-01A Material: Plaster Base Coat Location: Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Hair - 1% Other - 98%

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

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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 - 20 Cust. #: BD-HS-01B Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
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	Cellulose - 1% Hair - 1% Other - 98%
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% POINT COUNT RESULT	Other - 97.75%

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Robert T. Letarte Jr., Laboratory Director

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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 - 21a Cust. #: BD-HS-01C Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 4	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65111 - 21b Cust. #: BD-HS-01C Material: Plaster Base Coat Location: Appearance: beige, fibrous, homogenous Layer: 3 of 4	Asbestos Present: NO No Asbestos Observed	Hair - 1% Other - 99%
Lab ID #: 65111 - 21c Cust. #: BD-HS-01C Material: Plaster Base Coat Location: Appearance: beige, fibrous, homogenous Layer: 4 of 4	Asbestos Present: NO No Asbestos Observed	Hair - 2% Other - 98%

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NVLAP Lab Code 102118-0

65111

AREX Research, Inc.

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



Client Name: Red Cedar Consulting

Date of Survey: 5.24.16

Address: PO Box 13216
 Lansing, MI 48901

Project: 160 E. Sherman Blvd.

City, St., Zip: Lansing, MI 48901

Project #: _____

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

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour 72 hour

Other: TTP All Samples Except Plaster
 Asbestos: Bulk Wipe _____ Point Count _____ PCM _____
 Lead: Bulk _____ Wipe _____ Air _____ Paint _____ Soil _____
 Mold: Bulk _____ Tape _____ Biosis _____ Other _____ Viable _____
 TEM: AHERA 7400 Bulk/NOB _____ EPA Level II _____

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	BD-HM-01A	Roller Roofing			
2	BD-HM-01B	Roller Roofing			
3	BD-HM-02A	Asphalt Shingle			
4	BD-HM-02B	Asphalt Shingle			
5	BD-HM-03A	Brick Linoleum 2-Layer			
6	BD-HM-03B	Brick Linoleum 2-Layer			
7	BD-HM-04A	White Linoleum Multi-Layer			
8	BD-HM-04B	White Linoleum Multi-Layer			
9	BD-HM-05A	White 1x1 Smooth Ceiling Tile			
10	BD-HM-05B	White 1x1 Smooth Ceiling Tile			
11	BD-HM-06A	White 1x1 Swirl Ceiling Tile			

RECEIVED

Relinquished by: [Signature]
 Date: 5-25-16

Received by: CRS
 Date: 5-25-16

Relinquished by: _____
 Date: _____

Received by: [Signature]
 Date: 2-6-2016

65111

pg. 2 of 2

APEX Research, Inc.

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



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

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

Date of Survey: 5-24-16

Project: 1100 E. Sherman Blvd.

Project #:

Contact Person: Aaron Paquet

Lab Use Only
Log-In _____
Report _____

Turn Around Times: (Circle One)

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

Rush 24 hour
48 hour 72 hour

Other: **TTP** All Samples Except Plaster

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

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	BD-HM-016B	White 1x1 Swirl Ceiling Tile			
13	BD-HM-07A	White 2x2 Ceiling Tile			
14	BD-HM-07B	White 2x2 Ceiling Tile			
15	BD-HM-08A	Daywall			
16	BD-HM-08B	Daywall			
17	BD-HM-09A	Glazing			
18	BD-HM-09B	Glazing			
19	BD-HS-01A	Plaster			
20	BD-HS-01B	Plaster			
21	BD-HS-01C	Plaster			

Relinquished by: _____ Received by: US

Date: 5-25-16 Date: 5-25-16

Relinquished by: _____ Received by: _____

Date: _____ Date: _____

Received by: RECEIVED

Date: MAY 26 2016



Certificate of Laboratory 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 # 16-65171
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	Non-Asbestos
Lab ID #: 65171 - 01 Cust. #: BD-HS-01D Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65171 - 01a Cust. #: BD-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%
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	Other - 100%

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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 # 16-65171
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	Non-Asbestos
Lab ID #: 65171 - 02a Cust. #: BD-HS-01E 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 #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

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

Robert T. Letarte Jr., Laboratory Director

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



NVLAP Lab Code 102118-0

APEX Research, Inc.

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

E-mail: apexresearch@chartermi.net

Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address:

PO Box 13216

City, St., Zip:

Lansing, MI 48901

Phone:

(888) 449-4566

Fax: (888) 448-8739

Date of Survey: 5-31-16

Project:

160 E. Sherman Blvd.

Project #:

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush

24 hour

48 hour

72 hour

Other:



All Samples Except Plaster

TEM:

AHERA 7400

Bulk/NOB

EPA Level II

Mold:

Bulk

Tape

Biosis

Other

Viabile

Lead:

Bulk

Wipe

Air

Paint

Soil

Asbestos: Bulk x

Wipe

Point Count

PCM

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	RD-118-01D	Plaster			
2	RD-118-01E	Plaster			

Relinquished by: [Signature] Received by: [Signature] Date: 5-31-16

Relinquished by: [Signature] Received by: [Signature] Date: JUN 1 12:06



Tables

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

Hazardous Materials Description and Location		
Location	Material Description	Quantity
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 Description	Friable	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/ND	Bathroom	NA
BD-HM-04B	White Linoleum Multilayer	No	M	Category I	ND/ND/ND/ND/ND/ND/ND/ND/ND/ND	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

M = Miscellaneous building material

Abbreviations

NQ = Not quantified

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

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

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

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

Table 3 - Summary of Presumed Asbestos Containing Materials, 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
 S = Surfacing Material

Abbreviations

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

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
1 st Floor	Wall Plaster	No	2,941 sq. ft.
1 st 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.

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.

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.

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)

Project No.: 16-1070
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

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

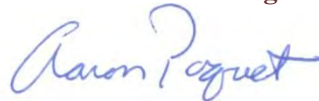
DISCLAIMER

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



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

Red Cedar Consulting

Attachment 1
APEX Research Laboratory Analytical Results



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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 - 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%
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	Cellulose - 20% Other - 80%
Lab ID #: 64728 - 03 Cust. #: RT-HM-02A Material: Brown Linoleum Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 247 W Rotterdam St

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Lansing, MI 48901

ARI Report # 16-64728
Date Collected: 05/08/16
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Date Analyzed: 05/14/16
Date Reported: 05/17/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
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	Cellulose - 5% Other - 95%
Lab ID #: 64728 - 04 Cust. #: RT-HM-02B Material: Brown Linoleum Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64728 - 04a Cust. #: RT-HM-02B Material: White 9x9 Vinyl Tile Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Test Method, Polarized Light Microscopy (PLM)

Project: 247 W Rotterdam St

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

Sample Information	Asbestos Type/Percent	Non-Asbestos
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	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64728 - 07 Cust. #: RT-HM-04A Material: Red Linoleum 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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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 - 08 Cust. #: RT-HM-04B Material: Red Linoleum Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 64728 - 09 Cust. #: RT-HM-05A Material: White Smooth 1x1 Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 60% Other - 40%
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

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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	Asbestos Present: NO No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 64728 - 12 Cust. #: RT-HM-06B Material: White Pitted 1x1 Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 64728 - 13 Cust. #: RT-HM-07A Material: Glazing Location: Appearance: grey, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO Chrysotile - Trace POINT COUNT RESULT	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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 - 14 Cust. #: RT-HM-07B Material: Glazing Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO Chrysotile - 0.50% POINT COUNT RESULT	Other - 99.50%
Lab ID #: 64728 - 15 Cust. #: RT-HM-08A Material: Glazing Location: Appearance: grey, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64728 - 16 Cust. #: RT-HM-08B Material: Glazing Location: Appearance: beige, 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

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Certificate of Laboratory Analysis

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Project: 247 W Rotterdam St

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Mr. Aaron Paquet
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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 - 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%
Lab ID #: 64728 - 17a Cust. #: RT-HM-09A Material: Mastic Location: Appearance: black,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
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	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64728 - 19 Cust. #: RT-HS-01A Material: Plaster Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64728 - 19a Cust. #: RT-HS-01A 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.



NVLAP Lab Code 102118-0



Certificate of Laboratory 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 - 20 Cust. #: RT-HS-01B Material: Plaster Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
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	Cellulose - 2% Other - 98%
Lab ID #: 64728 - 21 Cust. #: RT-HS-01C Material: Plaster Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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	Asbestos Present: NO No Asbestos Observed	Other - 100%
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	Cellulose - 2% Other - 98%

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

Robert T. Letarte Jr., Laboratory Director

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



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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 - 23 Cust. #: RT-HS-01E Material: Plaster Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64728 - 23a Cust. #: RT-HS-01E Material: Mortar Location: Appearance: grey, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

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

Robert T. Letarte Jr., Laboratory Director

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



NVLAP Lab Code 102118-0

Apex # **64728**

pg 1 of 3

APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189

E-mail: apexresearch@chartermi.net



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

Client Name: Red Cedar Consulting

Date of Survey: 5-8-16

Address: PO Box 13216

Project: 247 W. Rotherdam St.

City, St., Zip: Lansing, MI 48901

Project #:

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

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush 24 hour

Asbestos: Bulk X

Wipe Point Count PCM

48 hour 72 hour

Lead: Bulk

Wipe Air Paint Soil

Other: 4 Day

TTIP All Samples Except Plaster

Mold: Bulk

Tape BioSIS Other Viable

TEEM: AHERA 7400

Bulk/NOB EPA Level II

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	RT-HM-01A	Shingle			
2	RT-HM-01B	Shingle			
3	RT-HM-02A	Brown Linoleum/white grout tile			
4	RT-HM-02B	Brown Linoleum/white grout tile			
5	RT-HM-03A	Beige 12x12 vinyl tile			
6	RT-HM-03B	Beige 12x12 vinyl tile			
7	RT-HM-04A	Red Linoleum			
8	RT-HM-04B	Red Linoleum			
9	RT-HM-05A	White Smooth 1x1 Ceiling Tile			
10	RT-HM-05B	White Smooth 1x1 Ceiling Tile			
11	RT-HM-06A	White Pitted 1x1 Ceiling Tile			

RECEIVED
MAY 11 2016

Relinquished by: [Signature]

Received by: [Signature]

Date: 5-10-16

Date:

Relinquished by:

Received by:

Date:

Date:

64728

PS 2 of 3

APEX Research, Inc.

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

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



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

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

Date of Survey: 5-8-16

Project: 247 W. Rotherdam St.

Project #:

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour 72 hour

Other: 4 Day



All Samples Except Plaster

Asbestos: Bulk Wipe Point Count PCM

Lead: Bulk Wipe Air Paint Soil

Mold: Bulk Tape BioSIS Other Viable

TEM: AHERA 7400 Bulk/NOB EPA Level II

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	RT-HM-068	White Pickd vel Ceiling Tile			
13	RT-HM-07A	Glazing			
14	RT-HM-07B				
15	RT-HM-08A				
16	RT-HM-08B				
17	RT-HM-09A	White 12x12 Vinyl Tile			
18	RT-HM-09B	White 12x12 Vinyl Tile			
19	RT-MS-01A	Plaster			
20	RT-MS-01B				
21	RT-MS-01C				
22	RT-MS-01D				

RECEIVED

Relinquished by: Carm Paquet

Received by: [Signature]

Date: 5-8-16

Date: MAY 11 2016

64728

pg 3 of 3

APEX Research, Inc.

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

E-mail: apexresearch@chartermi.net

Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

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

Date of Survey: 5-8-16

Project: 247 W. Rockefeller St.

Project #:

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush 24 hour

Asbestos: Bulk Wipe Point Count PCM

48 hour 72 hour

Lead: Bulk Wipe Air Paint Soil

Other: 4 Day

Mold: Bulk Tape BiosIS Other Viable
TEM: AHERRA 7400 Bulk/NOB EPA Level II

Lab Use Only
Log-In _____
Report _____

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
23	RT-15-01D	Plaster			

Relinquished by: _____ Received by: _____

Date: 5-10-16 Date: MAY 11 2016

Relinquished by: _____ Received by: _____

Date: _____ Date: _____

Tables

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

Hazardous 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:

Material Types

Abbreviations

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

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

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

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

Table 3 - Summary of Presumed Asbestos Containing Materials, 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

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

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.

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.

Project No.: 16-1070
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

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

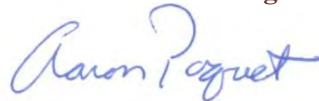
DISCLAIMER

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



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

Red Cedar Consulting

Attachment 1
APEX Research Laboratory Analytical Results



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 252 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 - 01 Cust. #: RD-HM-01A Material: Brown Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 64721 - 01a Cust. #: RD-HM-01A Material: Brown Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 64721 - 01b Cust. #: RD-HM-01A 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

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



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 252 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 - 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%
Lab ID #: 64721 - 02a Cust. #: RD-HM-01B Material: Brown Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
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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NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

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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 - 03 Cust. #: RD-HM-02A Material: 9x9 Green Vinyl Tile/ Leveling Compound Location: Appearance: grey,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
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 Cust. #: RD-HM-02B Material: 9x9 Green Vinyl Tile/ Leveling Compound Location: Appearance: grey,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

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Report To:

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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 - 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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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	Cellulose - 20% Fiberglass - 5% Other - 75%
Lab ID #: 64721 - 07a Cust. #: RD-HM-04A Material: Joint Compound Location: Appearance: white, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64721 - 08 Cust. #: RD-HM-04B Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	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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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	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64721 - 09 Cust. #: RD-HM-05A Material: Glazing Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Wollastonite - 1% Other - 99%
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	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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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 - 11 Cust. #: RS-HS-01A Material: Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64721 - 11a Cust. #: RS-HS-01A Material: Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Hair - 2% Other - 98%
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	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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Date Collected: 05/08/16
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	Asbestos Present: NO No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: 64721 - 13 Cust. #: RS-HS-01C Material: Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64721 - 13a Cust. #: RS-HS-01C Material: Base Coat Location: Appearance: brown, 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.



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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 - 14 Cust. #: RS-HS-01D Material: Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64721 - 14a Cust. #: RS-HS-01D Material: Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: 64721 - 15 Cust. #: RS-HS-01E Material: Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 252 Rotterdam St.

Report To:
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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 - 15a Cust. #: RS-HS-01E Material: Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Hair - 5% Other - 95%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

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

Robert T. Letarte Jr., Laboratory Director

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



NVLAP Lab Code 102118-0

Apex # **647721**

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



Client Name: Red Cedar Consulting

Date of Survey: 5-8-16

Address: PO Box 13216

Project: 252 Reberdam St.

City, St., Zip: Lansing, MI 48901

Project #: _____

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

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour 72 hour

Other: **TIP** All Samples Except Plaster

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

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	RD-HM-01A	Shingle			
2	RD-HM-01B	Shingle			
3	RD-HM-02A	Green Green Vinyl Tile			
4	RD-HM-02B	Green Green Vinyl Tile			
5	RD-HM-03A	White W/ Pitted Ceiling Tile			
6	RD-HM-03B	White W/ Pitted Ceiling Tile			
7	RD-HM-04A	Drywall			
8	RD-HM-01B	Drywall			
9	RD-HM-05A	Glazing			
10	RD-HM-05B	Glazing			
11	RD-HS-01A	Plaster			

Lab Use Only
 Log-In _____
 Report _____

Relinquished by: [Signature]

Received by: [Signature]

Relinquished by: _____

Received by: _____

Date: 5-10-16

Date: MAY 11 2016

Date: _____

Date: _____

647221

pg 2 of 2

APEX Research, Inc.

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

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



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

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

Date of Survey: 5-8-16

Project: 252 Rotherdam St.

Project #:

Contact Person: Aaron Paquet

Lab Use Only
Log-In _____
Report _____

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour 72 hour

Other: TTP All Samples Except Plaster
Mold: Bulk _____ Tape _____ BioSIS _____ Other _____ Viable _____
Asbestos: Bulk x Wipe _____ Point Count _____ PCM _____
Lead: Bulk _____ Wipe _____ Air _____ Paint _____ Soil _____
TEM: AHERA 7400 _____ Bulk/NOB _____ EPA Level II _____

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	RD-HS-21B	Plaster			
13	RD-HS-21C				
14	RD-HS-21D				
15	RD-HS-21E				
RECEIVED					

Relinquished by: *[Signature]*

Date: 5-16-16

Received by: *[Signature]*

Date: _____

Relinquished by: _____

Date: _____

Received by: _____

Date: _____

Tables

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

Hazardous Materials Description and Location		
Location	Material Description	Quantity
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

Notes:

Material Types

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

Abbreviations

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

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

Table 3 - Summary of Presumed Asbestos Containing Materials, 252 W Rotterdam Ave., Muskegon Heights, Michigan

Asbestos Containing Material Description and Location					
Location	Material Description	Friable	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.) Basement (misc. HVAC wrap on framing and floor, 20 sq. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	170 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, 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.) 2 nd Fl. Living/Dining (1 register, 10 sq. ft. and vertical chase to basement, 25 sq. ft.)	HVAC Duct Wrap	Yes	170 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.)			
Basement (misc. HVAC wrap on framing and floor, 20 sq. ft.)			
Total			170 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

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.

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.

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.

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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

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

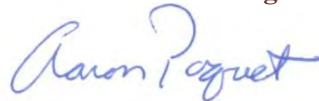
DISCLAIMER

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



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

Red Cedar Consulting

Attachment 1
APEX Research Laboratory Analytical Results



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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 - 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	Asbestos Present: NO No Asbestos Observed	Fiberglass - 15% Other - 85%
Lab ID #: 65106 - 03 Cust. #: SA-HM-02A Material: Shingle Lap Siding Location: Appearance: black, 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

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



NVLAP Lab Code 102118-0



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

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 65106 - 04 Cust. #: SA-HM-02B Material: Shingle Lap Siding Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 65106 - 05 Cust. #: SA-HM-03A Material: Stone Linoleum Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 10% Fiberglass - 5% Other - 85%
Lab ID #: 65106 - 06 Cust. #: SA-HM-03B Material: Stone Linoleum Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 10% Fiberglass - 5% Other - 85%

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Robert T. Letarte Jr., Laboratory Director

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Date Reported: 05/27/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
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	Asbestos Present: NO No Asbestos Observed	Cellulose - 80% Other - 20%
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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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	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Fiberglass - 20% Perlite - 30% Other - 10%
Lab ID #: 65106 - 11 Cust. #: SA-HM-06A Material: Drywall Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 65106 - 12 Cust. #: SA-HM-06B Material: Drywall Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%

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Robert T. Letarte Jr., Laboratory Director

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Sample Information	Asbestos Type/Percent	Non-Asbestos
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	Other - 100%
Lab ID #: 65106 - 14 Cust. #: SA-HM-07B Material: Glazing Location: Appearance: beige,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65106 - 15 Cust. #: SA-HS-01A Material: Plaster Finish Coat Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 65106 - 15a Cust. #: SA-HS-01A Material: Plaster Base Coat Location: Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: 65106 - 16 Cust. #: SA-HS-01B Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65106 - 16a Cust. #: SA-HS-01B 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

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Date Collected: 05/24/16
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Date Analyzed: 05/27/16
Date Reported: 05/27/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 65106 - 17 Cust. #: SA-HS-01C Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65106 - 17a Cust. #: SA-HS-01C Material: Plaster Base Coat Location: Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: 65106 - 18 Cust. #: SA-HS-01D Material: Plaster Texture Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 3	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.



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

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 65106 - 18a Cust. #: SA-HS-01D Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 3	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65106 - 18c Cust. #: SA-HS-01D Material: Plaster Base Coat Location: Appearance: beige, fibrous, homogenous Layer: 3 of 3	Asbestos Present: NO No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: 65106 - 19 Cust. #: SA-HS-01E Material: Plaster Texture Location: Appearance: white, nonfibrous, homogenous Layer: 1 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

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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 - 19a Cust. #: SA-HS-01E Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 3	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65106 - 19b Cust. #: SA-HS-01E Material: Plaster Base Coat Location: Appearance: beige, fibrous, homogenous Layer: 3 of 3	Asbestos Present: NO No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

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

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NVLAP Lab Code 102118-0

APEX Research, Inc.

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



E-mail: apexresearch@chartermi.net

Fax: 734-449-9991

Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

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

Date of Survey: 5-24-16

Project: 263 E. Summit Ave.

Project #:

Contact Person: Aaron Paquet

Lab Use Only
Log-In _____
Report _____

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour 72 hour

Other: TTP All Samples Except Plaster

Asbestos: Bulk Wipe _____

Point Count _____ PCM _____

Air _____ Paint _____

Soil _____

Other _____

Soil _____

Other _____

Other _____

Other _____

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	SA-4TM-01A	Shingle			
2	SA-4TM-01B	Shingle			
3	SA-4TM-02A	Shingle lap Siding			
4	SA-4TM-02B	Shingle lap Siding			
5	SA-4TM-03A	Stone Limestone			
6	SA-4TM-03B	Stone Limestone			
7	SA-4TM-04A	White Wt Ceiling Tile			
8	SA-4TM-04B	White Wt Ceiling Tile			
9	SA-4TM-05A	White 2x4 Ceiling Tile			
10	SA-4TM-05B	White 2x4 Ceiling Tile			
11	SA-4TM-06A	Drywall			

Relinquished by: [Signature]

Received by: WR

Date: 5-25-16

Date: 5-25-16

Relinquished by: _____

Received by: [Signature]

Date: _____

Date: MAY 26 2016

RECEIVED
05-26-2016

65106

pg 2 of 2

APEX Research, Inc.

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



E-mail: apexresearch@chartermi.net

Fax: 734-449-9991

Client Name: Red Cedar Consulting

Date of Survey: 5-24-16

Address: PO Box 13216

Project: 263 E. Summit Ave.

City, St., Zip: Lansing, MI 48901

Project #:

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

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour 72 hour

Other: TTP All Samples Except Plaster

Mold: Bulk _____ Tape _____ Biosis _____ Other _____ Viable _____
TEM: AHERA 7400 _____ Bulk/NOB _____ EPA Level II _____

Asbestos: Bulk x Wipe _____ Point Count _____ PCM _____

Lead: Bulk _____ Wipe _____ Air _____ Paint _____ Soil _____

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	SA-4M-2613	Drywall			
13	SA-4M-27A	Glazing			
14	SA-4M-27B	Glazing			
15	SA-HS-01A	Plaster			
16	SA-WS-01B	↓			
17	SA-WS-01C				
18	SA-WS-01D				
19	SA-WS-01E				

Lab Use Only
Log-In _____
Report _____

Relinquished by: [Signature] Received by: UPS

Date: 5-25-16 Date: 5-28-16

Relinquished by: _____ Received by: [Signature]

Date: _____ Date: MAY 26 2016

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

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, 263 E Summit Ave., Muskegon Heights, Michigan

Asbestos Containing Material Description and Location					
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity
Living (1 register, 10 sq. ft.) 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.

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, 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.)	HVAC Duct Wrap	Yes	60 sq. ft.
SW Bedroom (1 register, 10 sq. ft.)			
NW Bedroom (1 register, 10 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
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.

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.

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.

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
Phone: 517-284-6777

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

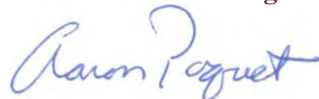
DISCLAIMER

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

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

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

Sincerely,
Red Cedar Consulting



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

Red Cedar Consulting

Attachment 1
APEX Research Laboratory Analytical Results



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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 - 01 Cust. #: DA-HM-01A Material: Asphalt Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Fiberglass - 20% Other - 80%
Lab ID #: 65107 - 02 Cust. #: DA-HM-01B Material: Asphalt Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Fiberglass - 30% Other - 70%
Lab ID #: 65107 - 03 Cust. #: DA-HM-02A Material: Fiberlap Siding Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 65% Other - 35%

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

Robert T. Letarte Jr., Laboratory Director

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



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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 - 04 Cust. #: DA-HM-02B Material: Fiberlap Siding Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 60% Other - 40%
Lab ID #: 65107 - 05 Cust. #: DA-HM-03A Material: Brown 12x12 Vinyl Tile Location: Appearance: grey, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
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	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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	Asbestos Present: NO No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 65107 - 08 Cust. #: DA-HM-04B 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 #: 65107 - 09 Cust. #: DA-HM-05A Material: Drywall 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

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



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Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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
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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	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 65107 - 10a Cust. #: DA-HM-05B Material: Joint Compound Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
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	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: 324 E Delano Ave

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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 - 12 Cust. #: DA-HM-06B Material: Glazing Location: Appearance: grey,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65107 - 13 Cust. #: DA-HS-01A Material: Plaster Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
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.



NVLAP Lab Code 102118-0



Certificate of Laboratory 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 - 14 Cust. #: DA-HS-01B Material: Plaster Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65107 - 14a Cust. #: DA-HS-01B Material: Mortar Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 65107 - 15 Cust. #: DA-HS-01C Material: Plaster Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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 - 15a Cust. #: DA-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 #: 65107 - 16 Cust. #: DA-HS-01D Material: Plaster Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65107 - 16a Cust. #: DA-HS-01D 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.



NVLAP Lab Code 102118-0



Certificate of Laboratory 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 - 17 Cust. #: DA-HS-01E Material: Plaster Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65107 - 17a Cust. #: DA-HS-01E Material: Mortar Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

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

Robert T. Letarte Jr., Laboratory Director

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

65107

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



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

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

Date of Survey: 5-24-16

Project: 324 E. Delano Ave.

Project #:

Contact Person: Aaron Paquet

Lab Use Only
Log-In _____
Report _____

Turn Around Times: (Circle One)

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

Rush 24 hour
48 hour 72 hour

Other: TTP All Samples Except Plaster
Mold: Bulk _____ Tape _____ Biosis _____ Other _____ Viable _____
Asbestos: Bulk Wipe _____ Point Count _____ PCM _____
Lead: Bulk _____ Wipe _____ Air _____ Paint _____ Soil _____
TEM: AHERA 7400 Bulk/NOB _____ EPA Level II _____

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	DA-HM-01A	Asphalt Shingle			
2	DA-HM-01B	Asphalt Shingle			
3	DA-HM-02A	Fiber Lap Siding			
4	DA-HM-02B	Fiber Lap Siding			
5	DA-HM-03A	Brown 13x12 Vinyl Tile			
6	DA-HM-03B	Brown 13x12 Vinyl Tile			
7	DA-HM-04A	White 1x1 Ceiling Tile			
8	DA-HM-04B	White 1x1 Ceiling Tile			
9	DA-HM-05A	Daywall			
10	DA-HM-05B	Daywall			
11	DA-HM-06A	Glazing			

RECEIVED

Relinquished by: [Signature]
Date: 5-24-16

Received by: [Signature]
Date: 5-24-16

Relinquished by: _____
Date: _____

Received by: [Signature]
Date: MAY 26 2016

65107

pg. 2 of 2

APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189
E-mail: apexresearch@chartemmi.net



Client Name: Red Cedar Consulting

Address: PO Box 13216
Lansing, MI 48901

City, St., Zip: Lansing, MI 48901

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

Date of Survey: 5.24.16

Project: 324 E. Delano Ave.

Project #:

Contact Person: Aaron Paquet

Lab Use Only
Log-In _____
Report _____

Turn Around Times: (Circle One)

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

Rush

24 hour

48 hour 72 hour

Other: TTP All Samples Except Plaster

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

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	DA-HM-06B	Glazing			
13	DA-HS-01A	Plaster			
14	DA-HS-01B	Plaster			
15	DA-HS-01C	Plaster			
16	DA-HS-01D	Plaster			
17	DA-HS-01E	Plaster			

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

Date: 5-24-16 Date: 5-24-16

Relinquished by: _____ Received by: **RECEIVED**

Date: _____ Date: MAY 26 2016

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

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, 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

Project No.: 16-1070
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.

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.

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.

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

Project No.: 16-1070
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).

Project No.: 16-1070
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

Certificate of Laboratory 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	Non-Asbestos
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%
Lab ID #: 64877 - 01a Cust. #: PS-HM-01A Material: White Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 64877 - 01b Cust. #: PS-HM-01A Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 3 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Other - 50%

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

Robert T. Letarte Jr., Laboratory Director

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



NVLAP Lab Code 102118-0

Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)



Project: 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	Non-Asbestos
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%
Lab ID #: 64877 - 02a Cust. #: PS-HM-01B Material: White Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 64877 - 02b Cust. #: PS-HM-01B Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 3 of 3	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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NVLAP Lab Code 102118-0

Certificate of Laboratory 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	Non-Asbestos
Lab ID #: 64877 - 03 Cust. #: PS-HM-02A Material: Asphalt Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 64877 - 03a Cust. #: PS-HM-02A Material: Brown Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 64877 - 03b Cust. #: PS-HM-02A Material: White Shingle Location: Appearance: black, fibrous, homogenous Layer: 3 of 3	Asbestos Present: NO No Asbestos Observed	Fiberglass - 30% Other - 70%

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 Date Reported: 05/20/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64877 - 04 Cust. #: PS-HM-02B Material: Asphalt Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 64877 - 04a Cust. #: PS-HM-02B Material: Brown Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 64877 - 04b Cust. #: PS-HM-02B Material: White Shingle Location: Appearance: black, fibrous, homogenous Layer: 3 of 3	Asbestos Present: NO No Asbestos Observed	Fiberglass - 30% Other - 70%

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

Sample Information	Asbestos Type/Percent	Non-Asbestos
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%
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	Cellulose - 70% Other - 30%
Lab ID #: 64877 - 07 Cust. #: PS-HM-04A Material: Beige 12"x12" Vinyl Tile Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Robert T. Letarte Jr., Laboratory Director

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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	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	Asbestos Present: NO No Asbestos Observed	Other - 100%

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 Date Reported: 05/20/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
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	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 64877 - 11 Cust. #: PS-HM-06A Material: Green 12"x12" Vinyl Tile, 2 Layer Location: Appearance: green, nonfibrous, homogenous Layer: 1 of 4	Asbestos Present: NO No Asbestos Observed	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	Other - 100%
Lab ID #: 64877 - 11b Cust. #: PS-HM-06A Material: Beige Floor Tile Location: Appearance: beige,fibrous,homogenous Layer: 3 of 4	Asbestos Present: YES Chrysotile - 5%	Other - 95%
Lab ID #: 64877 - 11c Cust. #: PS-HM-06A Material: Glue Location: Appearance: yellow,nonfibrous,homogenous Layer: 4 of 4	Asbestos Present: NO No Asbestos Observed	Other - 100%

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 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 No Asbestos Observed	Other - 100%
Lab ID #: 64877 - 12a Cust. #: PS-HM-06B Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 4	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64877 - 12b Cust. #: PS-HM-06B Material: Beige Floor Tile Location: Appearance: Layer: 3 of 4	Asbestos Present: NOT ANALYZED	

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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%
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	Other - 100%

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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	Asbestos Present: NOT ANALYZED	
Lab ID #: 64877 - 14a Cust. #: PS-HM-07B Material: Mastic Location: Appearance: black,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
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: YES Chrysotile - 1.25% POINT COUNT RESULT	Other - 98.75%

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

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64877 - 15a Cust. #: PS-HM-08A Material: Glue Location: Appearance: brown, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64877 - 16 Cust. #: PS-HM-08B Material: Stone 12"x12" Vinyl Tile Location: Appearance: Layer: of	Asbestos Present: NOT ANALYZED	
Lab ID #: 64877 - 17 Cust. #: PS-HM-09A Material: White 1'x1' Ceiling Tile Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	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: NO No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 64877 - 19 Cust. #: PS-HM-10A Material: Glazing Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 5%	Other - 95%
Lab ID #: 64877 - 20 Cust. #: PS-HM-10B Material: Glazing Location: Appearance: Layer: of	Asbestos Present: NOT ANALYZED	

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

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Sample Information	Asbestos Type/Percent	Non-Asbestos
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 No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 64877 - 23 Cust. #: PS-HM-12A Material: Fiberboard Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	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 - 24 Cust. #: PS-HM-12B Material: Fiberboard Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 64877 - 25 Cust. #: PS-HS-01A Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64877 - 25a Cust. #: PS-HS-01A Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 2% Other - 98%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64877 - 26 Cust. #: PS-HS-01B Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 64877 - 27 Cust. #: PS-HS-01C Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 64877 - 28 Cust. #: PS-HS-01D Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 2% Other - 98%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
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	Other - 100%
Lab ID #: 64877 - 29a Cust. #: PS-HS-01E 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 #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

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NVLAP Lab Code 102118-0

64877

Pg. 1 of 3

Apex Research, Inc.

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



Client Name: Red Cedar Consulting

Date of Survey: 5-15-16

Address: PO Box 13216

Project: 1998 Park St.

City, St., Zip: Lansing, MI 48901

Project #: _____

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

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour 12 hour

Other: TTP All Samples Except Plaster
Asbestos: Bulk Wipe _____ Point Count _____ PCM _____
Lead: Bulk _____ Wipe _____ Air _____ Paint _____ Soil _____
Mold: Bulk _____ Tape _____ Biosis _____ Other _____ Viable _____
TEM: AHERA 7400 _____ Bulk/NOB _____ EPA Level II _____

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	PS-HM-01A	Asphalt Shingle			
2	PS-HM-01B	Asphalt Shingle			
3	PS-HM-02A	Asphalt Shingle			
4	PS-HM-02B	Asphalt Shingle			
5	PS-HM-03A	Vapor Barrier			
6	PS-HM-03B	Vapor Barrier			
7	PS-HM-04A	Beige 12"x12" Vinyl Tile			
8	PS-HM-04B	Beige 12"x12" Vinyl Tile			
9	PS-HM-05A	Brown Linoleum			
10	PS-HM-05B	Brown Linoleum			
11	PS-HM-06A	Green 12"x12" Vinyl Tile 2-layer			

Lab Use Only
Log-In _____
Report _____

Relinquished by: [Signature] Received by: MAX 17 2016

Relinquished by: _____ Received by: _____

Date: 5-17-16

Date: _____

Date: _____

Date: _____



64877

pg. 2 of 3

APEX Research, Inc.

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

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



Client Name: Red Cedar Consulting

Date of Survey: 5-15-16

Address: PO Box 13216

Project: 1998 Park St.

City, St., Zip: Lansing, MI 48901

Project #: _____

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

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour 12 hour

Other: _____



All Samples Except Plaster

AHERA 7400 Bulk/NOB EPA Level II

Asbestos: Bulk Wipe _____ Point Count _____ PCM _____

Lead: Bulk _____ Wipe _____ Air _____ Paint _____ Soil _____

Mold: Bulk _____ Tape _____ BIOSIS _____ Other _____ Viable _____

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	PS-HM-060B	Green 12"x12" Vinyl Tile 2-layer			
13	PS-HM-07A	Pink 9"x9" Vinyl Tile			
14	PS-HM-07B	Pink 9"x9" Vinyl Tile			
15	PS-HM-08A	Stone 12"x12" Vinyl Tile			
16	PS-HM-08B	Stone 12"x12" Vinyl Tile			
17	PS-HM-09A	White 1'x1' Ceiling Tile			
18	PS-HM-09B	White 1'x1' Ceiling Tile			
19	PS-HM-10A	Glazing			
20	PS-HM-10B	Glazing			
21	PS-HM-11A	Drywall			
22	PS-HM-11B	Drywall			

RECEIVED

Lab Use Only
 Log-In: _____
 Report: _____

Relinquished by: [Signature]

Received by: MAY 17 2016

Date: 5-17-16

Date: _____

Relinquished by: _____

Received by: _____

Date: _____

Date: _____

61877

Pg. 3 of 3

APEX Research, Inc.

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

E-mail: apexresearch@chartermi.net

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Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

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

Date of Survey: 5-15-16

Project: 1998 Park St.

Project #:

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour

Other: All Samples Except Plaster

Asbestos: Bulk Wipe Point Count PCM

Lead: Bulk Wipe Air Paint Soil

Mold: Bulk Tape Biosis Other Viable

TEM: AHERA 7400 Bulk/NOB EPA Level II

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
23	PS-HM-12A	Fiberboard			
24	PS-HM-12B	Fiberboard			
25	PS-HS-01A	Plaster			
26	PS-HS-01B	Plaster			
27	PS-HS-01C	Plaster			
28	PS-HS-01D	Plaster			
29	PS-HS-01E	Plaster			

RECEIVED

Relinquished by:

Date: 5-17-16

Received by: MAY 17 2016

Date: MAY 17 2016

Relinquished by:

Date:

Received by:

Date:

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:

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, 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:

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, 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 Floor)	HVAC Duct Wrap	Yes	170 sq. ft.
Kitchen (Misc. HVAC wrap, 25 sq. ft. on Kitchen Floor)			
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.

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.

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.

Project No.: 16-1070
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).

Project No.: 16-1070
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

Certificate of Laboratory 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	Non-Asbestos
Lab ID #: 64869 - 01 Cust. #: TH-HM-01A Material: Asphalt Shingle Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 64869 - 02 Cust. #: TH-HM-01B Material: Asphalt Shingle Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 64869 - 03 Cust. #: TH-HM-02A Material: Vapor Barrier 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

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



NVLAP Lab Code 102118-0

Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)



Project: 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 - 04 Cust. #: TH-HM-02B Material: Vapor Barrier Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 70% Other - 30%
Lab ID #: 64869 - 05 Cust. #: TH-HM-03A Material: Shingle Lap Siding Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 64869 - 06 Cust. #: TH-HM-03B Material: Shingle Lap Siding 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

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



NVLAP Lab Code 102118-0

Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)



Project: 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	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64869 - 07a Cust. #: TH-HM-04A Material: Glue Location: Appearance: yellow,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
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%

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0

Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)



Project: 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 - 08a Cust. #: TH-HM-04B Material: Glue Location: Appearance: yellow,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64869 - 09 Cust. #: TH-HM-05A Material: Beige 12"x12" Vinyl Tile Location: Appearance: beige,nonfibrous,homogenous Layer: 1 of 4	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64869 - 09a Cust. #: TH-HM-05A Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 4	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Robert T. Letarte Jr., Laboratory Director

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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 - 09b Cust. #: TH-HM-05A Material: Flooring Location: Appearance: white, fibrous, homogenous Layer: 3 of 4	Asbestos Present: NO No Asbestos Observed	Fiberglass - 10% Other - 90%
Lab ID #: 64869 - 09c Cust. #: TH-HM-05A Material: Linoleum Location: Appearance: white, fibrous, nonhomogenous Layer: 4 of 4	Asbestos Present: YES Chrysotile - 30%	Other - 70%
Lab ID #: 64869 - 10 Cust. #: TH-HM-05B Material: Beige 12"x12" Vinyl Tile Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 4	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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 Date Collected: 05/15/16
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 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	Other - 100%
Lab ID #: 64869 - 10b Cust. #: TH-HM-05B Material: Flooring Location: Appearance: beige, fibrous, homogenous Layer: 3 of 4	Asbestos Present: NO No Asbestos Observed	Fiberglass - 10% Other - 90%
Lab ID #: 64869 - 10c Cust. #: TH-HM-05B Material: Linoleum Location: Appearance: Layer: 4 of 4	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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 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 - 11 Cust. #: TH-HM-06A Material: White 1'x1' Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 64869 - 12 Cust. #: TH-HM-06B Material: White 1'x1' Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 80% Other - 20%
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 - 20% Other - 80%

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

Robert T. Letarte Jr., Laboratory Director

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ARI Report # 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	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 64869 - 15 Cust. #: TH-HM-08A Material: Glazing Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 10%	Other - 90%
Lab ID #: 64869 - 16 Cust. #: TH-HM-08B Material: Glazing Location: Appearance: Layer: of	Asbestos Present: NOT ANALYZED	

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Robert T. Letarte Jr., Laboratory Director

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Project: 2008 Seventh St

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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 - 17 Cust. #: TH-HS-01A Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
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	Cellulose - 2% Other - 98%
Lab ID #: 64869 - 18 Cust. #: TH-HS-01B Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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Test Method, Polarized Light Microscopy (PLM)



Project: 2008 Seventh St

Report To:

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 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	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64869 - 19a Cust. #: TH-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

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 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 - 20 Cust. #: TH-HS-01D Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
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	Cellulose - 5% Other - 95%
Lab ID #: 64869 - 21 Cust. #: TH-HS-01E Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Project: 2008 Seventh St

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 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	Asbestos Present: NO No Asbestos Observed	Cellulose - 5% Other - 95%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

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Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0

APPEX Research, Inc.

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

F-mail: apexresearch@chartermi.net

Fax: 734-449-9991



Client Name: Red Cedar Consulting

Date of Survey: 5-15-16

Address: PO Box 13216

Project: 2008 Seventh St.

City, St., Zip: Lansing, MI 48901

Project #:

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

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush 24 hour

Asbestos: Bulk Wipe Point Count PCM

48 hour 72 hour

Lead: Bulk Wipe Air Paint Soil

Other: All Samples Except Plaster TEM: AHERA 7400 Bulk/NOB EPA Level II

Mold: Bulk Tape BiOSIS Other Viable

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	TH-HM-01A	Asphalt Shingle			
2	TH-HM-01B	Asphalt Shingle			
3	TH-HM-02A	Vapor Barrier			
4	TH-HM-02B	Vapor Barrier			
5	TH-HM-03A	Shingle Lap Siding			
6	TH-HM-03B	Shingle Lap Siding			
7	TH-HM-04A	Red 12"x12" Vinyl Tile			
8	TH-HM-04B	Red 12"x12" Vinyl Tile			
9	TH-HM-05A	Beige 12"x12" Vinyl Tile			
10	TH-HM-05B	Beige 12"x12" Vinyl Tile			
11	TH-HM-06A	White 1'x1' Ceiling Tile			

Lab Use Only
Log-In _____
Report _____

Relinquished by:

[Signature]

Received by:

RECEIVED
[Signature]

Relinquished by:

Received by:

Date: 5-17-16

Date: MAY 17 2016

Date:

Date:

64869

pg. 2 of 2

APEX Research, Inc.

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



Client Name: Red Cedar Consulting

Date of Survey: 5-15-16

Address: PO Box 13216

Project: 2008 Seventh St.

City, St., Zip: Lansing, MI 48901

Project #: _____

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

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush 24 hour

Asbestos: Bulk Wipe _____ Point Count _____ PCM _____

48 hour 72 hour

Lead: Bulk _____ Wipe _____ Air _____ Paint _____ Soil _____

Other: _____ Mold: Bulk _____ Tape _____ BioSIS _____ Other _____ Viable _____
TEM: AHERA 7400 _____ Bulk/NOB _____ EPA Level II _____

TTP All Samples Except Plaster

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12		TH-HM-010B White 1'x1' Ceiling Tile			
13		TH-HM-07A Drywall			
14		TH-HM-07B Drywall			
15		TH-HM-08A Glazing			
16		TH-HM-08B Glazing			
17		TH-HS-01A Plaster			
18		TH-HS-01B Plaster			
19		TH-HS-01C Plaster			
20		TH-HS-01D Plaster			
21		TH-HS-01E Plaster			

RECEIVED
MAY 17 2016

Relinquished by: [Signature]

Received by: _____

Date: 5-17-16

Date: _____

Relinquished by: _____

Received by: _____

Date: _____

Date: _____

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

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, 2008 7th St., Muskegon Heights, Michigan

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

Notes:

Material Types

M = Miscellaneous building material
 TSI = Thermal System Insulation
 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.

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.

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.)

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.

Project No.: 16-1070
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

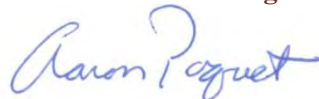
DISCLAIMER

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)

Red Cedar Consulting

Attachment 1
APEX Research Laboratory Analytical Results

Certificate of Laboratory 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 - 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% Other - 75%
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	Asbestos Present: NO No Asbestos Observed	Cellulose - 25% Other - 75%

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

Robert T. Letarte Jr., Laboratory Director

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



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

Sample Information	Asbestos Type/Percent	Non-Asbestos
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%
Lab ID #: 64878 - 02a Cust. #: PA-HM-01B Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 25% Other - 75%
Lab ID #: 64878 - 02b Cust. #: PA-HM-01B Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 3 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 25% Other - 75%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64878 - 03 Cust. #: PA-HM-02A Material: Fiber Lap Siding Location: Appearance: black, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 65% Other - 35%
Lab ID #: 64878 - 04 Cust. #: PA-HM-02B Material: Fiber Lap Siding Location: Appearance: black, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 65% Other - 35%
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%

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Robert T. Letarte Jr., Laboratory Director

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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	Asbestos Present: NO No Asbestos Observed	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%
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	Other - 100%

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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%

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 Date Reported: 05/20/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64878 - 10 Cust. #: PA-HM-05B Material: Red Linoleum Location: Appearance: red, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 35% Fiberglass - 5% Other - 60%
Lab ID #: 64878 - 11 Cust. #: PA-HM-06A 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%
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%

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 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

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64878 - 16 Cust. #: PA-HM-08B Material: Drywall Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 64878 - 17 Cust. #: PA-HM-09A Material: Glazing Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 5%	Other - 95%
Lab ID #: 64878 - 18 Cust. #: PA-HM-09B Material: Glazing Location: Appearance: Layer: of	Asbestos Present: NOT ANALYZED	

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 #: 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%
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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 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%

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

Sample Information	Asbestos Type/Percent	Non-Asbestos
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 No Asbestos Observed	Cellulose - 95% Other - 5%
Lab ID #: 64878 - 22 Cust. #: PA-HM-11B Material: White Pitted 1'x1' Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 95% Other - 5%
Lab ID #: 64878 - 23 Cust. #: PA-HS-01A Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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



NVLAP Lab Code 102118-0

Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)



Project: 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 - 23a Cust. #: PA-HS-01A Material: Plaster Base Coat Location: Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	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	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64878 - 24a Cust. #: PA-HS-01B 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.



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Report To:
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 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 No Asbestos Observed	Cellulose - 5% Wollastonite - 2% Other - 93%
Lab ID #: 64878 - 25a Cust. #: PA-HS-01C Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 3	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64878 - 25b Cust. #: PA-HS-01C Material: Plaster Base Coat Location: Appearance: beige, fibrous, homogenous Layer: 3 of 3	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.



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Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)



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

ARI Report # 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 - 26 Cust. #: PA-HS-01D Material: Texture Location: Appearance: grey,nonfibrous,homogenous Layer: 1 of 3	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64878 - 26a Cust. #: PA-HS-01D Material: Plaster Finish Coat Location: Appearance: white,nonfibrous,homogenous Layer: 2 of 3	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64878 - 26b Cust. #: PA-HS-01D Material: Plaster Base Coat Location: Appearance: beige,fibrous,homogenous Layer: 3 of 3	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.



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Certificate of Laboratory 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 - 27 Cust. #: PA-HS-01E Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64878 - 27a Cust. #: PA-HS-01E Material: Plaster Base Coat Location: Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

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

Robert T. Letarte Jr., Laboratory Director

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



NVLAP Lab Code 102118-0

APEX Research, Inc.

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

E-mail: apexresearch@chartermi.net

Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

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

Date of Survey: 5-15-16

Project: 2016 Park St.

Project #:

Contact Person: Aaron Paquet

Lab Use Only
Log-In _____
Report _____

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour

72 hour

Other: _____

TTP All Samples Except Plaster

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

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	PA-HM-01A	Asphalt Shingle			
2	PA-HM-01B	Asphalt Shingle			
3	PA-HM-02A	Fiber lap siding			
4	PA-HM-02B	Fiber lap siding			
5	PA-HM-03A	White Linoleum			
6	PA-HM-03B	White Linoleum			
7	PA-HM-04A	White 12"x12" Vinyl Tile			
8	PA-HM-04B	White 12"x12" Vinyl Tile			
9	PA-HM-05A	Red Linoleum			
10	PA-HM-05B	Red Linoleum			
11	PA-HM-06A	White 1x1' Ceiling Tile			

RECEIVED

Relinquished by: [Signature] Received by: [Signature] 5/17/2016

Relinquished by: _____ Received by: _____

Date: 5-17-16

Date: _____

Date: _____

Date: _____

64878

09.2083

APEX Research, Inc.

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

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



Client Name: Red Cedar Consulting

Date of Survey: 5-15-16

Address: PO Box 13216

Project: 2016 Park St.

City, St., Zip: Lansing, MI 48901

Project #: _____

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

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour 72 hour

Other: _____

(TTP) All Samples Except Plaster

Asbestos: Bulk Wipe _____ Point Count _____ PCM _____

Lead: Bulk _____ Wipe _____ Air _____ Paint _____ Soil _____

Mold: Bulk _____ Tape _____ BioSIS _____ Other _____ Viable _____

TEM: AHERA 7400 _____ Bulk/NOB _____ EPA Level II _____

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	PA-HM-06B	White 1'x1' Ceiling Tile			
13	PA-HM-07A	White 2'x4' Ceiling Tile			
14	PA-HM-07B	White 2'x4' Ceiling Tile			
15	PA-HM-08A	Drywall			
16	PA-HM-08B	Drywall			
17	PA-HM-09A	Glazing			
18	PA-HM-09B	Glazing			
19	PA-HM-10A	Green Linoleum Multilayer			
20	PA-HM-10B	Green Linoleum Multilayer			
21	PA-HM-11A	White Pitted 1'x1' Ceiling Tile			
22	PA-HM-11B	White Pitted 1'x1' Ceiling Tile			

RECEIVED

Relinquished by: [Signature]

Received by: [Signature]

Relinquished by: _____

Received by: _____

Date: 5-17-16

Date: _____

Date: _____

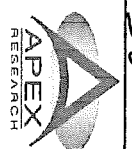
Date: _____

64878

pg. 3 of 3

APEX Research, Inc.

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



Client Name: Red Cedar Consulting

Date of Survey: 5-15-16

Address: PO Box 13216

Project: 2016 Park St.

City, St., Zip: Lansing, MI 48901

Project #: _____

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

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush 24 hour

Asbestos: Bulk Wipe _____ Point Count _____ PCM _____

48 hour 12 hour

Lead: Bulk _____ Wipe _____ Air _____ Paint _____ Soil _____

Other: _____

Mold: Bulk _____ Tape _____ Other _____ Viable _____
TEM: AHERA 7400 Bulk/NOB _____ EPA Level II _____

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
23	PA-HS-01A	Plaster			
24	PA-HS-01B	Plaster			
25	PA-HS-01C	Plaster			
26	PA-HS-01D	Plaster			
27	PA-HS-01E	Plaster			

Relinquished by: [Signature]

Received by: [Signature]

Relinquished by: _____

Received by: _____

Date: 5-17-16

Date: MAY 17 2016

Date: _____

Date: _____

Lab Use Only
Log-In _____
Report _____

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:

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
NAD = 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, 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
- S = 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.)	HVAC Duct Wrap	Yes	72.5 sq. ft.
Basement (misc. HVAC Tape on Basement Framing, 2.5 sq. ft.)			
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.

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.

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)

- 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.

Project No.: 16-1070
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 MIOASHA-Asbestos Program whenever demolition, encapsulation and/or renovation activities at a site involving greater than ten lineal feet and/or fifteen square feet of ACM will be completed.

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

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

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

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

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

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

Project No.: 16-1070
Muskegon County Land Bank
Parcel ID: 61-26-280-011-0008-00

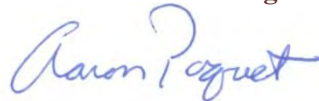
DISCLAIMER

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



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

Red Cedar Consulting

Attachment 1
APEX Research Laboratory Analytical Results



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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 - 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 No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 64875 - 01b Cust. #: ST-HM-01A Material: Brown 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.



NVLAP Lab Code 102118-0



Certificate of Laboratory 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 - 01c Cust. #: ST-HM-01A Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 4 of 4	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 64875 - 02 Cust. #: ST-HM-01B 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	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.



NVLAP Lab Code 102118-0



Certificate of Laboratory 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 - 02b Cust. #: ST-HM-01B Material: Brown Shingle Location: Appearance: black, fibrous, homogenous Layer: 3 of 4	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 64875 - 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 #: 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.



NVLAP Lab Code 102118-0



Certificate of Laboratory 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 No Asbestos Observed	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	Asbestos Present: NO No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 64875 - 04a Cust. #: ST-HM-02B Material: Beige Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 2 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.



NVLAP Lab Code 102118-0



Certificate of Laboratory 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	Asbestos Present: NO No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 64875 - 06 Cust. #: ST-HM-03B Material: Tan Linoleum Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 64875 - 07 Cust. #: ST-HM-04A 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

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



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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 - 08 Cust. #: ST-HM-04B Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 64875 - 08a Cust. #: ST-HM-04B Material: Joint Compound Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64875 - 09 Cust. #: ST-HM-05A Material: Glazing Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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 - 10 Cust. #: ST-HM-05B Material: Glazing Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 5%	Other - 95%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

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

Robert T. Letarte Jr., Laboratory Director

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



NVLAP Lab Code 102118-0

64875

pg. 1 of 1

APEX Research, Inc.

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



Client Name: Red Cedar Consulting

Date of Survey: 5-15-16

Address: PO Box 13216

Project: 2003 Seventh St.

City, St., Zip: Lansing, MI 48901

Project #:

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

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour 72 hour

Other: All Samples Except Plaster

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

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	ST-HM-01A	Asphalt Shingle			
2	ST-HM-01B	Asphalt Shingle			
3	ST-HM-02A	White Linoleum 2-layer			
4	ST-HM-02B	White Linoleum 2-layer			
5	ST-HM-03A	Tan Linoleum			
6	ST-HM-03B	Tan Linoleum			
7	ST-HM-04A	Drywall			
8	ST-HM-04B	Drywall			
9	ST-HM-05A	Glazing			
10	ST-HM-05B	Glazing			

RECEIVED

Lab Use Only
Log-In _____
Report _____

Relinquished by: [Signature] Received by: [Signature] MAY 17 2016

Relinquished by: _____ Received by: _____

Date: 5-17-16 Date: APEX RESEARCH

Date: _____ Date: _____

Tables

Table 1 - Summary of Hazardous Materials, 2023 7th 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:

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, 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
 S = Surfacing Material

Abbreviations

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

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.

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

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:

- 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

Project No.: 16-1070
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

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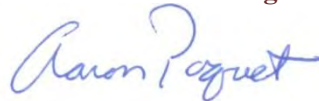
DISCLAIMER

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

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

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

Sincerely,
Red Cedar Consulting



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

Red Cedar Consulting

Attachment 1
APEX Research Laboratory Analytical Results



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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 - 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%
Lab ID #: 64889 - 01a Cust. #: WT-HM-01A Material: Brown Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 64889 - 01b Cust. #: WT-HM-01A Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 3 of 3	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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Date Reported: 05/20/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64889 - 02 Cust. #: WT-HM-01B Material: Brown Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 64889 - 02a Cust. #: WT-HM-01B Material: Brown Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 64889 - 02b Cust. #: WT-HM-01B Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 3 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Other - 50%

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

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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	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 64889 - 03a Cust. #: WT-HM-02A Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 60% Other - 40%
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	Cellulose - 40% Other - 60%

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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	Asbestos Present: NO No Asbestos Observed	Cellulose - 60% Other - 40%
Lab ID #: 64889 - 05 Cust. #: WT-HM-03A Material: White 12x12 Vinyl Tile Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 3	Asbestos Present: NO No Asbestos Observed	Other - 100%
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	Other - 100%

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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	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 64889 - 06 Cust. #: WT-HM-03B Material: White 12x12 Vinyl Tile Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 3	Asbestos Present: NO No Asbestos Observed	Other - 100%
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	Other - 100%

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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	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 64889 - 07 Cust. #: WT-HM-04A Material: Beige 12x12 Vinyl Tile Location: Appearance: brown, nonfibrous, homogenous Layer: 1 of 6	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64889 - 07a Cust. #: WT-HM-04A Material: Glue Location: Appearance: clear, nonfibrous, homogenous Layer: 2 of 6	Asbestos Present: NO No Asbestos Observed	Other - 100%

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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	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64889 - 07c Cust. #: WT-HM-04A Material: Glue Location: Appearance: clear, nonfibrous, homogenous Layer: 4 of 6	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64889 - 07d Cust. #: WT-HM-04A Material: Orange Sheet Flooring Location: Appearance: orange, fibrous, nonhomogenous Layer: 5 of 6	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Other - 50%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64889 - 07e Cust. #: WT-HM-04A Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 6 of 6	Asbestos Present: NO No Asbestos Observed	Cellulose - 60% Other - 40%
Lab ID #: 64889 - 08 Cust. #: WT-HM-04B Material: Beige 12x12 Vinyl Tile Location: Appearance: brown, nonfibrous, homogenous Layer: 1 of 6	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64889 - 08a Cust. #: WT-HM-04B Material: Glue Location: Appearance: clear, nonfibrous, homogenous Layer: 2 of 6	Asbestos Present: NO No Asbestos Observed	Other - 100%

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

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64889 - 08b Cust. #: WT-HM-04B Material: White Floor Tile Location: Appearance: white, nonfibrous, homogenous Layer: 3 of 6	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64889 - 08c Cust. #: WT-HM-04B Material: Glue Location: Appearance: clear, nonfibrous, homogenous Layer: 4 of 6	Asbestos Present: NO No Asbestos Observed	Other - 100%
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	Cellulose - 50% Other - 50%

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

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64889 - 08e Cust. #: WT-HM-04B Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 6 of 6	Asbestos Present: NO No Asbestos Observed	Cellulose - 60% Other - 40%
Lab ID #: 64889 - 09 Cust. #: WT-HM-05A 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 - 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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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%
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	Other - 100%

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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 No Asbestos Observed	Other - 100%
Lab ID #: 64889 - 12 Cust. #: WT-HM-06B Material: Tan 12x12 Vinyl Tile Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
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	Other - 100%

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

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64889 - 13 Cust. #: WT-HM-07A Material: Tan Linoleum Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 6	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64889 - 13a Cust. #: WT-HM-07A Material: Glue Location: Appearance: clear, nonfibrous, homogenous Layer: 2 of 6	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64889 - 13b Cust. #: WT-HM-07A Material: Brown Linoleum Location: Appearance: brown, fibrous, nonhomogenous Layer: 3 of 6	Asbestos Present: NO No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64889 - 13c Cust. #: WT-HM-07A Material: Yellow Linoleum Location: Appearance: yellow, fibrous, nonhomogenous Layer: 4 of 6	Asbestos Present: NO No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 64889 - 13d Cust. #: WT-HM-07A Material: Brown Floor Tile Location: Appearance: brown, fibrous, homogenous Layer: 5 of 6	Asbestos Present: YES Chrysotile - 10%	Other - 90%
Lab ID #: 64889 - 13e Cust. #: WT-HM-07A Material: Mastic Location: Appearance: black, fibrous, homogenous Layer: 6 of 6	Asbestos Present: YES Chrysotile - 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.



NVLAP Lab Code 102118-0



Certificate of Laboratory 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 - 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 Location: Appearance: clear, nonfibrous, homogenous Layer: 2 of 6	Asbestos Present: NO No Asbestos Observed	Other - 100%
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% Other - 80%

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

Robert T. Letarte Jr., Laboratory Director

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Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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	Asbestos Present: NO No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 64889 - 14d Cust. #: WT-HM-07B Material: Brown Floor Tile Location: Appearance: Layer: 5 of 6	Asbestos Present: NOT ANALYZED	
Lab ID #: 64889 - 14e Cust. #: WT-HM-07B Material: Mastic Location: Appearance: 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

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



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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 - 15 Cust. #: WT-HM-08A Material: Green Linoleum Location: Appearance: green, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 64889 - 15a Cust. #: WT-HM-08A Material: Green Sheet Flooring Location: Appearance: green, fibrous, nonhomogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Other - 50%
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

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



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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 - 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 - 50% Other - 50%
Lab ID #: 64889 - 17 Cust. #: WT-HM-09A 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 #: 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.



NVLAP Lab Code 102118-0



Certificate of Laboratory 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 - 19 Cust. #: WT-HM-10A Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Fiberglass - 5% Other - 75%
Lab ID #: 64889 - 20 Cust. #: WT-HM-10B Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Fiberglass - 5% Other - 75%
Lab ID #: 64889 - 21 Cust. #: WT-HM-11A Material: Fiberboard 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

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



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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	Asbestos Present: NO No Asbestos Observed	Cellulose - 70% Other - 30%
Lab ID #: 64889 - 24 Cust. #: WT-HM-12A Material: Glazing Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 64889 - 25 Cust. #: WT-HM-12B Material: Glazing Location: Appearance: white, fibrous, homogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 5%	Other - 95%

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

Robert T. Letarte Jr., Laboratory Director

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



NVLAP Lab Code 102118-0

64883

pg 1 of 3

ARERA Research, Inc.

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



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

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

Date of Survey: 5-14-16

Project: 2010 Wood St.

Project #:

Contact Person: Aaron Paquet

Lab Use Only
Log-In _____
Report _____

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour 12 hour

Other: _____

TTP All Samples Except Plaster

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

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	WT-Hm-01A	Shingle			
2	WT-Hm-01B	Shingle			
3	WT-Hm-02A	Asphalt Lap Siding			
4	WT-Hm-02B	Asphalt Lap Siding			
5	WT-Hm-03A	White 12x12 Vinyl Tile			
6	WT-Hm-03B	White 12x12 Vinyl Tile			
7	WT-Hm-04A	Beige 12x12 Vinyl Tile			
8	WT-Hm-04B	Beige 12x12 Vinyl Tile			
9	WT-Hm-05A	White Linoleum			
10	WT-Hm-05B	White Linoleum			
11	WT-Hm-06A	Tan 12x12 Vinyl Tile			

RECEIVED

Relinquished by: [Signature] Received by: [Signature] M/AT 1/7/2016 1523

Date: 5-17-16

Date: _____

Relinquished by: _____

Received by: _____

Date: _____

Date: _____

64883

pg 2 of 3

APEX Research, Inc.

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

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



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

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

Date of Survey: 5-14-16

Project: 2012 Wood St.

Project #:

Contact Person: Aaron Paquet

Lab Use Only
Log-In _____
Report _____

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour 72 hour

Other: ITP All Samples Except Plaster

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

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	WT-HM-0613	Tan 12x12 vinyl tile			
13	WT-HM-074	Tan Linoleum			
14	WT-HM-075	Tan Linoleum			
15	WT-HM-084	Green Linoleum			
16	WT-HM-088	Green Linoleum			
17	WT-HM-094	White 1x1 Ceiling Tile			
18	WT-HM-093	White 1x1 Ceiling Tile			
19	WT-HM-104	Drywall			
20	WT-HM-103	Drywall			
21	WT-HM-114	Fiberboard			
22	WT-HM-115	Fiberboard			

RECEIVED

Relinquished by: [Signature]

Received by: [Signature]

Date: 5-17-16

Date: MAY 17 2016

Relinquished by: _____

Received by: _____

Date: _____

Date: _____

64883

pg 3 of 3

APEX Research, Inc.

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



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

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

Date of Survey: 5-14-16

Project: 2016 Wood St.

Project #:

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour 72 hour

Other:

TPP All Samples Except Plaster

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

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
Q3	WT-Hm-1209	Glazing			
Q4	WT-Hm-1215	Glazing			

RECEIVED

Relinquished by: [Signature] Received by: MAV 17 2016

Date: 5-17-16 Date: APEX RESEARCH

Relinquished by: Received by:

Date: Date:

Tables

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

Hazardous Materials Description and Location		
Location	Material Description	Quantity
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

M = Miscellaneous building material

Abbreviations

NQ = Not quantified

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

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

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

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

Table 3 - Summary of Presumed Asbestos Containing Materials, 2040 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, 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.

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.

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.)

- 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

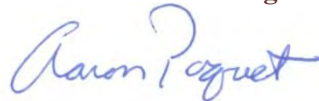
DISCLAIMER

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



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

Red Cedar Consulting

Attachment 1
APEX Research Laboratory Analytical Results



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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 - 01 Cust. #: FS-HM--01A Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	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	Cellulose - 30% Other - 70%
Lab ID #: 64726 - 03 Cust. #: FS-HM-02A Material: Red 12x12 Vinyl Tile Location: Appearance: white, nonfibrous, homogenous Layer: 1 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

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64726 - 03a Cust. #: FS-HM-02A Material: Floor Tile Location: Appearance: brown,nonfibrous,homogenous Layer: 2 of 3	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64726 - 03b Cust. #: FS-HM-02A Material: Tar Paper Location: Appearance: black,fibrous,homogenous Layer: 3 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 60% Other - 40%
Lab ID #: 64726 - 04 Cust. #: FS-HM-02B Material: Red 12x12 Vinyl Tile Location: Appearance: brown,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
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 No Asbestos Observed	Other - 100%
Lab ID #: 64726 - 05a Cust. #: FS-HM-03A Material: Stone Linoleum Location: Appearance: grey,fibrous,homogenous Layer: 2 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%

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Date Analyzed: 05/16/16
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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	Asbestos Present: NO No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 64726 - 06 Cust. #: FS-HM-03B Material: Stone Linoleum Location: Appearance: grey, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64726 - 06a Cust. #: FS-HM-03B Material: Stone Linoleum Location: Appearance: white, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Fiberglass - 20% Other - 80%

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Robert T. Letarte Jr., Laboratory Director

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

Sample Information	Asbestos Type/Percent	Non-Asbestos
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	Other - 100%
Lab ID #: 64726 - 08 Cust. #: FS-HM-04B Material: Black 12x12 Vinyl Tile Location: Appearance: grey,fibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Fiberglass - 5% Other - 95%
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	Other - 100%

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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%
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	Other - 100%

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Date Analyzed: 05/16/16
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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64726 - 11 Cust. #: FS-HM-06A Material: Black/White Linoleum Location: Appearance: black,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64726 - 11a Cust. #: FS-HM-06A Material: Backing Location: Appearance: brown,fibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 64726 - 12 Cust. #: FS-HM-06B Material: Black/White Linoleum Location: Appearance: black,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64726 - 12a Cust. #: FS-HM-06B Material: Backing Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 64726 - 13 Cust. #: FS-HM-07A Material: Glazing Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO Chrysotile - Trace POINT COUNT RESULT	Other - 100%
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	Other - 100%

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

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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%
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	Other - 100%

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

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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	Other - 100%
Lab ID #: 64726 - 19 Cust. #: FS-HS-01A Material: Plaster Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64726 - 19a Cust. #: FS-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

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Sample Information	Asbestos Type/Percent	Non-Asbestos
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	Other - 100%
Lab ID #: 64726 - 20a Cust. #: FS-HS-01B Material: Mortar Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 64726 - 21 Cust. #: FS-HS-01C Material: Plaster Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
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	Other - 100%
Lab ID #: 64726 - 22 Cust. #: FS-HS-01D Material: Plaster Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64726 - 22a Cust. #: FS-HS-01D Material: Mortar Location: Appearance: grey,fibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 2% Other - 98%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64726 - 23 Cust. #: FS-HS-01E Material: Plaster Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64726 - 23a Cust. #: FS-HS-01E Material: Mortar Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

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

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research 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 # **64726**

pg 1 of 3

APEX Research, Inc.

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



Client Name: Red Cedar Consulting

Date of Survey: 5-7-16

Address: PO Box 13216
Lansing, MI 48901

Project: 2110 Fifth St.

City, St., Zip: Lansing, MI 48901

Project #: _____

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

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour 72 hour

Other: 4 Day



All Samples Except Plaster

AHERA 7400

Bulk/NOB

EPA Level II

Asbestos: Bulk Wipe _____ Point Count _____ PCM _____

Lead: Bulk _____ Wipe _____ Air _____ Paint _____ Soil _____

Mold: Bulk _____ Tape _____ BioSIS _____ Other _____ Viable _____

TEM: _____

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	FS-HM-01A	Shingle			
2	FS-HM-01B	Shingle			
3	FS-HM-02A	Red 12x12 Vinyl Tile			
4	FS-HM-02B	Red 12x12 Vinyl Tile			
5	FS-HM-03A	Stone Limestone			
6	FS-HM-03B	Stone Limestone			
7	FS-HM-04A	Black 12x12 Vinyl Tile			
8	FS-HM-04B	Black 12x12 Vinyl Tile			
9	FS-HM-05A	Gray 12x12 Vinyl Tile			
10	FS-HM-05B	Gray 12x12 Vinyl Tile			
11	FS-HM-06A	Black & White Limestone			

Lab Use Only
Log-In _____
Report _____

Relinquished by: [Signature]

Received by: [Signature]

Relinquished by: _____

Received by: _____

Date: 5-10-16

Date: _____

Date: _____

Date: _____

647226

Pg 2 of 3

APEX Research, Inc.

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

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



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

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

Date of Survey: 5-7-16

Project: 210 Fifth St.

Project #:

Contact Person: Aaron Paquet

Lab Use Only
Log-In _____
Report _____

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour 72 hour

Other: 4 Day



All Samples Except Plaster

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

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	FS-HM-06B	Black & White Linoleum			
13	FS-HM-07A	Glazing			
14	FS-HM-07B	Glazing			
15	FS-HM-08A	White 1x1 Ceiling tile			
16	FS-HM-08B	White 1x1 Ceiling tile			
17	FS-HM-09A	Glazing			
18	FS-HM-09B	Glazing			
19	FS-HS-01A	Plaster			
20	FS-HS-01B				
21	FS-HS-01C				
22	FS-HS-01D				

RECEIVED

Relinquished by: *[Signature]*

Received by: *[Signature]*

Date: 5-10-16

Date: _____

Relinquished by: _____

Received by: _____

Date: _____

Date: _____

64726

pg 3 of 3

APEX Research, Inc.

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



E-mail: apexresearch@chartermi.net

Fax: 734-449-9991

Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

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

Date of Survey: 5-7-16

Project: 2110 Fifth St.

Project #:

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour 72 hour

Other: 4 Day

TTP All Samples Except Plaster

Asbestos: Bulk x Wipe

Lead: Bulk

Mold: Bulk

Point Count

PCM

Wipe

Air

Paint

Soil

Other

Bulk

Tape

Biosis

Other

Viabile

AHERA 7400

Bulk/NOB

EPA Level II

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
23	FS-HS-01E	Plaster			

RECEIVED

Lab Use Only
Log-in _____
Report _____

Relinquished by: *[Signature]*

Date: 5-10-16

Received by: *[Signature]*

Date: APEX RESEARCH

Relinquished by: _____

Date: _____

Received by: _____

Date: _____

Tables

Table 1 - Summary of Hazardous Materials, 2110 5th 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

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, 2110 5th 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.) 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.)	HVAC Duct Wrap	Yes	50 sq. ft.
Basement (misc. HVAC wrap on old living room register, 10 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

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.

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.

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)

Project No.: 16-1070
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.

Project No.: 16-1070
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

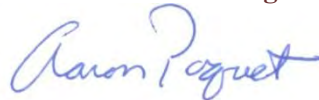
DISCLAIMER

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

Certificate of Laboratory 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 - 01 Cust. #: SS-HM-01A Material: Brown Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 4	Asbestos Present: NO No Asbestos Observed	Fiberglass - 30% Other - 70%
Lab ID #: 64873 - 01a Cust. #: SS-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 #: 64873 - 01b Cust. #: SS-HM-01A Material: Red 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.



NVLAP Lab Code 102118-0

Certificate of Laboratory 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	Cellulose - 50% Other - 50%
Lab ID #: 64873 - 02 Cust. #: SS-HM-01B Material: Brown Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 4	Asbestos Present: NO No Asbestos Observed	Fiberglass - 30% Other - 70%
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% Other - 60%

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

Robert T. Letarte Jr., Laboratory Director

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



NVLAP Lab Code 102118-0

Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)



Project: 2113 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 - 02b Cust. #: SS-HM-01B Material: Red Shingle Location: Appearance: black, fibrous, homogenous Layer: 3 of 4	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 64873 - 02c Cust. #: SS-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 #: 64873 - 03 Cust. #: SS-HM-02A Material: Stone Linoleum Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 3	Asbestos Present: YES Chrysotile - 30%	Other - 70%

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0

Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)



Project: 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 - 03a Cust. #: SS-HM-02A Material: Floor Tile Location: Appearance: brown,nonfibrous,homogenous Layer: 2 of 3	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64873 - 03b Cust. #: SS-HM-02A Material: Glue Location: Appearance: yellow,nonfibrous,homogenous Layer: 3 of 3	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64873 - 04 Cust. #: SS-HM-02B Material: Stone Linoleum Location: Appearance: Layer: 1 of 3	Asbestos Present: NOT ANALYZED	

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

Robert T. Letarte Jr., Laboratory Director

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Project: 2113 Superior St.

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 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 - 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	Asbestos Present: NO No Asbestos Observed	Other - 100%
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%

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

Robert T. Letarte Jr., Laboratory Director

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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 - 06 Cust. #: SS-HM-03B Material: White Linoleum Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 64873 - 07 Cust. #: SS-HM-04A Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
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%

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Robert T. Letarte Jr., Laboratory Director

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Project: 2113 Superior St.

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 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 - 08 Cust. #: SS-HM-04B Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 64873 - 09 Cust. #: SS-HM-05A Material: White 1x1 Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 64873 - 09a Cust. #: SS-HM-05A Material: Glue Pod Location: Appearance: brown, 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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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 - 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	Cellulose - 80% Other - 20%
Lab ID #: 64873 - 10a Cust. #: SS-HM-05B Material: Glue Pod Location: Appearance: brown, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
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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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 - 12 Cust. #: SS-HM-06B Material: Fiberboard Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 64873 - 13 Cust. #: SS-HM-07A Material: Glazing Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 5%	Other - 95%
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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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 - 15 Cust. #: SS-HS-01A Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64873 - 15a Cust. #: SS-HS-01A Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Hair - 2% Other - 97%
Lab ID #: 64873 - 16 Cust. #: SS-HS-01B Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Robert T. Letarte Jr., Laboratory Director

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 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 - 16a Cust. #: SS-HS-01B Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Hair - 1% Other - 98%
Lab ID #: 64873 - 17 Cust. #: SS-HS-01C Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64873 - 17a Cust. #: SS-HS-01C Material: Plaster Base Coat Location: Appearance: brown, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Test Method, Polarized Light Microscopy (PLM)



Project: 2113 Superior St.

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 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 - 18 Cust. #: SS-HS-01D Material: Plaster Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64873 - 19 Cust. #: SS-HS-01E Material: Plaster Finish Coat Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
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	Cellulose - 1% Hair - 2% Other - 97%

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

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



Client Name: Red Cedar Consulting

Date of Survey: 5-14-16

Address: PO Box 13216

Project: 2103 Superior St.

City, St., Zip: Lansing, MI 48901

Project #: _____

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

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour 72 hour

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

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	SS-HM-01A	Shingle			
2	SS-HM-01B	Shingle			
3	SS-HM-02A	Stone Linoleum			
4	SS-HM-02B	Stone Linoleum			
5	SS-HM-03A	White Linoleum			
6	SS-HM-03B	White Linoleum			
7	SS-HM-04A	Drywall			
8	SS-HM-04B	Drywall			
9	SS-HM-05A	White Wet Ceiling Tile / Glue Pod			
10	SS-HM-05B	White Wet Ceiling Tile / Glue Pod			
11	SS-HM-06A	Fiber board			

RECEIVED

Relinquished by: [Signature]

Received by: [Signature]

Relinquished by: _____

Received by: _____

Date: 5-17-16

Date: _____

Date: _____

Date: _____

64873

Pg 2 of 2

APEX Research, Inc.

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



Client Name: Red Cedar Consulting

Date of Survey: 5-14-16

Address: PO Box 13216

Project: 2113 Superior St.

City, St., Zip: Lansing, MI 48901

Project #: _____

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

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour 72 hour

Other: TTP All Samples Except Plaster
Asbestos: Bulk Wipe _____ Point Count _____ PCM _____
Lead: Bulk _____ Wipe _____ Air _____ Paint _____ Soil _____
Mold: Bulk _____ Tape _____ Biosis _____ Other _____ Viable _____
TEM: AHERA 7400 _____ Bulk/NOB _____ EPA Level II _____

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	SS-ASM-0613	Fiber board			
13	SS-ASM-071A	Glazing			
14	SS-ASM-0713	Glazing			
15	SS-MS-01A	Plaster			
16	SS-MS-01B				
17	SS-MS-01C				
18	SS-MS-01D				
19	SS-MS-01E				
RECEIVED					

Relinquished by: [Signature]
Date: 5-17-16
Received by: [Signature]
Date: May 17 2016
APEX RESEARCH

Relinquished by: _____
Date: _____
Received by: _____
Date: _____

Lab Use Only
Log-In _____
Report _____

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	M	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	M	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

Notes:

Material Types

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

Abbreviations

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

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

Table 3 - Summary of Presumed Asbestos Containing Materials, 2113 Superior St., Muskegon Heights, Michigan

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.

Notes:

Material Types

M = Miscellaneous building material
 TSI = Thermal System Insulation
 S = 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.

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, 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.

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.

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.)

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 cementitious ACM must be removed prior to demolition due to the likelihood of becoming regulated due to the demolition process.

The Category I resilient floor 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.

Project No.: 16-1070
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

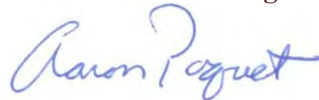
DISCLAIMER

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



Certificate of Laboratory 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 - 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%
Lab ID #: 64735 - 02 Cust. #: SS-HM-01B Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%
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

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Date Reported: 05/18/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64735 - 04 Cust. #: SS-HM-02B Material: Asphalt Siding Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 60% Other - 40%
Lab ID #: 64735 - 05 Cust. #: SS-HM-03A Material: 9x9 Beige Floor Tile Location: Appearance: beige, fibrous, homogenous Layer: 1 of 2	Asbestos Present: YES Chrysotile - 5%	Other - 95%
Lab ID #: 64735 - 05a Cust. #: SS-HM-03A Material: Mastic Location: Appearance: black, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Robert T. Letarte Jr., Laboratory Director

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64735 - 06 Cust. #: SS-HM-03B Material: 9x9 Beige Floor Tile Location: Appearance: Layer: of	Asbestos Present: NOT ANALYZED	
Lab ID #: 64735 - 07 Cust. #: SS-HM-04A Material: Beige Linoleum Location: Appearance: white, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Fiberglass - 20% Other - 80%
Lab ID #: 64735 - 08 Cust. #: SS-HM-04B Material: Beige Linoleum Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Fiberglass - 20% Other - 80%

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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%
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	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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Date Reported: 05/18/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
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	Asbestos Present: NO No Asbestos Observed	Other - 100%
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%

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Robert T. Letarte Jr., Laboratory Director

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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	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 64735 - 16 Cust. #: SS-HM-08B Material: Brown Linoleum Location: Appearance: grey, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%
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 - 60% Other - 40%

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

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Date Reported: 05/18/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
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 - 80% Other - 20%
Lab ID #: 64735 - 19 Cust. #: SS-HM-10A Material: Orange Linoleum 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	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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Sample Information	Asbestos Type/Percent	Non-Asbestos
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	Cellulose - 65% Other - 35%
Lab ID #: 64735 - 23 Cust. #: SS-HS-01A Material: Stucco 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

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Date Reported: 05/18/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64735 - 24 Cust. #: SS-HS-01B Material: Stucco Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 5%	Other - 95%
Lab ID #: 64735 - 25 Cust. #: SS-HS-01C Material: Stucco Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64735 - 26 Cust. #: SS-HS-01D Material: Stucco Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	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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Date Analyzed: 05/17/16
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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	Other - 98.0%
Lab ID #: 64735 - 28 Cust. #: SS-HS-02A Material: Plaster Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 64735 - 29 Cust. #: SS-HS-02B 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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Date Reported: 05/18/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64735 - 30 Cust. #: SS-HS-02C Material: Plaster Location: Appearance: grey,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64735 - 31 Cust. #: SS-HS-02D Material: Plaster Location: Appearance: grey,fibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 2% Other - 98%
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.



NVLAP Lab Code 102118-0

Apex # **64735**

Page 1 of 3

APEX Research, Inc.

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



Client Name: Red Cedar Consulting

Address: PO Box 13216
 Lansing, MI 48901

City, St., Zip: Lansing, MI 48901

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

Date of Survey: 5-7-16

Project: 2124 Sixth St.

Project #:

Contact Person: Aaron Paquet

Lab Use Only
 Log-In _____
 Report _____

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour 72 hour

Other: 5 Day

(ITP) All Samples Except Plaster

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

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	SS-HM-01A	Shingle			
2	SS-HM-01B	Shingle			
3	SS-HM-02A	Asphalt Siding			
4	SS-HM-02B	Asphalt Siding			
5	SS-HM-03A	Beige 9x9 Vinyl Tile			
6	SS-HM-03B	Beige 9x9 Vinyl Tile			
7	SS-HM-04A	Beige Linoleum			
8	SS-HM-04B	Beige Linoleum			
9	SS-HM-05A	White 2x4 Ceiling Tile			
10	SS-HM-05B	White 2x4 Ceiling Tile			
11	SS-HM-06A	RECEIVED			

Relinquished by: [Signature]
 Date: 5-10-16

Received by: [Signature]
 Date: _____
 APEX RESEARCH

Relinquished by: _____
 Date: _____

Received by: _____
 Date: _____

64735
APEX Research, Inc.

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



Client Name: Red Cedar Consulting

Address: PO Box 13216
 Lansing, MI 48901

City, St., Zip: Lansing, MI 48901

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

Date of Survey: 5-7-16

Project: 2124 Sixth St

Project #:

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour 72 hour

Other: 5 Day

TTP All Samples Except Plaster
 TEM: AHERA 7400 EPA Level II

Asbestos: Bulk Wipe Point Count PCM

Lead: Bulk Wipe Air Paint Soil

Mold: Bulk Tape BioSIS Other Viable

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	SS-HM-06B	Glazing			
13	SS-HM-07A	White 12x12 vinyl tile			
14	SS-HM-07B	White 12x12 vinyl tile			
15	SS-HM-08A	Brown linoleum			
16	SS-HM-08B	Brown linoleum			
17	SS-HM-09A	White 1x1 ceiling tile			
18	SS-HM-09B	White 1x1 ceiling tile			
19	SS-HM-10A	Orange linoleum			
20	SS-HM-10B	Orange linoleum			
21	SS-HM-11A	Fiberboard			
22	SS-HM-11B	Fiberboard			

Lab Use Only
 Log-In _____
 Report _____

Relinquished by: [Signature]
 Date: 5-16-16

Received by: [Signature]
 Date: MAY 11 2016

Relinquished by: _____
 Date: _____

Received by: _____
 Date: _____

64735

APEX Research, Inc.

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



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

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

Date of Survey: 5-7-16

Project: 2124 Sixth St

Project #:

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour 72 hour

Other: 5 Day

TTP All Samples Except Plaster

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

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
23	SS-HS-01A	Stucco			
24	SS-HS-01B				
25	SS-NS-01C				
26	SS-HS-01D				
27	SS-HS-01E	Plaster			
28	SS-HS-02A				
29	SS-HS-02B				
30	SS-HS-02C				
31	SS-HS-02D				
32	SS-HS-02E				

Relinquished by: *[Signature]* Received by: **RECEIVED**
Date: 5-10-16 Date: MAY 11 2016

Relinquished by: _____ Received by: _____
Date: _____ Date: _____

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

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, 2124 6th 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	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.

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, 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.

Notes:

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.

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.

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.

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.

Project No.: 16-1070
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

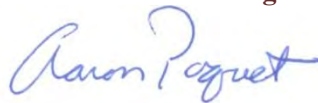
Red Cedar Consulting performed destructive testing methods in an attempt to access and inspect all areas of the Building. Unfortunately, due to the age of construction along with multiple additions/renovations that may have been completed on the Building, additional inspections may be required if suspect 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



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

Red Cedar Consulting

Attachment 1
APEX Research Laboratory Analytical Results

Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)



Project: 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 - 01 Cust. #: WS-HM-01A Material: Green 12x12 Vinyl Tile Location: Appearance: green, fibrous, homogenous Layer: 1 of 2	Asbestos Present: YES Chrysotile - 3.00% POINT COUNT RESULT	Other - 97.00%
Lab ID #: 64871 - 01a Cust. #: WS-HM-01A Material: Glue Location: Appearance: yellow, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
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.



NVLAP Lab Code 102118-0

Certificate of Laboratory 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 No Asbestos Observed	Other - 100%
Lab ID #: 64871 - 03 Cust. #: WS-HM-02A Material: Green Linoleum Location: Appearance: green,fibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 60% Other - 40%
Lab ID #: 64871 - 04 Cust. #: WS-HM-02B Material: Green Linoleum Location: Appearance: green,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.



NVLAP Lab Code 102118-0

Certificate of Laboratory 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 - 05 Cust. #: WS-HM-03A Material: Glazing Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64871 - 06 Cust. #: WS-HM-03B Material: Glazing Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64871 - 07 Cust. #: WS-HS-01A Material: Plaster Location: Appearance: white, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Other - 99%

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

Robert T. Letarte Jr., Laboratory Director

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



NVLAP Lab Code 102118-0

Certificate of Laboratory 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 - 08 Cust. #: WS-HS-01B Material: Plaster Location: Appearance: white, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 64871 - 09 Cust. #: WS-HS-01C Material: Plaster Finish Coat Location: Appearance: pink, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64871 - 09a Cust. #: WS-HS-01C Material: Plaster Base Coat Location: Appearance: white, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Other - 99%

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

Robert T. Letarte Jr., Laboratory Director

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

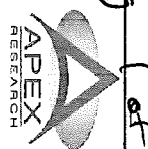


NVLAP Lab Code 102118-0

64871

Apex Research, Inc.

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



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

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

Date of Survey: 5-14-16

Project: 2133 Wood St.

Project #:

Contact Person: Aaron Paquet

Lab Use Only
Log-In _____
Report _____

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour 72 hour

Other: _____

TTP All Samples Except Plaster

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

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	WS-HM-01A	Green Oxid vinyl Tile			
2	WS-HM-01B	Green 12x12 vinyl Tile			
3	WS-HM-02A	Green Linoleum			
4	WS-HM-02B	Green Linoleum			
5	WS-HM-03A	Glazys			
6	WS-HM-03B	Glazing			
7	WS-HS-01A	Plaster			
8	WS-HS-01B				
9	WS-HS-01C	↓			

RECEIVED

Relinquished by: *[Signature]*

Received by: *[Signature]* MAY 17 2016

Relinquished by: _____

Received by: _____

Date: 5-17-16

Date: *[Signature]* MAY 17 2016

Date: _____

Date: _____

Tables

Table 1 - Summary of Hazardous Materials, 2133 Wood St., Muskegon Heights, Michigan

Hazardous Materials Description and Location		
Location	Material Description	Quantity
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:

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, 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 Materials			
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

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.

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.

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)

- 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)

Project No.: 16-1070
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

Project No.: 16-1070
Muskegon County Land Bank
Parcel ID: 61-26-650-006-0023-00

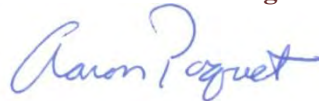
DISCLAIMER

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



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

Red Cedar Consulting

Attachment 1
APEX Research Laboratory Analytical Results

Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)



Project: 2145 McIlwraith 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 - 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: Appearance: black, fibrous, homogenous Layer: 2 of 3	Asbestos Present: NO No Asbestos Observed	Fiberglass - 20% Other - 80%
Lab ID #: 64881 - 01b Cust. #: MS-HM-01A Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 3 of 3	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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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64881 - 02 Cust. #: MS-HM-01B 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 - 02a Cust. #: MS-HM-01B Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 3	Asbestos Present: NO No Asbestos Observed	Fiberglass - 20% Other - 80%
Lab ID #: 64881 - 02b Cust. #: MS-HM-01B Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 3 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 35% Other - 65%

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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%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64881 - 04a Cust. #: MS-HM-02B 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 - 05 Cust. #: MS-HM-03A Material: Beige Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Fiberglass - 10% Other - 70%
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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NVLAP Lab Code 102118-0

Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)



Project: 2145 McIlwraith 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% Other - 70%
Lab ID #: 64881 - 08 Cust. #: MS-HM-04B Material: White 4" 5a. Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Fiberglass - 10% Other - 70%
Lab ID #: 64881 - 09 Cust. #: MS-HM-05A Material: White 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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ARI Report # 16-64881
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 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	Cellulose - 20% Fiberglass - 10% Other - 70%
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	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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 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 - 13 Cust. #: MS-HM-07A Material: White 1x1 Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 95% 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 No Asbestos Observed	Cellulose - 95% 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 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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ARI Report # 16-64881
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 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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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64881 - 19 Cust. #: MS-HM-10A Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 64881 - 19a Cust. #: MS-HM-10A Material: Joint Compound Location: Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: YES Chrysotile - 1.50% POINT COUNT RESULT	Other - 98.50%
Lab ID #: 64881 - 20 Cust. #: MS-HM-10B Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%

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

Robert T. Letarte Jr., Laboratory Director

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64881 - 20a Cust. #: MS-HM-10B Material: Joint Compound Location: Appearance: Layer: 2 of 2	Asbestos Present: NOT ANALYZED	
Lab ID #: 64881 - 21 Cust. #: MS-HM-11A Material: Glazing Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 1.25% POINT COUNT RESULT	Other - 98.75%
Lab ID #: 64881 - 22 Cust. #: MS-HM-11B Material: Glazing Location: Appearance: Layer: of	Asbestos Present: NOT ANALYZED	

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

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ARI Report # 16-64881
 Date Collected: 05/14/16
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 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	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64881 - 23b Cust. #: MS-HM-12A Material: Flooring Location: Appearance: beige, fibrous, nonhomogenous Layer: 3 of 3	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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 Date Reported: 05/20/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64881 - 24 Cust. #: MS-HM-12B Material: Pebbled 9x9 Vinyl Tile Location: Appearance: Layer: 1 of 3	Asbestos Present: NOT ANALYZED	
Lab ID #: 64881 - 24a Cust. #: MS-HM-12B Material: Mastic Location: Appearance: black,nonfibrous,homogenous Layer: 2 of 3	Asbestos Present: NO No Asbestos Observed	Other - 100%
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	Cellulose - 35% Other - 65%

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Robert T. Letarte Jr., Laboratory Director

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 Lansing, MI 48901

ARI Report # 16-64881
 Date Collected: 05/14/16
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 Date Analyzed: 05/20/16
 Date Reported: 05/20/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
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%
Lab ID #: 64881 - 26 Cust. #: MS-HM-13B 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%
Lab ID #: 64881 - 27 Cust. #: MS-HS-01A Material: Plaster Base Coat 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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 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 - 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%
Lab ID #: 64881 - 29 Cust. #: MS-HS-01C Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 2% Other - 98%
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	Other - 100%

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Robert T. Letarte Jr., Laboratory Director

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ARI Report # 16-64881
 Date Collected: 05/14/16
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 Date Analyzed: 05/20/16
 Date Reported: 05/20/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64881 - 30a Cust. #: MS-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%
Lab ID #: 64881 - 31 Cust. #: MS-HS-01B\E Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

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64881

pg 1 of 3

APEX Research, Inc.



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

E-mail: apexresearch@chartermi.net

Fax: 734-449-9991

Client Name: Red Cedar Consulting

Date of Survey: 5-14-16

Address: PO Box 13216

Project: 2145 McIlwraith St.

City, St., Zip: Lansing, MI 48901

Contact Person: Aaron Paquet

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

Turn Around Times: (Circle One) PLM EPA 600, PC all samples with a detection of <5% ACM. apaquet@redcedarconsulting.net

Rush 24 hour

48 hour 72 hour

Other: TTP All Samples Except Plaster

Asbestos: Bulk Wipe Point Count PCM

Lead: Bulk Wipe Air Paint Soil

Mold: Bulk Tape BiOSIS Other Viable

TEM: AHERA 7400 Bulk/NOB EPA Level II

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	MS-WM-01A	Asphalt Shingle			
2	MS-WM-01B	Asphalt Shingle			
3	MS-WM-02A	Brown Linoleum			
4	MS-WM-02B	Brown Linoleum			
5	MS-WM-03A	Beige Linoleum			
6	MS-WM-03B	Beige Linoleum			
7	MS-WM-04A	White 4" x 8" Linoleum			
8	MS-WM-04B	White 4" x 8" Linoleum			
9	MS-WM-05A	White Linoleum			
10	MS-WM-05B	White Linoleum			
11	MS-WM-06A	White 2x2x8 Recessed Ceiling Tile			

RECEIVED

Relinquished by: [Signature]

Received by: [Signature]

Date: 5-17-16

Date: MAY 17 2016

Relinquished by: _____

Received by: _____

Date: _____

Date: _____

64881

Pg 2 of 3

APEX Research, Inc.

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



Client Name: Red Cedar Consulting

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Address: PO Box 13216

Project: 2145 McElwain St.

City, St., Zip: Lansing, MI 48901

Contact Person: Aaron Paquet

Phone: (888) 449-4566

Fax: (888) 448-8739

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hours
12 hour

Other: TTP All Samples Except Plaster

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

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	MS-HM-068	White 2x4 Rough Ceiling tile			
13	MS-HM-074	White 1x1 Ceiling tile			
14	MS-HM-078	White 1x1 Ceiling tile			
15	MS-HM-084	White 2x4 Squid Ceiling tile			
16	MS-HM-088	White 2x4 Squid Ceiling tile			
17	MS-HM-094	White 2x4 Pitted Ceiling tile			
18	MS-HM-098	White 2x4 Pitted Ceiling tile			
19	MS-HM-104	Drywall			
20	MS-HM-108	Drywall			
21	MS-HM-114	Ceiling			
22	MS-HM-118	Ceiling			

Lab Use Only
Log In _____
Report _____

Relinquished by: Car P Received by: Amber

Relinquished by: _____ Received by: _____

Date: 5-17-16

Date: MAY 17 2016

Date: _____

Date: _____

64881

pg 3 of 3

APEX Research, Inc.

E-mail: apexresearch@chartermi.net

Fax: 734-449-9991



11054 Hi Tech Drive, Whitmore Lake, MI 48189

Phone: 734-449-9990

Client Name: Red Cedar Consulting

Date of Survey: 5-14-16

Lab Use Only
Log-In _____
Report _____

Address: PO Box 13216

Project: 2145 Ave Elizabeth St.

City, St., Zip: Lansing, MI 48901

Project #: _____

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

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour 72 hour

Other: TTP All Samples Except Plaster

Asbestos: Bulk Wipe _____ Point Count _____ PCM _____

Lead: Bulk _____ Wipe _____ Air _____ Paint _____ Soil _____

Mold: Bulk _____ Tape _____ Biosis _____ Other _____ Viable _____

TEEM: AHERA 7400 _____ Bulk/NOB _____ EPA Level II _____

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
23	ms-km-12A	Pebbled 6x9 Vinyl Tile			
24	ms-km-12B	Pebbled 6x9 Vinyl Tile			
25	ms-km-13A	White Smooth Joint Ceiling Tile			
26	ms-km-13B	White Smooth Joint Ceiling Tile			
27	ms-MS-01A	Plaster			
28	ms-MS-01B				
29	ms-MS-01C				
30	ms-MS-01D				
31	ms-MS-01E				

RECEIVED

Relinquished by: [Signature] Received by: [Signature] MAY 17 2016

Date: 5-17-16 Date: APEX RESEARCH

Relinquished by: _____ Received by: _____

Date: _____ Date: _____

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 McIlwraith St., Muskegon Heights, Michigan

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
MS-HM-01A	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 McIlwraith 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

Notes:

Material Types

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

Abbreviations

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

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

Table 3 - Summary of Presumed Asbestos Containing Materials, 2145 McIlwraith 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, 2145 McIlwraith 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:

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
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.

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.

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.)

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.

Project No.: 16-1070
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

Certificate of Laboratory 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 - 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% Other - 70%
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	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.



NVLAP Lab Code 102118-0

Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)



Project: 2200 Riordan St.

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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 - 01c Cust. #: ST-HM-01A 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 - 02 Cust. #: ST-HM-01B Material: Grey Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 4	Asbestos Present: NO No Asbestos Observed	Fiberglass - 30% 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 No Asbestos Observed	Fiberglass - 30% Other - 70%

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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	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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 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 - 04 Cust. #: ST-HM-02B 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%
Lab ID #: 64872 - 05 Cust. #: ST-HM-03A Material: Beige Linoleum Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Fiberglass - 10% Other - 90%
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

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



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ARI Report # 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	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 64872 - 08 Cust. #: ST-HM-04B Material: Grey Linoleum Location: Appearance: grey, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 64872 - 09 Cust. #: ST-HM-05A Material: Old Linoleum Location: Appearance: beige, fibrous, homogenous Layer: 1 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

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



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Test Method, Polarized Light Microscopy (PLM)



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 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	Asbestos Present: NO No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 64872 - 10 Cust. #: ST-HM-05B Material: Old Linoleum Location: Appearance: beige, fibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Fiberglass - 10% Other - 90%
Lab ID #: 64872 - 10a Cust. #: ST-HM-05B Material: Linoleum Location: Appearance: grey, fibrous, nonhomogenous Layer: 2 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.



NVLAP Lab Code 102118-0

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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 - 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	Asbestos Present: NO No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 64872 - 13 Cust. #: ST-HM-07A Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	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

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



NVLAP Lab Code 102118-0

Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)



Project: 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 - 13a Cust. #: ST-HM-07A Material: Mud Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64872 - 14 Cust. #: ST-HM-07B Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Fiberglass - 5% Other - 75%
Lab ID #: 64872 - 15 Cust. #: ST-HM-08A Material: Glazing Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Other - 99%

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

Robert T. Letarte Jr., Laboratory Director

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Certificate of Laboratory 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 - 16 Cust. #: ST-HM-08B Material: Glazing Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64872 - 17 Cust. #: ST-HM-09A Material: Glazing Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
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	Cellulose - 1% Other - 99%

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

Robert T. Letarte Jr., Laboratory Director

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



NVLAP Lab Code 102118-0

Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)



Project: 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 - 19 Cust. #: ST-HS-01A Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	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	Cellulose - 2% Other - 98%
Lab ID #: 64872 - 20 Cust. #: ST-HS-01B Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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



NVLAP Lab Code 102118-0

Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)



Project: 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 - 20a Cust. #: ST-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 #: 64872 - 21 Cust. #: ST-HS-01C Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
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.



NVLAP Lab Code 102118-0

Certificate of Laboratory 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 - 22 Cust. #: ST-HS-01D Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
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	Cellulose - 2% Other - 98%
Lab ID #: 64872 - 23 Cust. #: ST-HS-01E Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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



NVLAP Lab Code 102118-0

Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)



Project: 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 - 23a Cust. #: ST-HS-01E 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 #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

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

Robert T. Letarte Jr., Laboratory Director

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



NVLAP Lab Code 102118-0

APEX Research, Inc.

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



Client Name: Red Cedar Consulting

Date of Survey: 5-14-16

Address: PO Box 13216

Project: 2200 Richardson St.

City, St., Zip: Lansing, MI 48901

Project #: _____

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

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush 24 hour

Asbestos: Bulk Wipe _____ Point Count _____ PCM _____

48 hour 72 hour

Lead: Bulk _____ Wipe _____ Air _____ Paint _____ Soil _____

Other: _____

Mold: Bulk _____ Tape _____ Biosis _____ Other _____ Viable _____
 TEM: AHERA 7400 Bulk/NOB _____ EPA Level II _____

(TTP) All Samples Except Plaster

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	ST-HM-01A	Shingle			
2	ST-HM-01B	Shingle			
3	ST-HM-02A	White Floral Linoleum			
4	ST-HM-02B	White Floral Linoleum			
5	ST-HM-03A	Beige Linoleum			
6	ST-HM-03B	Beige Linoleum			
7	ST-HM-04A	Gray Linoleum			
8	ST-HM-04B	Gray Linoleum			
9	ST-HM-05A	Old Linoleum			
10	ST-HM-05B	Old Linoleum			
11	ST-HM-06A	White 1x1 Ceiling Tile			

Lab Use Only
 Log-in: _____
 Report: _____

Relinquished by: [Signature]

Received by: [Signature]

Date: 5-17-16

Date: MAY 17 2016

Relinquished by: _____

Received by: _____

Date: _____

Date: _____

64872

7/3/2013

APEX Research, Inc.

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

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



Client Name: Red Cedar Consulting

Address: PO Box 13216 Lansing, MI 48901

City, St., Zip: (888) 449-4566 Fax: (888) 448-8739

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

Turn Around Times: (Circle One) P1M EPA 600, PC all samples with a detection of <5% ACM.

apaguet@redcedarconsulting.net

Rush 24 hour

48 hour 72 hour

Other: All Samples Except Plaster TEM: AHERA 7400 Bulk/NOB EPA Level II

Lab Use Only Log-In Report

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	ST-HM-06B	White Lt Ceiling Tile			
13	ST-HM-07A	Drywall			
14	ST-HM-07B	Drywall			
15	ST-HM-08A	Ceiling			
16	ST-HM-08B				
17	ST-HM-09A				
18	ST-HM-09B				
19	ST-HS-01A	Plaster			
20	ST-HS-01B				
21	ST-HS-01C				
22	ST-HS-01D				

RECEIVED

Relinquished by: [Signature] Received by: [Signature] Date: 5-17-16 Date: MAY 17 2016

Relinquished by: _____ Received by: _____ Date: _____ Date: _____

64872

P5 3053

APEX Research, Inc.

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



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

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

Date of Survey: 5-14-16

Project: 2200 Pilsden St.

Project #:

Contact Person: Aaron Paquet

Lab Use Only
Log-In _____
Report _____

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour 72 hour

Other: _____

TTP All Samples Except Plaster

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

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
23	SR-KS-01E	Plaster			

RECEIVED

Relinquished by: [Signature]

Date: 5-17-16

Received by: [Signature]

Date: MAY 17 2016

Relinquished by: _____

Date: _____

Received by: _____

Date: _____

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

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, 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.

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*
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

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.

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.

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
Phone: 517-284-6777

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

DISCLAIMER

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

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

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

Sincerely,
Red Cedar Consulting



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

Red Cedar Consulting

Attachment 1
APEX Research Laboratory Analytical Results



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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 - 01 Cust. #: WS-HM-01A Material: Asphalt Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 65108 - 02 Cust. #: WS-HM-01B Material: Asphalt Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 65108 - 03 Cust. #: WS-HM-02A Material: Fiberlap Siding Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	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.



NVLAP Lab Code 102118-0



Certificate of Laboratory 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 - 04 Cust. #: WS-HM-02B Material: Fiberlap Siding Location: Appearance: black,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65108 - 05 Cust. #: WS-HM-03A Material: Asphalt Shingle Location: Appearance: black,fibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 65108 - 06 Cust. #: WS-HM-03B Material: Asphalt Shingle Location: Appearance: black,fibrous,homogenous Layer: 1 of 1	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.



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Certificate of Laboratory 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 - 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%
Lab ID #: 65108 - 08 Cust. #: WS-HM-04B Material: Fiberlap Siding Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 80% Other - 20%
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.



NVLAP Lab Code 102118-0



Certificate of Laboratory 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	Asbestos Present: NO No Asbestos Observed	Cellulose - 10% 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	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 65108 - 12 Cust. #: WS-HM-06B Material: White 1x1 Ceiling Tile Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	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.



NVLAP Lab Code 102118-0



Certificate of Laboratory 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	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 65108 - 14 Cust. #: WS-HM-07B Material: Drywall Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 65108 - 15 Cust. #: WS-HM-08A Material: Glazing 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.



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 2225 Wood St

Report To:

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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 - 16 Cust. #: WS-HM-08B Material: Glazing Location: Appearance: grey,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

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

Robert T. Letarte Jr., Laboratory Director

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



NVLAP Lab Code 102118-0

APEX Research, Inc.

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

E-mail: apexresearch@chartermi.net

Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

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

Date of Survey: 5-24-16

Project: 2225 Wood St.

Project #:

Contact Person: Aaron Paquet

Lab Use Only
Log In _____
Report _____

Turn Around Times: (Circle One)

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

Rush

24 hour

Asbestos: Bulk Wipe _____ Point Count _____ PCM _____

Lead: Bulk _____ Wipe _____ Air _____ Paint _____ Soil _____

48 hour 72 hour

Mold: Bulk _____ Tape _____ BioSIS _____ Other _____ Viable _____

Other: TTP All Samples Except Plaster

TEM: AHERA 7400 Bulk/NOB _____ EPA Level II _____

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	WS-HM-01A	Asphalt Shingle			
2	WS-HM-01B	Asphalt Shingle			
3	WS-HM-02A	Fiber Lap Siding			
4	WS-HM-02B	Fiber Lap Siding			
5	WS-HM-03A	Asphalt Shingle			
6	WS-HM-03B	Asphalt Shingle			
7	WS-HM-04A	Fiber Lap Siding			
8	WS-HM-04B	Fiber Lap Siding			
9	WS-HM-05A	White Linoleum			
10	WS-HM-05B	White Linoleum			
11	WS-HM-06A	White 1x1 Ceiling Tile			

RECEIVED

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

Date: 5-24-16

Date: 5-24-16

Relinquished by: _____

Date: _____

Received by: [Signature]

Date: MAY 26 2016

G5108

pg. 2 of 2

APEX Research, Inc.

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

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



Client Name: Red Cedar Consulting

Date of Survey: 5-24-16

Address: PO Box 13216

Project: 2225 Wood St.

City, St., Zip: Lansing, MI 48901

Project #:

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

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush

24 hour

Asbestos: Bulk

Wipe

Point Count

PCM

48 hour

72 hour

Lead: Bulk

Wipe

Air

Paint

Soil

Other:

TIP All Samples Except Plaster

Mold: Bulk

Tape

BioSIS

Other

Viable

TEM: AHERA 7400

Bulk/NOB

EPA Level II

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	WS-HM-010B	White 1x1 Ceiling Tile			
13	WS-HM-07A	Drywall			
14	WS-HM-07B	Drywall			
15	WS-HM-08A	Glazing			
16	WS-HM-08B	Glazing			

Relinquished by: [Signature]

Received by: [Signature]

Date: 5-24-16

Date: 5-24-16

Relinquished by: _____

Received by: **RECEIVED**

Date: _____

Date: MAY 26 2016

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

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, 2225 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, 2225 Wood St., Muskegon Heights, Michigan

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

Notes:

Abbreviations

lin. ft. = linear feet

sq. ft. = square feet

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

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

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



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

May 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.

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.

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.)

Project No.: 16-1070
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)

Project No.: 16-1070
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

Project No.: 16-1070
Muskegon County Land Bank
Parcel ID: 61-26-185-063-0016-00

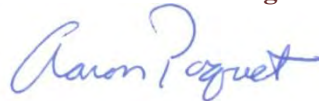
DISCLAIMER

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



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

Red Cedar Consulting

Attachment 1
APEX Research Laboratory Analytical Results



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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 - 01 Cust. #: RN-HM-01A Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 64888 - 01a Cust. #: RN-HM-01A Material: Tarp Paper Location: Appearance: black, fibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 64888 - 02 Cust. #: RN-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

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Sample Information	Asbestos Type/Percent	Non-Asbestos
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 - 50% Other - 50%
Lab ID #: 64888 - 03 Cust. #: RN-HM-02A Material: Rolled Roofing Location: Appearance: black, fibrous, homogenous Layer: 1 of 4	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
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%

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Date Reported: 05/24/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64888 - 03b Cust. #: RN-HM-02A Material: Green Roofing Location: Appearance: black, fibrous, homogenous Layer: 3 of 4	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 64888 - 03c Cust. #: RN-HM-02A Material: Red Roofing Location: Appearance: black, fibrous, homogenous Layer: 4 of 4	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
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%

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Robert T. Letarte Jr., Laboratory Director

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Date Reported: 05/24/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
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%
Lab ID #: 64888 - 04b Cust. #: RN-HM-02B Material: Green Roofing Location: Appearance: black, fibrous, homogenous Layer: 3 of 4	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 64888 - 04c Cust. #: RN-HM-02B Material: Red Roofing Location: Appearance: black, fibrous, homogenous Layer: 4 of 4	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%

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Robert T. Letarte Jr., Laboratory Director

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Date Reported: 05/24/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64888 - 05 Cust. #: RN-HM-03A Material: White 12x12 Ceiling Tile/Floor Tile Location: Appearance: beige, fibrous, homogenous Layer: 1 of 2	Asbestos Present: YES Chrysotile - 5%	Other - 95%
Lab ID #: 64888 - 05a Cust. #: RN-HM-03A Material: Mastic Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: YES Chrysotile - 5%	Other - 95%
Lab ID #: 64888 - 06 Cust. #: RN-HM-03B Material: White 12x12 CT/Floor Tile/Mastic Location: Appearance: Layer: of	Asbestos Present: NOT ANALYZED	

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Robert T. Letarte Jr., Laboratory Director

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Date Reported: 05/24/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64888 - 07 Cust. #: RN-HM-04A Material: Tan Linoleum Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 64888 - 07a Cust. #: RN-HM-04A Material: Beige Linoleum Location: Appearance: beige, fibrous, homogenous Layer: 2 of 3	Asbestos Present: YES Chrysotile - 30%	Other - 70%
Lab ID #: 64888 - 07b Cust. #: RN-HM-04A Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 3 of 3	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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Date Reported: 05/24/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64888 - 08 Cust. #: RN-HM-04B Material: Tan Linoleum Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
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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Date Analyzed: 05/24/16
Date Reported: 05/24/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64888 - 09 Cust. #: RN-HM-05A Material: Beige 12x12 Vinyl Tile Location: Appearance: beige, fibrous, homogenous Layer: 1 of 2	Asbestos Present: YES Chrysotile - 5%	Other - 95%
Lab ID #: 64888 - 09a Cust. #: RN-HM-05A Material: Glue Location: Appearance: yellow, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64888 - 10 Cust. #: RN-HM-05B Material: Beige 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

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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	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64888 - 11 Cust. #: RN-HM-06A Material: Stone Linoleum Location: Appearance: beige,fibrous,nonhomogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 5% Fiberglass - 10% Other - 85%
Lab ID #: 64888 - 11a Cust. #: RN-HM-06A Material: Grey Sheet Flooring Location: Appearance: grey,fibrous,nonhomogenous Layer: 2 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

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Date Analyzed: 05/24/16
Date Reported: 05/24/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64888 - 12 Cust. #: RN-HM-06B Material: Stone Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 5% Fiberglass - 10% Other - 85%
Lab ID #: 64888 - 12a Cust. #: RN-HM-06B Material: Grey Sheet Flooring Location: Appearance: grey, fibrous, nonhomogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
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	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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Date Reported: 05/24/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64888 - 14 Cust. #: RN-HM-07B Material: Paisley Linoleum Location: Appearance: grey, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 64888 - 15 Cust. #: RN-HM-08A Material: Brown Linoleum Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 30%	Other - 70%
Lab ID #: 64888 - 16 Cust. #: RN-HM-08B Material: Brown Linoleum 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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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64888 - 17 Cust. #: RN-HM-09A Material: Fiberlap Siding Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 70% Other - 30%
Lab ID #: 64888 - 18 Cust. #: RN-HM-09B Material: Fiberlap Siding Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 70% Other - 30%
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 No Asbestos Observed	Cellulose - 80% Other - 20%

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

Robert T. Letarte Jr., Laboratory Director

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Date Reported: 05/24/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64888 - 20 Cust. #: RN-HM-10B Material: White 2x4 Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 64888 - 21 Cust. #: RN-HM-11A Material: Glazing Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 64888 - 22 Cust. #: RN-HM-11B Material: Glazing Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Other - 99%

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Date Reported: 05/24/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64888 - 23 Cust. #: RN-HM-12A Material: Glazing Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 5%	Other - 95%
Lab ID #: 64888 - 24 Cust. #: RN-HM-12B Material: Glazing Location: Appearance: Layer: of	Asbestos Present: NOT ANALYZED	
Lab ID #: 64888 - 25 Cust. #: RN-HM-13A Material: Brown Linoleum Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 30%	Other - 70%

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

Robert T. Letarte Jr., Laboratory Director

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



NVLAP Lab Code 102118-0



Certificate of Laboratory 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	Non-Asbestos
Lab ID #: 64888 - 26 Cust. #: RN-HM-13B Material: Brown Linoleum Location: Appearance: Layer: of	Asbestos Present: NOT ANALYZED	
Lab ID #: 64888 - 27 Cust. #: RN-HM-14A Material: Stone Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 30%	Other - 70%
Lab ID #: 64888 - 28 Cust. #: RN-HM-14B Material: Stone Linoleum 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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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 - 29 Cust. #: RN-HM-15A Material: Red/Beige Linoleum Location: Appearance: red, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 64888 - 30 Cust. #: RN-HM-15B Material: Red/Beige Linoleum Location: Appearance: red, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 64888 - 31 Cust. #: RN-HM-16A Material: Floral Linoleum Location: Appearance: brown, fibrous, nonhomogenous 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

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Project: 2232 Riordan St.

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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	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 64888 - 33 Cust. #: RN-HM-17A Material: White 1x1 Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 70% Other - 30%
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 No Asbestos Observed	Cellulose - 80% Other - 20%

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

Robert T. Letarte Jr., Laboratory Director

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Project: 2232 Riordan St.

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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 - 35 Cust. #: RN-HS-01A Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64888 - 35a Cust. #: RN-HS-01A Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Hair - 5% Other - 95%
Lab ID #: 64888 - 36 Cust. #: RN-HS-01B Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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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	Asbestos Present: NO No Asbestos Observed	Hair - 5% Other - 95%
Lab ID #: 64888 - 37 Cust. #: RN-HS-01C Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64888 - 37a Cust. #: RN-HS-01C Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Hair - 5% Other - 95%

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

Robert T. Letarte Jr., Laboratory Director

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Certificate of Laboratory 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	Non-Asbestos
Lab ID #: 64888 - 38 Cust. #: RN-HS-01AD Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64888 - 38a Cust. #: RN-HS-01D Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Hair - 5% Other - 95%
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	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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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 - 39a Cust. #: RN-HS-01E Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Hair - 5% Other - 95%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0

ARLX Research, Inc.

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



Client Name: Red Cedar Consulting

Date of Survey: 5-14-16

Address: PO Box 13216

Project: 2232 Riverdawn St.

City, St., Zip: Lansing, MI 48901

Project #:

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

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush 24 hour

Asbestos: Bulk Wipe Point Count PCM

48 hour 72 hour

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

Other: 4 Day **(TTP)** All Samples Except Plaster

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	RD-HM-01A	Shingle			
2	RD-HM-01B	Shingle			
3	RD-HM-02A	Rolls Roofing			
4	RD-HM-02B	Rolls Roofing			
5	RD-HM-03A	White 12x12 Ceiling Tile			
6	RD-HM-03B	White 12x12 Ceiling Tile			
7	RD-HM-04A	Tan Linoleum			
8	RD-HM-04B	Tan Linoleum			
9	RD-HM-05A	Beige 12x12 Vinyl Tile			
10	RD-HM-05B	Beige 12x12 Vinyl Tile			
11	RD-HM-06A	Stone Linoleum			

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

Date: 5-17-16 Date: 5-17-16 MAY 17 Date: 16

Lab Use Only
 Log-In _____
 Report _____

69888

pg 2 of 4

APEX Research, Inc.

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



Client Name: Red Cedar Consulting

Date of Survey: 5-14-16

Address: PO Box 13216

Project: 2132 Rosegar St.

City, St., Zip: Lansing, MI 48901

Project #:

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

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush 24 hour

Asbestos: Bulk Wipe Point Count PCM

48 hour 72 hour

Lead: Bulk Wipe Air Paint Soil

Other: 4 Day **(TTP)** All Samples Except Plaster
Mold: Bulk Tape BiOSIS Other Viable
AHERA 7400 Bulk/NOB EPA Level II

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	RW-HM-06B	Stone Limestone			
13	RW-HM-07A	Paisley Limestone			
14	RW-HM-07B	Paisley Limestone			
15	RW-HM-08A	Brown Limestone			
16	RW-HM-08B	Brown Limestone			
17	RW-HM-09A	Fiberglass Siding			
18	RW-HM-09B	Fiberglass Siding			
19	RW-HM-10A	White 2x4 Ceiling Tile			
20	RW-HM-10B	White 2x4 Ceiling Tile			
21	RW-HM-11A	Glazing			
22	RW-HM-11B	Glazing			

Lab Use Only
Log-In _____
Report _____

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

Relinquished by: _____ Received by: _____

Date: 5-17-16

Date: MAY 17 2016

Date: _____

Date: _____

64888

Page 3 of 4

APEX Research, Inc.

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



Client Name: Red Cedar Consulting

Date of Survey: 5-14-16

Address: PO Box 13216

Project: 2232 Pardon St.

City, St., Zip: Lansing, MI 48901

Project #: _____

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

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

P1M EPA 600, PC all samples with a detection of <5% ACM. apaquet@redcedarconsulting.net

Rush 24 hour

Asbestos: Bulk Wipe _____ Point Count _____ PCM _____

48 hour 72 hour

Lead: Bulk _____ Wipe _____ Air _____ Paint _____ Soil _____

Other: 4 Day

Mold: Bulk _____ Tape _____ Other _____ Viable _____
TEM: AHERA 7400 Bulk/NOB _____ EPA Level II _____

TTP All Samples Except Plaster

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
23	RW-HM-12A	ceiling			
24	RW-HM-12B	ceiling			
25	RW-HM-13A	Brown Limestone			
26	RW-HM-13B	Brown Limestone			
27	RW-HM-14A	Stone Limestone			
28	RW-HM-14B	Stone Limestone			
29	RW-HM-15A	Red/Beige Limestone			
30	RW-HM-15B	Red/Beige Limestone			
31	RW-HM-16A	Floral Limestone			
32	RW-HM-16B	Floral Limestone			
33	RW-HM-17A	white ceiling tile			

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

Relinquished by: _____ Received by: _____

Date: 5-17-16

Date: _____

Date: _____

Date: _____

61888

pg 4 of 4

APEX Research, Inc.

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



Client Name: Red Cedar Consulting

Address: PO Box 13216
Lansing, MI 48901

City, St, Zip: Phone: (888) 449-4566 Fax: (888) 448-8739

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

Rush 24 hour
48 hour 72 hour
Other: 4 Day

Asbestos: Bulk X Wipe Point Count PCM

Lead: Bulk Wipe Air Paint Soil

Mold: Bulk Tape BioSIS Other Viable

Other: TEM: AHERA 7400 Bulk/NOB EPA Level II

Date of Survey: 5-14-16
Project: 2232 Pilsbun St.
Project #: _____
Contact Person: Aaron Paquet

Lab Use Only
Log-In _____
Report _____

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
34	RD-KM-1713	White Lat Ceiling Tile			
35	RD-45-01A	Plaster			
36	RD-45-01B				
37	RD-45-01C				
38	RD-45-01D				
39	RD-48-01E				

Relinquished by: _____

Date: 5-17-16

Received by: _____

Date: MAY 17 2016

Relinquished by: _____

Date: _____

Received by: _____

Date: _____

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	1 st Fl. North Bedroom	NA
RN-HM-07B	Paisley Linoleum	No	M	Category I	ND	1 st 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 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, 2232 Riordan St., Muskegon Heights, Michigan

Asbestos Containing Material Description and 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.) 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.)			
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.
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.)			
Basement (misc. HVAC wrap on Ductwork, 20 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

Project No.: 16-1070
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.

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.

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 2nd 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)

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Muskegon County Land Bank
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- 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.

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

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

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

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

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

DISCLAIMER

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

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

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

Sincerely,
Red Cedar Consulting



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

Red Cedar Consulting

Attachment 1
APEX Research Laboratory Analytical Results

Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)



Project: 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 - 01 Cust. #: BS-HM-01A Material: Asphalt Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 65033 - 02 Cust. #: BS-HM-01B Material: Asphalt Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 65033 - 03 Cust. #: BS-HM-02A Material: Unknown 12x12 Vinyl Tile Location: Appearance: yellow, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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



NVLAP Lab Code 102118-0

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ARI Report # 16-65033
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 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 - 04 Cust. #: BS-HM-02B Material: Unknown 12x12 Vinyl Tile Location: Appearance: grey,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65033 - 05 Cust. #: BS-HM-03A Material: Brown 12x12 Vinyl Tile Location: Appearance: beige,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
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 No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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 Date Analyzed: 05/24/16
 Date Reported: 05/24/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 65033 - 07 Cust. #: BS-HM-04A Material: Red/Blue Linoleum Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 30%	Other - 70%
Lab ID #: 65033 - 08 Cust. #: BS-HM-04B Material: Red/Blue Linoleum Location: Appearance: Layer: of	Asbestos Present: NOT ANALYZED	
Lab ID #: 65033 - 09 Cust. #: BS-HM-05A Material: Beige Linoleum 2 Layer/Tile Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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 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	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	Asbestos Present: NO No Asbestos Observed	Other - 100%
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

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 Date Analyzed: 05/24/16
 Date Reported: 05/24/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 65033 - 11 Cust. #: BS-HM-06A Material: Glazing Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 1.25% POINT COUNT RESULT	Other - 98.75%
Lab ID #: 65033 - 12 Cust. #: BS-HM-06B Material: Glazing Location: Appearance: Layer: of	Asbestos Present: NOT ANALYZED	
Lab ID #: 65033 - 13 Cust. #: BS-HM-07A Material: Tan 9x9 Vinyl Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	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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 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	Asbestos Present: NOT ANALYZED	
Lab ID #: 65033 - 15 Cust. #: BS-HS-01A Material: Plaster/Joint Compound Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65033 - 15a Cust. #: BS-HS-01A Material: Plaster Location: Appearance: white, 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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 Date Analyzed: 05/24/16
 Date Reported: 05/24/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
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%
Lab ID #: 65033 - 16a Cust. #: BS-HS-01B Material: Mortar Location: Appearance: grey,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
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	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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



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Sample Information	Asbestos Type/Percent	Non-Asbestos
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	Other - 100%
Lab ID #: 65033 - 18 Cust. #: BS-HS-01D Material: Plaster Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65033 - 18a Cust. #: BS-HS-01D 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.



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 Date Analyzed: 05/24/16
 Date Reported: 05/24/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 65033 - 19 Cust. #: BS-HS-01E Material: Plaster Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65033 - 19a Cust. #: BS-HS-01E Material: Mortar Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 65033 - 20 Cust. #: BS-HS-02A Material: Plaster/Stucco Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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



NVLAP Lab Code 102118-0

Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)



Project: 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	Other - 100%
Lab ID #: 65033 - 21 Cust. #: BS-HS-02B Material: Plaster/Stucco Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
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.



NVLAP Lab Code 102118-0

Certificate of Laboratory 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 Material: Plaster/Stucco Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65033 - 22a Cust. #: BS-HS-02C Material: Mortar/Stucco Location: Appearance: grey, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

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

Robert T. Letarte Jr., Laboratory Director

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



NVLAP Lab Code 102118-0

65033

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

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



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

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

Date of Survey: 5.22.16

Project: 2305 Baker St.

Project #:

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush

24 hour

48 hour 72 hour

Other: TTP All Samples Except Plaster

Asbestos: Bulk Wipe Point Count PCM

Lead: Bulk Wipe Air Paint Soil

Mold: Bulk Tape Biosis Other Viable

TEM: AHERA 7400 Bulk/NOB EPA Level II

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	BS-Hm-01A	Asphalt Shingle			
2	BS-Hm-01B	Asphalt Shingle			
3	BS-Hm-02A	Unknown 12x12 Vinyl Tile			
4	BS-Hm-02B	Unknown 12x12 Vinyl Tile			
5	BS-Hm-03A	Brown 12x12 Vinyl Tile			
6	BS-Hm-03B	Brown 12x12 Vinyl Tile			
7	BS-Hm-04A	Red/Blue Linoleum			
8	BS-Hm-04B	Red/Blue Linoleum			
9	BS-Hm-05A	Beige Linoleum 2 Layer			
10	BS-Hm-05B	Beige Linoleum 2 Layer			
11	BS-Hm-06A	Glazing			

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

Date: 5-23-16 Date: MAY 23 2016

Relinquished by: _____ Received by: _____

Date: _____ Date: _____

65033

Pg. 2 of 2

APEX Research, Inc.

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



E-mail: apexresearch@chartermi.net

Fax: 734-449-9991

Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

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

Date of Survey: 5.22.16

Project: 3305 Baker St.

Project #:

Contact Person: Aaron Paquet

Lab Use Only
Log-In _____
Report _____

Turn Around Times: (Circle One)

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

Rush

24 hour

48 hour 72 hour

Other: TTP All Samples Except Plaster

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

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	BS-HM-01B	Glazing			
13	BS-HM-07A	Tan 9x9 Vinyl Tile			
14	BS-HM-07B	Tan 9x9 Vinyl Tile			
15	BS-HS-01A	Plaster			
16	BS-HS-01B	Plaster			
17	BS-HS-01C	Plaster			
18	BS-HS-01D	Plaster			
19	BS-HS-01E	Plaster			
20	BS-HS-02A	Stucco			
21	BS-HS-02B	Stucco			
22	BS-HS-02C	Stucco			

RECEIVED

Relinquished by: [Signature] Received by: May 23 2016

Date: 5-23-16

Date: [Signature]

APEX RESEARCH

Relinquished by: _____ Received by: _____

Date: _____

Date: _____

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:

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, 2305 Baker St., Muskegon Heights, Michigan

Asbestos Containing Material Description and 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

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, 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

Project No.: 16-1070
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.

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.

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.)

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.

Project No.: 16-1070
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



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

Red Cedar Consulting

Attachment 1
APEX Research Laboratory Analytical Results



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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	Asbestos Present: NO No Asbestos Observed	Fiberglass - 15% Other - 85%
Lab ID #: 65109 - 02 Cust. #: ST-HM-01B Material: Asphalt Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Fiberglass - 15% Other - 85%
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	Cellulose - 20% Other - 80%

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

Robert T. Letarte Jr., Laboratory Director

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



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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 - 04 Cust. #: ST-HM-02B Material: Rolled Roofing/Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 65109 - 05 Cust. #: ST-HM-03A Material: White Linoleum Location: Appearance: white, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Fiberglass - 2% Other - 78%
Lab ID #: 65109 - 06 Cust. #: ST-HM-03B Material: White Linoleum Location: Appearance: white, fibrous, homogenous 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



Certificate of Laboratory 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	Non-Asbestos
Lab ID #: 65109 - 07 Cust. #: ST-HM-04A Material: Beige Linoleum Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 65109 - 08 Cust. #: ST-HM-04B Material: Beige Linoleum Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
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%

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

Robert T. Letarte Jr., Laboratory Director

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Date Collected: 05/24/16
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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	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 65109 - 11 Cust. #: ST-HM-06A Material: Old Linoleum Location: Appearance: red, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 60% Other - 40%
Lab ID #: 65109 - 12 Cust. #: ST-HM-06B Material: Old Linoleum Location: Appearance: red, 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.



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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 - 13 Cust. #: ST-HM-07A Material: Drywall Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 65109 - 13a Cust. #: ST-HM-07A Material: Joint Compound Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65109 - 14 Cust. #: ST-HM-07B Material: Drywall Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%

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

Robert T. Letarte Jr., Laboratory Director

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



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ARI Report # 16-65109
Date Collected: 05/24/16
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Date Analyzed: 05/27/16
Date Reported: 05/27/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 65109 - 14a Cust. #: ST-HM-07B Material: Joint Compound Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65109 - 15 Cust. #: ST-HM-08A Material: Glazing Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 5%	Other - 95%
Lab ID #: 65109 - 16 Cust. #: ST-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

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Certificate of Laboratory Analysis

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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 - 17 Cust. #: ST-HS-01A Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
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	Hair - 2% Other - 98%
Lab ID #: 65109 - 18 Cust. #: ST-HS-01B Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 2321 Leahy St

Report To:
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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 - 18a Cust. #: ST-HS-01B Material: Plaster Base Coat Location: Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: 65109 - 19 Cust. #: ST-HS-01C Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: 65109 - 19a Cust. #: ST-HS-01C Material: Drywall Location: Appearance: beige, fibrous, nonhomogenous 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.



NVLAP Lab Code 102118-0

65109

ARVA research, Inc.

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



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

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

Date of Survey: 5-24-16

Project: 2321 Leahy St.

Project #:

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush

24 hour

Asbestos: Bulk x

Wipe _____ Point Count _____

PCM _____

Lead: Bulk _____

Wipe _____

Air _____

Paint _____

Soil _____

Mold: Bulk _____

Tape _____

BioSIS _____

Other _____

Viable _____

TEM: AHERA 7400

Bulk/NOB _____

EPA Level II _____

Other: TTP All Samples Except Plaster

48 hour

72 hour

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	ST-HM-01A	Asphalt Shingle			
2	ST-HM-01B	Asphalt Shingle			
3	ST-HM-02A	Roller Roofing			
4	ST-HM-02B	Roller Roofing			
5	ST-HM-03A	White Linoleum			
6	ST-HM-03B	White Linoleum			
7	ST-HM-04A	Beige Linoleum			
8	ST-HM-04B	Beige Linoleum			
9	ST-HM-05A	Speckled grey Vinyl Tile			
10	ST-HM-05B	Speckled grey Vinyl Tile			
11	ST-HM-06A	Old Linoleum			

Relinquished by: [Signature]

Received by: URS

Date: 5-24-16

Date: 5-24-16

Relinquished by: _____

Received by: [Signature]

Date: _____

Date: MAY 26 2016

RECEIVED

65109

pg. 2 of 2

APEX Research, Inc.

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



Client Name: Red Cedar Consulting

Date of Survey: 5-24-16

Lab Use Only
Log-In _____
Report _____

Address: PO Box 13216

Project: 2391 Leahy St.

City, St., Zip: Lansing, MI 48901

Project #: _____

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

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush

Asbestos: Bulk Wipe _____ Point Count _____ PCM _____

48 hour 72 hour

Lead: Bulk _____ Wipe _____ Air _____ Paint _____ Soil _____

Other: All Samples Except Plaster

Mold: Bulk _____ Tape _____ Biosis _____ Other _____ Viable _____

TEMI: AHERA 7400 _____ Bulk/NOB _____ EPA Level II _____

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	ST-HM-06B	old Linoleum			
13	ST-HM-07A	Drywall			
14	ST-HM-07B	Drywall			
15	ST-HM-08A	Glazing			
16	ST-HM-08B	Glazing			
17	ST-HS-01A	Plaster			
18	ST-HS-01B	Plaster			
19	ST-HS-01C	Plaster			

Relinquished by:

Received by:

Date: 5-24-16

Date: 5-24-16

Date: _____

Date: MAY 26 2016

RECEIVED

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

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

Abbreviations

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

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

Table 3 - Summary of Presumed Asbestos Containing Materials, 2321 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

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

Abbreviations

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

Table 4 - Summary of All Asbestos Containing Materials, 2321 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.)	HVAC Duct Wrap	Yes	75 sq. ft.
Center Bedroom (1 register, 10 sq. ft.)			
Basement (Misc. HVAC Debris in Crawlspace, 35 sq. ft.)			
Total			75 sq. ft.
Interior - Asbestos Containing Materials			
Location	Material Description	Friable	Approx. Quantity
Living (4 windows 32" wide x 58" tall)	Glazing	Yes	4 Windows
NE Bedroom (1 window 32" wide x 54" tall)	Glazing	Yes	1 Window
Center Bedroom (1 window 32" wide x 54" tall)	Glazing	Yes	1 Window
Dining (2 windows 28" wide x 54" tall)	Glazing	Yes	2 Windows
Kitchen (1 window 28" wide x 38" tall)	Glazing	Yes	1 Window
Bath (1 window 20" wide x 30" tall)	Glazing	Yes	1 Window
Rear Entry (10 windows 28" wide x 54" tall)	Glazing	Yes	10 Windows
Total			21 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*
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.

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 cementitious “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.

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.

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

Project No.: 16-1070
Muskegon County Land Bank
Parcel ID: 61-26-185-102-0007-00

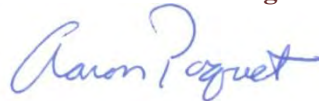
DISCLAIMER

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



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

Red Cedar Consulting

Attachment 1
APEX Research Laboratory Analytical Results



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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
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 - 40% Other - 60%
Lab ID #: 64720 - 01b Cust. #: ST-HM-01A Material: Tar Location: Appearance: black, fibrous, homogenous Layer: 3 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Other - 50%

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

Robert T. Letarte Jr., Laboratory Director

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



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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
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 No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 64720 - 02b Cust. #: ST-HM-01B Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 3 of 3	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.



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Certificate of Laboratory Analysis

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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
Lab ID #: 64720 - 03 Cust. #: ST-HM-02A Material: Red Linoleum Location: Appearance: red, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 30%	Other - 70%
Lab ID #: 64720 - 04 Cust. #: ST-HM-02B Material: Red Linoleum Location: Appearance: Layer: of	Asbestos Present: NOT ANALYZED	
Lab ID #: 64720 - 05 Cust. #: ST-HM-03A Material: White 1x1 Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 2	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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Certificate of Laboratory 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
Lab ID #: 64720 - 05a Cust. #: ST-HM-03A Material: Glue Pod Location: Appearance: brown,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Wollastonite - 1% Other - 99%
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 No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 64720 - 06a Cust. #: ST-HM-03B Material: Glue Pod Location: Appearance: brown,fibrous,homogenous Layer: 2 of 2	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

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



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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
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	Wollastonite - 1% Other - 99%
Lab ID #: 64720 - 08 Cust. #: ST-HM-04B Material: Glazing Location: Appearance: beige,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Wollastonite - 1% Other - 99%
Lab ID #: 64720 - 09 Cust. #: ST-HS-01A Material: Plaster Finish Coat Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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



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Certificate of Laboratory 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
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	Cellulose - 2% Hair - 2% Other - 96%
Lab ID #: 64720 - 10 Cust. #: ST-HS-01B Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64720 - 10a Cust. #: ST-HS-01B Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 2% Hair - 2% Other - 96%

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

Robert T. Letarte Jr., Laboratory Director

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



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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
Lab ID #: 64720 - 11 Cust. #: ST-HS-01C Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64720 - 11a Cust. #: ST-HS-01C Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Hair - 2% Other - 97%
Lab ID #: 64720 - 12 Cust. #: ST-HS-01D Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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
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	Cellulose - 1% Hair - 2% Other - 97%
Lab ID #: 64720 - 13 Cust. #: ST-HS-01E Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64720 - 13a Cust. #: ST-HS-01E Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 2% Hair - 2% Other - 96%

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

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research 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 # **64720**

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



Client Name: Red Cedar Consulting

Date of Survey: 5-8-16

Address: PO Box 13216

Project: 2325 Wood St.

City, St., Zip: Lansing, MI 48901

Project #:

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

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour 72 hour

Other: TTP All Samples Except Plaster

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

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	ST-HM-01A	Shingle			
2	ST-HM-01B	Shingle			
3	ST-HM-02A	Red Limestone			
4	ST-HM-02B	Red Limestone			
5	ST-HM-03A	White 1st Ceiling Tile/Glue Jct			
6	ST-HM-03B	White 1st Ceiling Tile/Glue Jct			
7	ST-HM-04A	Glazing			
8	ST-HM-04S	Glazing			
9	ST-HS-01A	Plaster			
10	ST-HS-01B				
11	ST-HS-01C	↓			

Lab Use Only
 Log-In _____
 Report _____

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

Relinquished by: _____ Received by: _____

Date: 5-10-16

Date: MAY 11 2016

Date: _____

Date: _____

64720

pg 2 of 2

APEX Research, Inc.

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

E-mail: apexresearch@chartermi.net

Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566

Fax: (888) 448-8739

Date of Survey: 5-8-16

Project: 2325 Wood St.

Project #:

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour 72 hour

Other: TTP All Samples Except Plaster

Asbestos: Bulk Wipe Point Count PCM

Lead: Bulk Wipe Air Paint Soil

Mold: Bulk Tape Biosis Other Viable

TEM: AHERA 7400 Bulk/NOB EPA Level II

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	ST-45-01D	Plaster			
13	ST-45-01E	Plaster			

RECEIVED

MAY 11 2016

Relinquished by: _____ Received by: [Signature]

Date: _____

Date: _____

Relinquished by: _____ Received by: _____

Date: _____

Date: _____

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

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, 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

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, 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.
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

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.

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.

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.)

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)

Project No.: 16-1070
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

Project No.: 16-1070
Muskegon County Land Bank
Parcel ID: 26-185-096-0017-00

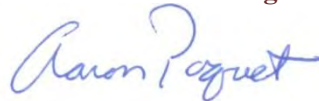
DISCLAIMER

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



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

Red Cedar Consulting

Attachment 1
APEX Research Laboratory Analytical Results



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 65040 - 01a Cust. #: TS-HM-01A Material: Black Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
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 - 50% Other - 50%

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

Robert T. Letarte Jr., Laboratory Director

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



NVLAP Lab Code 102118-0



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Test Method, Polarized Light Microscopy (PLM)

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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 - 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%
Lab ID #: 65040 - 02a Cust. #: TS-HM-01B 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	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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Date Analyzed: 05/25/16
Date Reported: 05/25/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
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 - 40% Other - 60%
Lab ID #: 65040 - 02d Cust. #: TS-HM-01B Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 5 of 5	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 65040 - 03 Cust. #: TS-HM-02A Material: Grey 9x9 Vinyl Tile Location: Appearance: grey, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Other - 99%

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

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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	Non-Asbestos
Lab ID #: 65040 - 03a Cust. #: TS-HM-02A Material: Glue Location: Appearance: yellow,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65040 - 04 Cust. #: TS-HM-02B Material: Grey 9x9 Vinyl Tile Location: Appearance: grey,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Other - 99%
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%

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

Robert T. Letarte Jr., Laboratory Director

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Date Reported: 05/25/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 65040 - 05 Cust. #: TS-HM-03A Material: Brown 9x9 Vinyl Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 2	Asbestos Present: YES Chrysotile - 10%	Other - 90%
Lab ID #: 65040 - 05a Cust. #: TS-HM-03A Material: Mastic Location: Appearance: black, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65040 - 06 Cust. #: TS-HM-03B Material: Brown 9x9 Vinyl Tile Location: Appearance: Layer: 1 of 2	Asbestos Present: NOT ANALYZED	

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

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Date Analyzed: 05/25/16
Date Reported: 05/25/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 65040 - 06a Cust. #: TS-HM-03B Material: Mastic Location: Appearance: black,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65040 - 07 Cust. #: TS-HM-04A Material: Beige 12x12 Vinyl Tile Location: Appearance: beige,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65040 - 07a Cust. #: TS-HM-04A Material: Glue Location: Appearance: clear,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

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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	Non-Asbestos
Lab ID #: 65040 - 08 Cust. #: TS-HM-04B Material: Beige 12x12 Vinyl Tile Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65040 - 08a Cust. #: TS-HM-04B Material: Glue Location: Appearance: clear, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
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 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.



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Date Analyzed: 05/25/16
Date Reported: 05/25/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 65040 - 10 Cust. #: TS-HM-05B Material: Tan 12x12 Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 65040 - 11 Cust. #: TS-HM-06A Material: White 2x4 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 #: 65040 - 12 Cust. #: TS-HM-06B Material: White 2x4 Ceiling Tile Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Mineral Wool - 40% 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.



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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	Non-Asbestos
Lab ID #: 65040 - 13 Cust. #: TS-HM-07A Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Fiberglass - 5% Other - 75%
Lab ID #: 65040 - 14 Cust. #: TS-HM-07B Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Fiberglass - 5% Other - 75%
Lab ID #: 65040 - 15 Cust. #: TS-HM-08A Material: Glazing Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	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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Date Collected: 05/22/16
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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: Appearance: Layer: of	Asbestos Present: NOT ANALYZED	
Lab ID #: 65040 - 17 Cust. #: TS-HM-09A 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 #: 65040 - 18 Cust. #: TS-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.



NVLAP Lab Code 102118-0



Certificate of Laboratory 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	Non-Asbestos
Lab ID #: 65040 - 19 Cust. #: TS-HM-10A Material: Beige Linoleum Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 3	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65040 - 19a Cust. #: TS-HM-10A Material: Floor Tile Location: Appearance: grey, fibrous, homogenous Layer: 2 of 3	Asbestos Present: YES Chrysotile - 10%	Other - 90%
Lab ID #: 65040 - 19b Cust. #: TS-HM-10A Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 3 of 3	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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Project: 2328 Maffett St

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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 - 20 Cust. #: TS-HM-10B Material: Beige Linoleum Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 3	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65040 - 20a Cust. #: TS-HM-10B Material: Floor Tile Location: Appearance: Layer: 2 of 3	Asbestos Present: NOT ANALYZED	
Lab ID #: 65040 - 20b Cust. #: TS-HM-10B Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 3 of 3	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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Certificate of Laboratory 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	Non-Asbestos
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% Other - 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	Cellulose - 50% Other - 50%
Lab ID #: 65040 - 23 Cust. #: TS-HS-01A Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



Certificate of Laboratory 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	Non-Asbestos
Lab ID #: 65040 - 23a Cust. #: TS-HS-01A Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: YES Chrysotile - 5%	Hair - 2% Other - 93%
Lab ID #: 65040 - 24 Cust. #: TS-HS-01B Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65040 - 24a Cust. #: TS-HS-01B Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: YES Chrysotile - 5%	Hair - 5% Other - 90%

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

Robert T. Letarte Jr., Laboratory Director

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Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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 - 25 Cust. #: TS-HS-01C Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65040 - 25a Cust. #: TS-HS-01C Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: YES Chrysotile - 5%	Hair - 2% Other - 93%
Lab ID #: 65040 - 26 Cust. #: TS-HS-01D Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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 - 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%
Lab ID #: 65040 - 27 Cust. #: TS-HS-01E Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
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	Cellulose - 2% Other - 98%

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

Robert T. Letarte Jr., Laboratory Director

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



NVLAP Lab Code 102118-0

ARPA Research, Inc.

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



Client Name: Red Cedar Consulting

Address: PO Box 13216
 Lansing, MI 48901

City, St., Zip: Lansing, MI 48901

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

Date of Survey: 5.22.16

Project: 2328 MacFlett St.

Project #:

Contact Person: Aaron Paquet

Lab Use Only
 Log-In _____
 Report _____

Turn Around Times: (Circle One)

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

Rush 24 hour
 48 hour 72 hour

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

TIP All Samples Except Plaster

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	TS-HM-01A	Asphalt Shingle			
2	TS-HM-01B	Asphalt Shingle			
3	TS-HM-02A	Gray 9x9 Vinyl Tile			
4	TS-HM-02B	Gray 9x9 Vinyl Tile			
5	TS-HM-03A	Brown 9x9 Vinyl Tile			
6	TS-HM-03B	Brown 9x9 Vinyl Tile			
7	TS-HM-04A	Beige 12x12 Vinyl Tile			
8	TS-HM-04B	Beige 12x12 Vinyl Tile			
9	TS-HM-05A	Tan 12x12 Ceiling Tile			
10	TS-HM-05B	Tan 12x12 Ceiling Tile			
11	TS-HM-06A	White 2x4 Ceiling Tile			

RECEIVED

Relinquished by: _____ Received by: _____
 Date: 5-13-16 Date: MAY 23 2016

Relinquished by: _____ Received by: _____
 Date: _____ Date: _____

65040

Pg. 2 of 3

APEX Research, Inc.

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



Client Name: Red Cedar Consulting

Address: PO Box 13216
Lansing, MI 48901

City, St., Zip: Lansing, MI 48901

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

Date of Survey: 5.22.16

Project: 2328 Maffett St.

Project #:

Contact Person: Aaron Paquet

Lab Use Only
Log-In _____
Report _____

Turn Around Times: (Circle One)

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

Rush _____ 24 hour
48 hour _____ 72 hour

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

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	TS-HM-016B	White 2x4 Ceiling Tile			
13	TS-HM-07A	Daywall			
14	TS-HM-07B	Daywall			
15	TS-HM-08A	Glazing			
16	TS-HM-08B	Glazing			
17	TS-HM-09A	White 1x1 Ceiling Tile			
18	TS-HM-09B	White 1x1 Ceiling Tile			
19	TS-HM-10A	Beige Linoleum			
20	TS-HM-10B	Beige Linoleum			
21	TS-HM-11A	Old Linoleum			
22	TS-HM-11B	Old Linoleum			

RECEIVED

Relinquished by: _____ Received by: _____

Date: 5-19-16 Date: MAY 23 2016

Relinquished by: _____ Received by: _____

Date: _____ Date: _____

65040

Pg. 3 of 3

APEX Research, Inc.

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

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



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

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

Date of Survey: 5.22.16

Project: 2328 Maffett St.

Project #:

Contact Person: Aaron Paquet

Lab Use Only
Log In _____
Report _____

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour 72 hour

Other: _____

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

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
23	TS-HS-01A	Plaster			
24	TS-HS-01B	Plaster			
25	TS-HS-01C	Plaster			
26	TS-HS-01D	Plaster			
27	TS-HS-01E	Plaster			

RECEIVED

Relinquished by: _____ Received by: _____
Date: 5-23-16 Date: MAY 23 2016

Relinquished by: _____ Received by: _____
Date: _____ Date: _____

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	M	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

Sample Number	Sample Description	Friable	Material Type	Material Classification	% Asbestos Laboratory Result	Sample Location	Approx. Material Quantity
ST-HS-01E	Plaster	No	S	Category II	ND/ND	2 nd Fl. S Bedroom Ceiling	NA

Notes:

Material Types

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

Abbreviations

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

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

Table 3 - Summary of Presumed Asbestos Containing Materials, 2328 Maffett St., Muskegon Heights, Michigan

Asbestos Containing Material Description and 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.) 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
1 st Floor	Wall Plaster	No	2,574 sq. ft.
1 st 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

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.

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.

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.

Project No.: 16-1070
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

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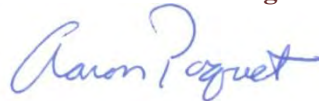
DISCLAIMER

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

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

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

Sincerely,
Red Cedar Consulting



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

Red Cedar Consulting

Attachment 1
APEX Research Laboratory Analytical Results

Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)



Project: 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 Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 64870 - 01b Cust. #: BS-HM-01A Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 3 of 3	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.



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 Date Reported: 05/20/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64870 - 02 Cust. #: BS-HM-01B Material: Asphalt Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Fiberglass - 2% Other - 78%
Lab ID #: 64870 - 02a Cust. #: BS-HM-01B Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 64870 - 03 Cust. #: BS-HM-02A Material: Beige 12x12 Vinyl Tile/Flooring Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 60% Other - 40%

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 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	Asbestos Present: NO No Asbestos Observed	Cellulose - 60% Other - 40%
Lab ID #: 64870 - 05 Cust. #: BS-HM-03A Material: Tan Linoleum Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 20%	Other - 80%
Lab ID #: 64870 - 06 Cust. #: BS-HM-03B Material: Tan Linoleum Location: Appearance: Layer: of	Asbestos Present: NOT ANALYZED	

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 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	Cellulose - 15% Fiberglass - 5% Other - 80%
Lab ID #: 64870 - 08 Cust. #: BS-HM-04B Material: Black Linoleum Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 15% Fiberglass - 5% Other - 80%
Lab ID #: 64870 - 09 Cust. #: BS-HM-05A Material: Beige Linoleum Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 10% Fiberglass - 5% Other - 85%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64870 - 10 Cust. #: BS-HM-05B Material: Beige Linoleum Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 10% Fiberglass - 5% Other - 85%
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	Cellulose - 1% Other - 99%
Lab ID #: 64870 - 11a Cust. #: BS-HM-06A Material: Glue Location: Appearance: clear, nonfibrous, homogenous Layer: 2 of 3	Asbestos Present: NO No Asbestos Observed	Other - 100%

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

Sample Information	Asbestos Type/Percent	Non-Asbestos
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% Fiberglass - 5% Other - 80%
Lab ID #: 64870 - 12 Cust. #: BS-HM-06B Material: White 12x12 Vinyl Tile Location: Appearance: white, fibrous, homogenous Layer: 1 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 64870 - 12a Cust. #: BS-HM-06B Material: Glue Location: Appearance: clear, nonfibrous, homogenous Layer: 2 of 3	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64870 - 12b Cust. #: BS-HM-06B Material: Linoleum Location: Appearance: beige, fibrous, homogenous Layer: 3 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 15% Fiberglass - 5% Other - 80%
Lab ID #: 64870 - 13 Cust. #: BS-HM-07A 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 #: 64870 - 14 Cust. #: BS-HM-07B Material: White 1x1 Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 80% Other - 20%

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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	Asbestos Present: NO No Asbestos Observed	Cellulose - 15% Fiberglass - 5% Other - 80%
Lab ID #: 64870 - 15a Cust. #: BS-HM-08A Material: Joint Compound/Texture Material Location: Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Other - 99%
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%

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 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%
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	Other - 100%

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

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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.

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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	Asbestos Present: NO No Asbestos Observed	Cellulose - 2% Vermiculite - 5% Other - 93%
Lab ID #: 64870 - 21 Cust. #: BS-HS-01C Material: Plaster Finish Coat Location: Appearance: grey, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64870 - 21a Cust. #: BS-HS-01C 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%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64870 - 22 Cust. #: BS-HS-1D Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64870 - 22a Cust. #: BS-HS-1D 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 - 23 Cust. #: BS-HS-1E Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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



NVLAP Lab Code 102118-0

Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)



Project: 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 - 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	Asbestos Present:	
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

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

Robert T. Letarte Jr., Laboratory Director

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



NVLAP Lab Code 102118-0

APEX Research, Inc.

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



Client Name: Red Cedar Consulting

Date of Survey: 5-14-16

Address: PO Box 13216

Project: 2428 Baker St.

City, St., Zip: Lansing, MI 48901

Project #: _____

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

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour 72 hour

Other: TTP All Samples Except Plaster TEM: AHERA 7400 Bulk/NOB EPA Level II

Asbestos: Bulk Wipe _____ Point Count _____ PCM _____
Lead: Bulk _____ Wipe _____ Air _____ Paint _____ Soil _____
Mold: Bulk _____ Tape _____ BioSIS _____ Other _____ Viable _____

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	BS-KM-01A	Asphalt Shingle			
2	BS-KM-01B	Asphalt Shingle			
3	BS-KM-02A	Beige 12x12 Vinyl Tile			
4	BS-KM-02B	Beige 12x12 Vinyl Tile			
5	BS-KM-03A	Tan Linoleum			
6	BS-KM-03B	Tan Linoleum			
7	BS-KM-04A	Black Linoleum			
8	BS-KM-04B	Black Linoleum			
9	BS-KM-05A	Beige Linoleum			
10	BS-KM-05B	Beige Linoleum			
11	BS-KM-06A	White 12x12 Vinyl Tile			

Relinquished by: *[Signature]*

Received by: *[Signature]*

Relinquished by: _____

Received by: _____

Date: 5-17-16

Date: MAY 17 2016

Date: _____

Date: _____

Lab Use Only
Log-In _____
Report _____

64870

Pg 2 of 3

APEX Research, Inc.

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



Client Name: Red Cedar Consulting

Date of Survey: 5-14-16

Address: PO Box 13216

Project: 2408 Baker St.

City, St., Zip: Lansing, MI 48901

Project #: _____

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

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour 72 hour

Other: TTP All Samples Except Plaster
Asbestos: Bulk Wipe _____ Point Count _____ PCM _____
Lead: Bulk _____ Wipe _____ Air _____ Paint _____ Soil _____
Mold: Bulk _____ Tape _____ BIOSIS _____ Other _____ Viable _____
Plaster TEM: AHERA 7400 _____ Bulk/NOB _____ EPA Level II _____

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	BS-400-068	White 12x12 vinyl tile			
13	BS-400-074	white 1x1 ceiling tile			
14	BS-400-078	white 1x1 ceiling tile			
15	BS-400-084	Drywall			
16	BS-400-085	Drywall			
17	BS-400-094	ceiling			
18	BS-400-098	ceiling			
19	BS-400-014	Plaster			
20	BS-400-013				
21	BS-400-010				
22	BS-400-010				

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

Relinquished by: _____ Received by: _____

Date: 5-17-16 Date: MAY 17 2016

Date: _____ Date: _____

Lab Use Only
Log-in: _____
Report: _____

6487D

Page 3 of 3

APEX Research, Inc.

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



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566

Fax: (888) 448-8739

Date of Survey: 5-14-16

Project: 2408 Bkrd St

Project #:

Contact Person: Aaron Paquet

Lab Use Only
 Log-In _____
 Report _____

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour 72 hour

Other: TTP All Samples Except Plaster
 AHERA 7400 Bulk/NOB _____ EPA Level II _____

Asbestos: Bulk Wipe _____ Point Count _____ PCM _____

Lead: Bulk _____ Wipe _____ Air _____ Paint _____ Soil _____

Mold: Bulk _____ Tape _____ BIOSIS _____ Other _____ Viable _____

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
23	RS-115-01E	Plaster			

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

Date: 5-17-16 Date: MAY 17 2016

Relinquished by: _____ Received by: _____

Date: _____ Date: _____

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	M	Category I	ND	Front Entry	NA
BS-HM-03A	Tan Linoleum	No	M	Category I	20% CH	Living	165 sq. ft.
BS-HM-03B	Tan Linoleum	No	M	Category I	NA	Living	NA
BS-HM-04A	Black Linoleum	No	M	Category I	ND	Kitchen	NA
BS-HM-04B	Black Linoleum	No	M	Category I	ND	Kitchen	NA
BS-HM-05A	Beige Linoleum	No	M	Category I	ND	Bath	NA
BS-HM-05B	Beige Linoleum	No	M	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	M	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
CH = Chrysotile Asbestos

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

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

Table 3 - Summary of Presumed Asbestos Containing Materials, 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 Materials				
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

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.

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.

Project No.: 16-1070
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).

Project No.: 16-1070
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

Certificate of Laboratory 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 - 01 Cust. #: RS-HM-01A Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Fiberglass - 30% Other - 70%
Lab ID #: 64882 - 02 Cust. #: RS-HM-01B Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Fiberglass - 30% Other - 70%
Lab ID #: 64882 - 03 Cust. #: RS-HM-02A Material: Rolled Roofing/Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 2	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.



NVLAP Lab Code 102118-0

Certificate of Laboratory 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 - 03a Cust. #: RS-HM-02A Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 64882 - 04 Cust. #: RS-HM-02B Material: Rolled Roofing/Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Fiberglass - 30% Other - 70%
Lab ID #: 64882 - 04a Cust. #: RS-HM-02B Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 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

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 Mr. Aaron Paquet
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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 - 05 Cust. #: RS-HM-03A Material: Green Linoleum Location: Appearance: green, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 64882 - 06 Cust. #: RS-HM-03B Material: Green Linoleum Location: Appearance: green, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 64882 - 07 Cust. #: RS-HM-04A Material: Green 12x12 Vinyl Tile Location: Appearance: green, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0

Certificate of Laboratory 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 - 07a Cust. #: RS-HM-04A Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64882 - 08 Cust. #: RS-HM-04B Material: Green 12x12 Vinyl Tile Location: Appearance: green,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64882 - 08a Cust. #: RS-HM-04B Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Robert T. Letarte Jr., Laboratory Director

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64882 - 09 Cust. #: RS-HM-05A Material: Beige Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 64882 - 10 Cust. #: RS-HM-05B Material: Beige Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 64882 - 11 Cust. #: RS-HM-06A Material: White 1x1 Smooth Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 80% Other - 20%

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

Robert T. Letarte Jr., Laboratory Director

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64882 - 11a Cust. #: RS-HM-06A Material: Glue Pod Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: YES Chrysotile - 5%	Other - 95%
Lab ID #: 64882 - 12 Cust. #: RS-HM-06B Material: White 1x1 Smooth Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 64882 - 12a Cust. #: RS-HM-06B Material: Glue Pod 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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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64882 - 13 Cust. #: RS-HM-07A Material: Glazing Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 64882 - 14 Cust. #: RS-HM-07B Material: Glazing Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64882 - 15 Cust. #: RS-HM-08A Material: Green Linoleum Location: Appearance: green, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 30%	Other - 70%

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

Robert T. Letarte Jr., Laboratory Director

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 Date Reported: 05/20/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64882 - 16 Cust. #: RS-HM-08B Material: Green Linoleum Location: Appearance: Layer: of	Asbestos Present: NOT ANALYZED	
Lab ID #: 64882 - 17 Cust. #: RS-HM-09A Material: Dark Green Linoleum Location: Appearance: green, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 30%	Other - 70%
Lab ID #: 64882 - 18 Cust. #: RS-HM-09B Material: Dark Green Linoleum 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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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	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Fiberglass - 10% Other - 40%
Lab ID #: 64882 - 20 Cust. #: RS-HM-10B Material: Tan Linoleum/Felt Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Fiberglass - 10% Other - 60%
Lab ID #: 64882 - 21 Cust. #: RS-HM-11A Material: Old Linoleum Location: Appearance: grey, fibrous, nonhomogenous 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.

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64882 - 22 Cust. #: RS-HM-11B Material: Old Linoleum Location: Appearance: grey, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 64882 - 23 Cust. #: RS-HM-12A Material: Felt Paper Location: Appearance: black, fibrous, nonhomogenous Layer: 1 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 64882 - 23a Cust. #: RS-HM-12A Material: Green 9x9 Vinyl Tile Location: Appearance: green, fibrous, homogenous Layer: 2 of 3	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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Sample Information	Asbestos Type/Percent	Non-Asbestos
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	Other - 100%
Lab ID #: 64882 - 24 Cust. #: RS-HM-12B Material: Felt Paper Location: Appearance: black, fibrous, nonhomogenous Layer: 1 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 64882 - 24a Cust. #: RS-HM-12B Material: Green 9x9 Vinyl Tile Location: Appearance: Layer: 2 of 3	Asbestos Present: NOT ANALYZED	

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

Robert T. Letarte Jr., Laboratory Director

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Sample Information	Asbestos Type/Percent	Non-Asbestos
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	Other - 100%
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: NO No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 64882 - 25a Cust. #: RS-HM-13A Material: Glue Pod Location: Appearance: brown,fibrous,homogenous Layer: 2 of 2	Asbestos Present: YES Chrysotile - 1.25% POINT COUNT RESULT	Other - 98.75%

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

Robert T. Letarte Jr., Laboratory Director

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 Date Reported: 05/20/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64882 - 26 Cust. #: RS-HM-13B Material: White Potted 1x1 Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 80% Other - 20%
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 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.

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 Date Reported: 05/20/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64882 - 28 Cust. #: RS-HM-14B Material: White 2x2 Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 64882 - 29 Cust. #: RS-HM-15A Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 64882 - 30 Cust. #: RS-HM-15B 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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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64882 - 31 Cust. #: RS-HS-01A Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64882 - 31a Cust. #: RS-HS-01A Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Hair - 1% Other - 98%
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	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64882 - 32a Cust. #: RS-HS-01B 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 No Asbestos Observed	Other - 100%
Lab ID #: 64882 - 33a Cust. #: RS-HS-01C Material: Plaster Base Coat Location: Appearance: brown, 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

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

Sample Information	Asbestos Type/Percent	Non-Asbestos
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	Other - 100%
Lab ID #: 64882 - 34a Cust. #: RS-HS-01D Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 2% Hair - 2% Other - 96%
Lab ID #: 64882 - 35 Cust. #: RS-HS-01E Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64882 - 35a Cust. #: RS-HS-01E Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 2% Hair - 1% Other - 97%
Lab ID #: 64882 - 53 Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	
Lab ID #: 64882 - 54 Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

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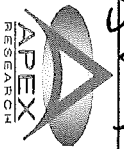
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64882

RS 1 of 4

APEX Research, Inc.

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



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St, Zip: Lansing, MI 48901

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

Date of Survey: 5-14-16

Project: 2478 Reynolds St.

Project #:

Contact Person: Aaron Paquet

Lab Use Only
Log-In _____
Report _____

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour 72 hour

Other: TTP All Samples Except Plaster

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

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	RS-WM-01A	Shingle			
2	RS-WM-01B	Shingle			
3	RS-WM-02A	Redwood Rafting			
4	RS-WM-02B	Redwood Rafting			
5	RS-WM-03A	Old Green Linoleum			
6	RS-WM-03B	Old Green Linoleum			
7	RS-WM-04A	Green 12x12 Vinyl Tile			
8	RS-WM-04B	Green 12x12 Vinyl Tile			
9	RS-WM-05A	Beige Linoleum			
10	RS-WM-05B	Beige Linoleum			
11	RS-WM-06A	White 1x1 Smooth Ceiling Tile (Blue 700)			

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

Date: 5-17-16 Date: MAY 17 2016 1523

Relinquished by: _____ Received by: _____

Date: _____ Date: _____

64882

PG 2 of 4

APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189

Phone: 734-449-9990

E-mail: apexresearch@chartermi.net

Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

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

Date of Survey: 5-14-16

Project: 2428 Reynolds St.

Project #:

Contact Person: Aaron Paquet

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

Turn Around Times: (Circle One)

Rush 24 hour

48 hour 72 hour

Other: TTP All Samples Except Plaster

Asbestos: Bulk Wipe Point Count PCM

Lead: Bulk Wipe Air Paint Soil

Mold: Bulk Tape Biosis Other Viable

TEM: AHERA 7400 Bulk/NOB EPA Level II

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
B	RS-4M-06B	White Wet Smooth Ceiling Tile/Glue Pad			
13	RS-4M-07A	Glazing			
14	RS-4M-07B	Glazing			
15	RS-4M-08A	Green Linoleum			
16	RS-4M-08B	Green Linoleum			
17	RS-4M-09A	Dark Green Linoleum			
18	RS-4M-09B	Dark Green Linoleum			
19	RS-4M-10A	Tan Linoleum			
20	RS-4M-10B	Tan Linoleum			
21	RS-4M-11A	Gold Linoleum			
22	RS-4M-11B	Gold Linoleum			

Relinquished by: [Signature]

Received by: [Signature]

Date: 5-17-16

Date: MAY 17 2016

Relinquished by: _____

Received by: _____

Date: _____

Date: _____

Lab Use Only
 Log-In _____
 Report _____

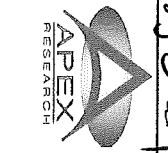
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APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189

E-mail: apexresearch@chartermi.net



Phone: 734-449-9990

Fax: 734-449-9991

Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St, Zip: Lansing, MI 48901

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

Date of Survey: 5-14-16

Project: 2428 Reynolds St.

Project #:

Contact Person: Aaron Paquet

Lab Use Only
Log-In _____
Report _____

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour 72 hour

Other: TTP All Samples Except Plaster

Asbestos: Bulk Wipe _____ Point Count _____ PCM _____

Lead: Bulk _____ Wipe _____ Air _____ Paint _____ Soil _____

Mold: Bulk _____ Tape _____ Biosis _____ Other _____ Viable _____

TEM: AHERA 7400 _____ Bulk/NOB _____ EPA Level II _____

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
23	RS-4M-124	Felt Paper Green 9x9 vinyl tile			
24	RS-4M-12B	Felt Paper Green 9x9 vinyl tile			
25	RS-4M-13A	White Pkts w/ Ceiling Tile Glue Pkg			
26	RS-4M-13B	White Pkts w/ Ceiling Tile Glue Pkg			
27	RS-4M-14A	White 2x2 Ceiling tile			
28	RS-4M-14B	White 2x2 Ceiling tile			
29	RS-4M-15A	Drywall			
30	RS-4M-15B	Drywall			
31	RS-4S-01A	Plaster			
32	RS-4S-01B				
33	RS-4S-01C				

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Received by: _____

Date: 5-17-16

Date: _____

Relinquished by: _____

Received by: _____

Date: _____

Date: _____

MAY 17 2016

APEX RESEARCH

64852

APEX Research, Inc.

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



Pg 4 of 4

Client Name: Red Cedar Consulting
Address: PO Box 13216
City, St, Zip: Lansing, MI 48901
Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 5-14-16
Project: 2478 Reynolds St
Project #:

Lab Use Only
Login _____
Report _____

Turn Around Times: (Circle One) PIM EPA 600, PC all samples with a detection of <5% ACM.
apaguete@redcedarconsulting.net

Rush 24 hour
48 hour 72 hour

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

TTP All Samples Except Plaster

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
34 39	RS-145-01D	Plaster			
	RS-145-01E	Plaster			

Relinquished by: [Signature] Date: 5-17-16
Received by: [Signature] Date: MAY 17 2016

RECEIVED

Relinquished by: _____ Date: _____
Received by: _____ Date: _____

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	M	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

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, 2428 Reynolds 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.) 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.) 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.)	HVAC Duct Wrap	Yes	135 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.)			
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.

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.

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)

Project No.: 16-1070
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

Project No.: 16-1070
Muskegon County Land Bank
Parcel ID: 61-26-185-108-0009-00

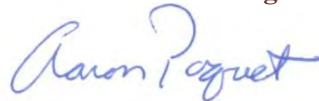
DISCLAIMER

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



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

Red Cedar Consulting

Attachment 1
APEX Research Laboratory Analytical Results

Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)



Project: 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 - 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%
Lab ID #: 64884 - 01a Cust. #: ES-HM-01A Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 5	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 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.



NVLAP Lab Code 102118-0

Certificate of Laboratory 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 - 01c Cust. #: ES-HM-01A Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 4 of 5	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 64884 - 01d Cust. #: ES-HM-01A Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 5 of 5	Asbestos Present: NO No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 64884 - 02 Cust. #: ES-HM-01B Material: Asphalt Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 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.



NVLAP Lab Code 102118-0

Certificate of Laboratory 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 - 02a Cust. #: ES-HM-01B Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 5	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 64884 - 02b Cust. #: ES-HM-01B Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 3 of 5	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 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

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



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ARI Report # 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 - 02d Cust. #: ES-HM-01B Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 5 of 5	Asbestos Present: NO No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 64884 - 03 Cust. #: ES-HM-02A Material: Fiberlap Siding Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 85% Other - 15%
Lab ID #: 64884 - 04 Cust. #: ES-HM-02B Material: Fiberlap Siding Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 85% Other - 15%

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

Robert T. Letarte Jr., Laboratory Director

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 Lansing, MI 48901

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 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	Asbestos Present: NO No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 64884 - 06 Cust. #: ES-HM-03B Material: White Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 64884 - 07 Cust. #: ES-HM-04A 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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 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 - 08 Cust. #: ES-HM-04B Material: Tan Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 64884 - 09 Cust. #: ES-HM-05A Material: Green Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 64884 - 10 Cust. #: ES-HM-05B Material: Green 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.



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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	Asbestos Present: NO No Asbestos Observed	Cellulose - 95% Other - 5%
Lab ID #: 64884 - 13 Cust. #: ES-HM-07A 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%

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

Robert T. Letarte Jr., Laboratory Director

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 Date Collected: 05/14/16
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 Date Analyzed: 05/20/16
 Date Reported: 05/20/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
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	Cellulose - 95% Other - 5%
Lab ID #: 64884 - 15 Cust. #: ES-HM-08A Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
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%

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

Robert T. Letarte Jr., Laboratory Director

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 Date Reported: 05/20/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
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	Other - 100%
Lab ID #: 64884 - 18 Cust. #: ES-HM-09B Material: Glazing Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64884 - 19 Cust. #: ES-HM-10A Material: Green Floral Linoleum Location: Appearance: green, 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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 Date Collected: 05/14/16
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 Date Analyzed: 05/20/16
 Date Reported: 05/20/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64884 - 20 Cust. #: ES-HM-10B Material: Green Floral Linoleum Location: Appearance: green, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 64884 - 21 Cust. #: ES-HM-11A Material: Beige Floral Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 35% Other - 65%
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

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 Lansing, MI 48901

ARI Report # 16-64884
 Date Collected: 05/14/16
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 Date Analyzed: 05/20/16
 Date Reported: 05/20/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64884 - 23 Cust. #: ES-HM-12A Material: Glazing Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO Chrysotile - Trace POINT COUNT RESULT	Other - 100%
Lab ID #: 64884 - 24 Cust. #: ES-HM-12B Material: Glazing Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO Chrysotile - 0.25% POINT COUNT RESULT	Other - 99.75%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0

APEX Research, Inc.

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

E-mail: apexresearch@chartermi.net

Fax: 734-449-9991



Client Name: Red Cedar Consulting

Date of Survey: 5-14-16

Address: PO Box 13216

Project: 2433 Elwood St.

City, St., Zip: Lansing, MI 48901

Project #:

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

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush 24 hour

Asbestos: Bulk Wipe Point Count PCM

48 hour

Lead: Bulk Wipe Air Paint Soil

Other: All Samples Except Plaster

Mold: Bulk Tape BioSIS Other Viable

TEM: AHERA 7400 Bulk/NOB EPA Level II

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	ES-HM-01A	Asphalt Shingle			
2	ES-HM-01B	Asphalt Shingle			
3	ES-VM-02A	Fiberlap Siding			
4	ES-HM-02B	Fiberlap Siding			
5	ES-HM-03A	White Linoleum			
6	ES-HM-03B	White Linoleum			
7	ES-HM-04A	Tan Linoleum			
8	ES-HM-04B	Tan Linoleum			
9	ES-HM-05A	Green Linoleum			
10	ES-HM-05B	Green Linoleum			
11	ES-HM-010A	White 1x1 Smooth Ceiling Tile			

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Relinquished by:

Date: 5-17-16

Received by:

Date: _____

Received by: _____

Date: _____

64884

pg 2 of 3

APEX Research, Inc.

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



Client Name: Red Cedar Consulting

Date of Survey: 5-14-16

Address: PO Box 13216
Lansing, MI 48901

Project: 2433 Elwood St.

City, St., Zip: Lansing, MI 48901

Project #: _____

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

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush 24 hour

Asbestos: Bulk Wipe _____ Point Count _____ PCM _____

48 hour 72 hour

Lead: Bulk _____ Wipe _____ Air _____ Paint _____ Soil _____

Other: _____

Mold: Bulk _____ Tape _____ BioSIS _____ Other _____ Viable _____
TEM: AHERA 7400 _____ Bulk/NOB _____ EPA Level II _____

TTP All Samples Except Plaster

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	ES-HM-06B	white vl smooth Ceiling tile			
13	ES-HM-07A	white vl Pebbled Ceiling tile			
14	ES-HM-07B	white vl Pebbled Ceiling tile			
15	ES-HM-08A	Dry wall			
16	ES-HM-08B	Dry wall			
17	ES-HM-09A	Glazing			
18	ES-HM-09B	Glazing			
19	ES-HM-10A	Green Floral Linoleum			
20	ES-HM-10B	Green Floral Linoleum			
21	ES-HM-11A	Beige Floral Linoleum			
22	ES-HM-11B	Beige Floral Linoleum			

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Date: _____

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64884

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APEX Research, Inc.

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



Client Name: Red Cedar Consulting

Date of Survey: 5-14-16

Address: PO Box 13216

Project: 2433 Elmwood St.

City, St., Zip: Lansing, MI 48901

Project #: _____

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

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush 24 hour

Asbestos: Bulk Wipe Point Count PCM

48 hour 72 hour

Lead: Bulk Wipe Air Paint Soil

Other: TTP All Samples Except Plaster

Mold: Bulk Tape BIOSIS Other Viable

TEEM: AHERA 7400 Bulk/NOB EPA Level II

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
23	ES-HW-024	Glazing			
24	ES-HW-1215	Glazing			

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Received by: _____

Date: 5-17-16

Date: _____ APEX RESEARCH

Date: _____

Date: _____

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

Notes:

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2433 Elwood St., Muskegon Heights, Michigan

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 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.

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, 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.

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*
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.

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.

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)

- 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)

Project No.: 16-1070
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

Project No.: 16-1070
Muskegon County Land Bank
Parcel ID: 61-26-185-112-0014-00

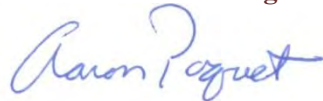
DISCLAIMER

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



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

Red Cedar Consulting

Attachment 1
APEX Research Laboratory Analytical Results



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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 - 01 Cust. #: WS-HM-01A Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Fiberglass - 30% Other - 70%
Lab ID #: 64725 - 01a Cust. #: WS-HM-01A Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 60% Other - 40%
Lab ID #: 64725 - 02 Cust. #: WS-HM-01B Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 2	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.



NVLAP Lab Code 102118-0



Certificate of Laboratory 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 - 02a Cust. #: WS-HM-01B Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 60% Other - 40%
Lab ID #: 64725 - 03 Cust. #: WS-HM-02A Material: White Linoleum Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 64725 - 04 Cust. #: WS-HM-02B Material: White Linoleum Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	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: 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	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 64725 - 06 Cust. #: WS-HM-03B Material: Floral Linoleum Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%
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% Mineral Wool - 30% Other - 40%

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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	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%
Lab ID #: 64725 - 10 Cust. #: WS-HM-05B Material: Drywall 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

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



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Test Method, Polarized Light Microscopy (PLM)

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 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 - 11 Cust. #: WS-HM-06A Material: Glazing Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 5%	Other - 95%
Lab ID #: 64725 - 12 Cust. #: WS-HM-06B Material: Glazing Location: Appearance: Layer: of	Asbestos Present: NOT ANALYZED	
Lab ID #: 64725 - 13 Cust. #: WS-HM-07A Material: Glazing 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

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Project: 2440 Wood St

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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 - 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: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
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.



NVLAP Lab Code 102118-0



Certificate of Laboratory 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 - 17 Cust. #: WS-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 #: 64725 - 18 Cust. #: WS-HS-01D Material: Plaster Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 5% Other - 95%
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.



NVLAP Lab Code 102118-0

Apex #
64725

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



Client Name: Red Cedar Consulting

Date of Survey: 5-8-16

Address: PO Box 13216

Project: 2442 Wood St.

City, St., Zip: Lansing, MI 48901

Project #:

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

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush 24 hour

Asbestos: Bulk x Wipe Point Count PCM

48 hour 72 hour

Lead: Bulk Wipe Air Paint Soil

Other: 4 Day

TTIP All Samples Except Plaster

Mold: Bulk Tape BioSIS Other Viable
 TEM: AHERA 7400 Bulk/NOB EPA Level II

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	WS-HM-01A	Shingle			
2	WS-HM-01B	Shingle			
3	WS-HM-02A	White Linoleum			
4	WS-HM-02B	White Linoleum			
5	WS-HM-03A	Floral Linoleum			
6	WS-HM-03B	Floral Linoleum			
7	WS-HM-04A	White 2x4 Ceiling Tile			
8	WS-HM-04B	White 2x4 Ceiling Tile			
9	WS-HM-05A	Drywall			
10	WS-HM-05B	Drywall			
11	WS-HM-06A	Coating			

Relinquished by: *[Signature]*

Received by: *[Signature]*

Date: 5-10-16

Date: MAY 11 2016

Relinquished by: _____

Received by: _____

Date: _____

Date: _____

64725

Pg 2 of 2

APEX Research, Inc.

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



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

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

Date of Survey: 5-8-16

Project: 2440 12000 St.

Project #:

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour 72 hour

Other: 4 Day



All Samples Except Plaster

AHERA 7400

Bulk/NOB

EPA Level II

Asbestos: Bulk Wipe Point Count PCM

Lead: Bulk Wipe Air Paint Soil

Mold: Bulk Tape BioSIS Other Viable

TEM: AHERA 7400 Bulk/NOB EPA Level II

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	WS-40M-06IS	Ceiling			
13	WS-40M-07A	Ceiling			
14	WS-40M-07B	Ceiling			
15	WS-45-01A	Plaster			
16	WS-45-01R				
17	WS-45-01C				
18	WS-45-01D				
19	WS-45-01E				
RECEIVED					

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

Date: 5-10-16

Date: *[Signature]*

Relinquished by:

Date:

Received by:

Date:

Lab Use Only
Log-In: _____
Report: _____

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

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, 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					

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, 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

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
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.

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 to the ease of unintentionally disturbing the ACM which may result in “visible emissions” which is known as a Fiber Release Episode.

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

Presumed Asbestos Containing Material

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

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. 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)

Project No.: 16-1070
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

Project No.: 16-1070
Muskegon County Land Bank
Parcel ID: 61-26-185-143-0020-00

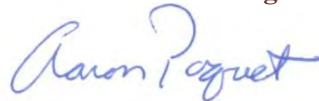
DISCLAIMER

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



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

Red Cedar Consulting

Attachment 1
APEX Research Laboratory Analytical Results



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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	Asbestos Present: NO No Asbestos Observed	Fiberglass - 30% Other - 70%
Lab ID #: 64730 - 01a Cust. #: JN-HM-01A Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 60% Other - 40%
Lab ID #: 64730 - 02 Cust. #: JN-HM-01B Material: Asphalt Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 2	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.



NVLAP Lab Code 102118-0



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Date Analyzed: 05/16/16
Date Reported: 05/18/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64730 - 02a Cust. #: JN-HM-01B Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 60% Other - 40%
Lab ID #: 64730 - 03 Cust. #: JN-HM-02A Material: 9"x9" Beige Vinyl Tile Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 5%	Other - 95%
Lab ID #: 64730 - 04 Cust. #: JN-HM-02B Material: 9"x9" Beige Vinyl Tile 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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ARI Report # 16-64730
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Date Analyzed: 05/16/16
Date Reported: 05/18/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64730 - 05 Cust. #: JN-HM-03A Material: Green Linoleum Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Synthetic - 20% Other - 60%
Lab ID #: 64730 - 06 Cust. #: JN-HM-03B Material: Green Linoleum Location: Appearance: green, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Synthetic - 20% Other - 60%
Lab ID #: 64730 - 07 Cust. #: JN-HM-04A Material: Peel & Stick Floor Tile Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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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	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64730 - 08 Cust. #: JN-HM-04B Material: Peel & Stick Floor Tile Location: Appearance: black,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64730 - 08a Cust. #: JN-HM-04B Material: White Linoleum Location: Appearance: white,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

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Date Collected: 05/07/16
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Date Analyzed: 05/16/16
Date Reported: 05/18/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64730 - 09 Cust. #: JN-HM-05A Material: 16"x16" White Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 60% Other - 40%
Lab ID #: 64730 - 10 Cust. #: JN-HM-05B Material: 16"x16" White Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 60% Other - 40%
Lab ID #: 64730 - 11 Cust. #: JN-HM-06A Material: 2'x4' White Ceiling Tile Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	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

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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 No Asbestos Observed	Cellulose - 30% Mineral Wool - 30% Other - 40%
Lab ID #: 64730 - 13 Cust. #: JN-HM-07A Material: Drywall Location: Appearance: grey, fibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 64730 - 13a Cust. #: JN-HM-07A Material: Joint Compound Location: Appearance: white, 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

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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	Non-Asbestos
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	Other - 100%
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	Cellulose - 20% Other - 80%
Lab ID #: 64730 - 15 Cust. #: JN-HM-08A Material: Glazing Location: Appearance: beige, 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.



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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	Non-Asbestos
Lab ID #: 64730 - 16 Cust. #: JN-HM-08B Material: Glazing Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	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	Asbestos Present: YES Chrysotile - 5%	Other - 95%
Lab ID #: 64730 - 17a Cust. #: JN-HM-09A Material: Mastic Location: Appearance: black, 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.



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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 - 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%
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	Asbestos Present: NO No Asbestos Observed	Other - 100%
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	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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 - 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%
Lab ID #: 64730 - 22 Cust. #: JN-HM-11B Material: Fiberboard Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 64730 - 23 Cust. #: JN-HS-01A Material: Plaster Location: Appearance: grey, fibrous, nonhomogenous Layer: 1 of 1	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.



NVLAP Lab Code 102118-0



Certificate of Laboratory 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 # 16-64730
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 - 24 Cust. #: JN-HS-01B Material: Plaster Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: 64730 - 25 Cust. #: JN-HS-01C Material: Plaster Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64730 - 25a Cust. #: JN-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

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



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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: NO SAMPLE RECEIVED	
Lab ID #: 64730 - 27 Cust. #: JN-HS-01E Material: Plaster Location: Appearance: Layer: of	Asbestos Present: NO SAMPLE RECEIVED	
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

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

Robert T. Letarte Jr., Laboratory Director

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



NVLAP Lab Code 102118-0

Apex # **64730**

pg 1 of 3

APEX Research, Inc.

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

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



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

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

Date of Survey: 5-7-16

Project: 2516 Jefferson St.

Project #:

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour 72 hour

Other: 5 day

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

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	JN-HM-01A	Asphalt Shingle			
2	JN-HM-01B	Asphalt Shingle			
3	JN-HM-02A	Beige 9"x9" Vinyl Tile			
4	JN-HM-02B	Beige 9"x9" Vinyl Tile			
5	JN-HM-03A	Green Linoleum			
6	JN-HM-03B	Green Linoleum			
7	JN-HM-04A	White Linoleum			
8	JN-HM-04B	White Linoleum			
9	JN-HM-05A	White 16"x16" Ceiling Tile			
10	JN-HM-05B	White 16"x16" Ceiling Tile			
11	JN-HM-06A	White 2'x4' Ceiling Tile			

Lab Use Only
Log-In _____
Report _____

Relinquished by: [Signature] Received by: URS
Date: 5-10-16 Date: 5-10-16

Relinquished by: [Signature] Received by: _____
Date: MAY 11 2016 Date: _____

APEX Research, Inc.

E-mail: apexresearch@chartermi.net

Fax: 734-449-9991



11054 Hi Tech Drive, Whitmore Lake, MI 48189

Phone: 734-449-9990

Client Name: Red Cedar Consulting

Date of Survey: 5-7-16

Address: PO Box 13216

Project: 2516 Jefferson St

City, St., Zip: Lansing, MI 48901

Project #:

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

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour 72 hour

Other: 5 day



All Samples Except Plaster

Asbestos: Bulk x Wipe Point Count PCM

Lead: Bulk Wipe Air Paint Soil

Mold: Bulk Tape BioSIS Other Viable

TEM: AHRA 7400 Bulk/NOB EPA Level II

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	JN-HM-06B	White 8'x4' Ceiling Tile			
13	JN-HM-07A	Drywall			
14	JN-HM-07B	Drywall			
15	JN-HM-08A	Galating			
16	JN-HM-08B	Galating			
17	JN-HM-09A	Brown 9" x 9" Vinyl Tile			
18	JN-HM-09B	Brown 9" x 9" Vinyl Tile			
19	JN-HM-10A	Blue 12" x 12" Vinyl Tile			
20	JN-HM-10B	Blue 12" x 12" Vinyl Tile			
21	JN-HM-11A	Fiberboard			
22	JN-HM-11B	Fiberboard			

Relinquished by: *[Signature]* Date: 5-10-16

Received by: *[Signature]* Date: 5-10-16

RECEIVED
MAY 11 2016

Relinquished by: *[Signature]* Date: _____

Received by: _____ Date: _____

64730

APEX Research, Inc.

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



pg 3 of 3

Client Name: Red Cedar Consulting

Address: PO Box 13216
Lansing, MI 48901

City, St., Zip: Phone: (888) 449-4566 Fax: (888) 448-8739

Project #: 2516 Jefferson St.

Turn Around Times: (Circle One) Rush 24 hour 48 hour 72 hour
Asbestos: Bulk Wipe Point Count PCM
Lead: Bulk Wipe Air Paint Soil
Mold: Bulk Tape BioSIS Other Viable
Other: 5 day All Samples Except Plaster
TEM: AHERA 7400 Bulk/NOB EPA Level II

Date of Survey: 5-7-16

Contact Person: Aaron Paquet
aplum EPA 600, PC all samples with a detection of <5% ACM.
apaquet@redcedarconsulting.net

Lab Use Only
Log-In _____
Report _____

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
23	JN-HS-01A	Plaster			
24	JN-HS-01B	Plaster			
25	JN-HS-01C	Plaster			
26	JN-HS-01D	Plaster			
27	JN-HS-01E	Plaster			

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

Date: 5-10-16 Date: 5-10-16

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

Date: MAY 11 2016 Date: _____



Certificate of Laboratory 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 - 01 Cust. #: JN-HS-01D Material: Texture Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 3	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	Other - 100%
Lab ID #: 65168 - 01b Cust. #: JN-HS-01D Material: Plaster Base Coat Location: Appearance: grey,fibrous,homogenous Layer: 3 of 3	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.



NVLAP Lab Code 102118-0



Certificate of Laboratory 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	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65168 - 02a Cust. #: JN-HS-01E Material: Plaster Finish Coat Location: Appearance: white,nonfibrous,homogenous Layer: 2 of 3	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65168 - 02b Cust. #: JN-HS-01E Material: Plaster Base Coat Location: Appearance: grey,fibrous,homogenous Layer: 3 of 3	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.



NVLAP Lab Code 102118-0

65168

pg 1 of 1

ARFA Research, Inc.

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



Client Name: Red Cedar Consulting

Address: PO Box 13216
Lansing, MI 48901

City, St., Zip:

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

Date of Survey: 5-31-16

Project: 2516 Jeffers on St.

Project #:

Contact Person: Aaron Paquet

apaguet@redcedarconsulting.net

Turn Around Times: (Circle One)

Rush 24 hour

48 hour 72 hour

Other:



All Samples Except Plaster

Asbestos: Bulk Wipe

Point Count PCM

Lead: Bulk Wipe

Air Paint

Soil Molds: Bulk Tape

Biosis Other Viable

AHERA 7400 Bulk/NOB EPA Level II

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	JD-HS-01D	Plaster			
2	JD-HS-01E	Plaster			

Lab Use Only
Log-In _____
Report _____

Relinquished by: [Signature] Date: 5-31-16
Received by: [Signature] Date: 5-31-16

Relinquished by: _____ Date: _____
Received by: [Signature] Date: 5-31-16

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	M	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:

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, 2516 Jefferson St., Muskegon Heights, Michigan

Asbestos 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

- 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, 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
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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.

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.

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



Certificate of Laboratory 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	Non-Asbestos
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	Cellulose - 30% Other - 70%
Lab ID #: 64733 - 01a Cust. #: SN-HM-01A Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 60% Other - 40%
Lab ID #: 64733 - 02 Cust. #: SN-HM-01B Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 2	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.



NVLAP Lab Code 102118-0



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Date Analyzed: 05/17/16
Date Reported: 05/18/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64733 - 02a Cust. #: SN-HM-01B Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 60% Other - 40%
Lab ID #: 64733 - 03 Cust. #: SN-HM-02A Material: Green Linoleum Location: Appearance: green, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 40%	Cellulose - 10% Other - 50%
Lab ID #: 64733 - 04 Cust. #: SN-HM-02B Material: Green Linoleum Location: Appearance: Layer: of	Asbestos Present: NOT ANALYZED	

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Robert T. Letarte Jr., Laboratory Director

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64733 - 05 Cust. #: SN-HM-03A Material: Brown Linoleum Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 64733 - 06 Cust. #: SN-HM-03B Material: Brown Linoleum Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 64733 - 07 Cust. #: SN-HM-04A Material: Glazing Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Robert T. Letarte Jr., Laboratory Director

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Date Analyzed: 05/17/16
Date Reported: 05/18/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
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	Other - 100%
Lab ID #: 64733 - 09 Cust. #: SN-HM-05A Material: 1x1 White Ceiling Tile Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 64733 - 10 Cust. #: SN-HM-05B Material: 1x1 White Ceiling Tile Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	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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Date Reported: 05/18/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64733 - 11 Cust. #: SN-HM-06A Material: Beige Linoleum Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 35%	Other - 65%
Lab ID #: 64733 - 12 Cust. #: SN-HM-06B Material: Beige Linoleum Location: Appearance: Layer: of	Asbestos Present: 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 No Asbestos Observed	Cellulose - 30% Other - 70%

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

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Date Analyzed: 05/17/16
Date Reported: 05/18/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64733 - 14 Cust. #: SN-HM-07B Material: Yellow Linoleum Location: Appearance: yellow, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 64733 - 15 Cust. #: SN-HM-08A Material: Green Linoleum Location: Appearance: green, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 64733 - 16 Cust. #: SN-HM-08B Material: Green Linoleum Location: Appearance: green, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%

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Date Analyzed: 05/17/16
Date Reported: 05/18/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
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 - 60% Other - 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 - 40% Other - 60%
Lab ID #: 64733 - 19 Cust. #: SN-HM-10A Material: Red & Green Linoleum Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	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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Date Reported: 05/18/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64733 - 20 Cust. #: SN-HM-10B Material: Red & Green Linoleum Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 64733 - 21 Cust. #: SN-HS-01A Material: Stucco Location: Appearance: grey, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
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	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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Date Collected: 05/07/16
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Date Analyzed: 05/17/16
Date Reported: 05/18/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
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	Other - 100%
Lab ID #: 64733 - 24 Cust. #: SN-HS-02A Material: Plaster Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64733 - 24a Cust. #: SN-HS-02A 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.

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Date Analyzed: 05/17/16
Date Reported: 05/18/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
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 - 5% Other - 95%
Lab ID #: 64733 - 26 Cust. #: SN-HS-02C Material: Plaster Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
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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Date Analyzed: 05/17/16
Date Reported: 05/18/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64733 - 28 Cust. #: SN-HS-02E Material: Plaster Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 64733 - 29 Cust. #: SN-HM-11A Material: Tan Linoleum Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
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%

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NVLAP Lab Code 102118-0

Apex #
64733

PS 1 of 3

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

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



Client Name: Red Cedar Consulting

Address: PO Box 13216
Lansing, MI 48901

City, St., Zip:

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

Date of Survey: 5-7-16

Project: 2521 Jefferson St.

Project #:

Contact Person: Aaron Paquet

Turn Around Times: (Circle One) PLM EPA 600, PC all samples with a detection of <5% ACM. apaquet@redcedarconsulting.net

Rush 24 hour

48 hour 72 hour

Other: 5 Day

TTP All Samples Except Plaster TEM:

AHERA 7400 Bulk/NOB EPA Level II

Asbestos: Bulk Wipe Point Count PCM

Lead: Bulk Wipe Air Paint Soil

Mold: Bulk Tape BioSIS Other Viable

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	SU-HM-01A	Shingle			
2	SU-HM-01B	Shingle			
3	SU-HM-02A	Green Linoleum			
4	SU-HM-02B	Green Linoleum			
5	SD-HM-03A	Brown Linoleum			
6	SD-HM-03B	Brown Linoleum			
7	SU-HM-04A	Cladding			
8	SD-HM-04B	Cladding			
9	SU-HM-05A	White vel Ceiling Tile			
10	SU-HM-05B	White vel Ceiling Tile			
11	SU-HM-06A	White Linoleum			

RECEIVED

Relinquished by: [Signature]

Received by: [Signature]

Date: 5-10-16

Date:

Relinquished by:

Received by:

Date:

Date:

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



Client Name: Red Cedar Consulting

Address: PO Box 13216
Lansing, MI 48901

City, St., Zip: Phone: (888) 449-4566 Fax: (888) 448-8739

Turn Around Times: (Circle One) Rush 24 hour 48 hour 72 hour

Other: 5 Day

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

Asbestos: Bulk Wipe Point Count PCM

Lead: Bulk Wipe Air Paint Soil

Mold: Bulk Tape BiosIS Other Viable

TEM: AHERA 7400 Bulk/NOB EPA Level II

Date of Survey: 5-7-16
Project: 2521 Jefferson St.
Project #: _____
Contact Person: Aaron Paquet

Lab Use Only
Log-In _____
Report _____

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	SN-HM-06B	Beige Linoleum			
13	SN-HM-07A	Yellow Linoleum			
14	SN-HM-07B	Yellow Linoleum			
15	SN-HM-08A	Green Linoleum			
16	SN-HM-08B	Green Linoleum			
17	SN-HM-09A	Blue Linoleum			
18	SD-HM-09B	Blue Linoleum			
19	SD-HM-10A	Red & Green Linoleum			
20	SU-HM-10B	Red & Green Linoleum			
21	SU-HS-01A	Stucco			
22	SP-HS-01B	Stucco			

Relinquished by: Cem Paquet Received by: _____

Date: 5-10-16 Date: MAY 11 2016

RECEIVED

Relinquished by: _____ Received by: _____

Date: _____ Date: _____

617-33

pg 3 of 3

APEX Research, Inc.

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

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



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

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

Date of Survey: 5-7-16

Project: 2521 Jefferson St.

Project #:

Contact Person: Aaron Paquet

Lab Use Only
Log-In _____
Report _____

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour 72 hour

Other: 5 Day



All Samples Except Plaster

Asbestos: Bulk Wipe _____ Point Count _____ PCM _____

Lead: Bulk _____ Wipe _____ Air _____ Paint _____ Soil _____

Mold: Bulk _____ Tape _____ BioSIS _____ Other _____ Viable _____

TEM: AHERA 7400 _____ Bulk/NOB _____ EPA Level II _____

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
23	SD-MS-01C	Stucco			
24	SD-MS-02A	Plaster			
25	SD-MS-02B				
26	SD-MS-02C				
27	SD-MS-02D				
28	SD-MS-02E				

RECEIVED

Relinquished by: *[Signature]*

Received by: *[Signature]*

Date: 5-10-16

Date: APEX RESEARCH

Relinquished by:

Received by:

Date:

Date:

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:

Material Types

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

Abbreviations

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

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

Table 3 - Summary of Presumed Asbestos Containing Materials, 2521 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.) 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. 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	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.)	HVAC Duct Wrap	Yes	175 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.)			
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.

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.

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)

Project No.: 16-1070
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

Project No.: 16-1070
Muskegon County Land Bank
Parcel ID: 61-26-185-152-0017-00

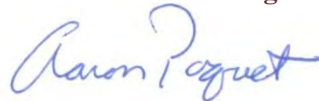
DISCLAIMER

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



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

Red Cedar Consulting

Attachment 1
APEX Research Laboratory Analytical Results



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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 No Asbestos Observed	Cellulose - 70% Other - 30%

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

Robert T. Letarte Jr., Laboratory Director

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



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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 - 01c Cust. #: RS-HM-01A Material: Felt Location: Appearance: brown, fibrous, homogenous Layer: 4 of 4	Asbestos Present: NO No Asbestos Observed	Cellulose - 70% Other - 30%
Lab ID #: 65038 - 02 Cust. #: RS-HM-01B Material: Asphalt Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Fiberglass - 2% Other - 78%
Lab ID #: 65038 - 02a Cust. #: RS-HM-01B Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 3	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



Certificate of Laboratory 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 - 02b Cust. #: RS-HM-01B Material: Felt Location: Appearance: brown, fibrous, homogenous Layer: 3 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 70% Other - 30%
Lab ID #: 65038 - 03 Cust. #: RS-HM-02A Material: Asphalt Siding Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 60% Other - 40%
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

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



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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 - 05 Cust. #: RS-HM-03A Material: Rolled Roofing Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Fiberglass - 20% Other - 80%
Lab ID #: 65038 - 06 Cust. #: RS-HM-03B Material: Rolled Roofing Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Fiberglass - 20% Other - 80%
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	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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NVLAP Lab Code 102118-0



Certificate of Laboratory 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 - 08 Cust. #: RS-HM-04B Material: Yellow Linoleum Location: Appearance: yellow, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 60% Other - 40%
Lab ID #: 65038 - 09 Cust. #: RS-HM-05A Material: White Linoleum Multilayer Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 6	Asbestos Present: NO No Asbestos Observed	Cellulose - 10% Fiberglass - 5% Other - 85%
Lab ID #: 65038 - 09a Cust. #: RS-HM-05A Material: Floor Tile Location: Appearance: blue, fibrous, homogenous Layer: 2 of 6	Asbestos Present: NO No Asbestos Observed	Synthetic - 3% Other - 97%

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Robert T. Letarte Jr., Laboratory Director

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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	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65038 - 09c Cust. #: RS-HM-05A Material: Linoleum Location: Appearance: white, fibrous, nonhomogenous Layer: 4 of 6	Asbestos Present: NO No Asbestos Observed	Cellulose - 10% Fiberglass - 5% Other - 85%
Lab ID #: 65038 - 09d Cust. #: RS-HM-05A Material: Floor Tile Location: Appearance: yellow, fibrous, homogenous Layer: 5 of 6	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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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 - 09e Cust. #: RS-HM-05A Material: Glue Location: Appearance: clear, nonfibrous, homogenous Layer: 6 of 6	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65038 - 10 Cust. #: RS-HM-05B Material: White Linoleum Multilayer Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 8	Asbestos Present: NO No Asbestos Observed	Cellulose - 10% Fiberglass - 5% Other - 85%
Lab ID #: 65038 - 10a Cust. #: RS-HM-05B Material: Floor Tile Location: Appearance: blue, fibrous, homogenous Layer: 2 of 8	Asbestos Present: NO No Asbestos Observed	Synthetic - 3% 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.



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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	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65038 - 10c Cust. #: RS-HM-05B Material: Floor Tile Location: Appearance: white,fibrous,homogenous Layer: 4 of 8	Asbestos Present: NO No Asbestos Observed	Cellulose - 5% Other - 95%
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%

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

Robert T. Letarte Jr., Laboratory Director

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Lansing, MI 48901

ARI Report # 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 - 10e Cust. #: RS-HM-05B Material: Floor Tile Location: Appearance: beige, fibrous, homogenous Layer: 6 of 8	Asbestos Present: YES Chrysotile - 5%	Other - 95%
Lab ID #: 65038 - 10f Cust. #: RS-HM-05B Material: Glue Location: Appearance: clear, nonfibrous, homogenous Layer: 7 of 8	Asbestos Present: NO No Asbestos Observed	Other - 100%
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

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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 - 11 Cust. #: RS-HM-06A Material: Black Linoleum Location: Appearance: black, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 10% Fiberglass - 5% Other - 85%
Lab ID #: 65038 - 12 Cust. #: RS-HM-06B Material: Black Linoleum Location: Appearance: black, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 10% Fiberglass - 5% Other - 85%
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.

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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	Asbestos Present: NO No Asbestos Observed	Cellulose - 60% Other - 40%
Lab ID #: 65038 - 15 Cust. #: RS-HM-08A Material: Drywall Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
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 - 20% Other - 80%

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

Robert T. Letarte Jr., Laboratory Director

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ARI Report # 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	Asbestos Present: NO No Asbestos Observed	Wollastonite - 1% Other - 99%
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	Other - 100%
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	Other - 100%

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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 - 19a Cust. #: RS-HS-01A Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 3	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65038 - 19b Cust. #: RS-HS-01A Material: Plaster Base Coat Location: Appearance: beige, fibrous, homogenous Layer: 3 of 3	Asbestos Present: NO No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: 65038 - 20 Cust. #: RS-HS-01B Material: Plaster/Texture Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 3	Asbestos Present: NO No Asbestos Observed	Other - 100%

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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 - 20a Cust. #: RS-HS-01B Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 3	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65038 - 20b Cust. #: RS-HS-01B Material: Plaster Base Coat Location: Appearance: beige, fibrous, homogenous Layer: 3 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Hair - 2% Other - 97%
Lab ID #: 65038 - 21 Cust. #: RS-HS-01C Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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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 - 21a Cust. #: RS-HS-01C Material: Plaster Base Coat Location: Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Hair - 3% Other - 97%
Lab ID #: 65038 - 22 Cust. #: RS-HS-01D Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
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.

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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 - 23 Cust. #: RS-HS-01E Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65038 - 23a Cust. #: RS-HS-01E Material: Plaster Base Coat Location: Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0

APEX Research, Inc.

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



Client Name: Red Cedar Consulting

Address: PO Box 13216
 Lansing, MI 48901

City, St., Zip: Lansing, MI 48901

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

Date of Survey: 5-22-16

Project: 2528 Riordan St.

Project #:

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour

72 hour

Other: TTP All Samples Except Plaster

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

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	RS-HM-01A	Asphalt Shingle			
2	RS-HM-01B	Asphalt Shingle			
3	RS-HM-02A	Asphalt Siding			
4	RS-HM-02B	Asphalt Siding			
5	RS-HM-03A	Roller Roofing			
6	RS-HM-03B	Roller Roofing			
7	RS-HM-04A	Yellow Linoleum			
8	RS-HM-04B	Yellow Linoleum			
9	RS-HM-05A	White Linoleum Multilayer			
10	RS-HM-05B	White Linoleum Multilayer			
11	RS-HM-06A	Black Linoleum			

Lab Use Only
 Log-In _____
 Report _____

Relinquished by:
 Received by: **RECEIVED**

Date: 5-23-16 Date: MAY 23 2016

Relinquished by: _____
 Received by: _____

Date: _____ Date: _____

65038

pg. 2 of 3

APEX Research, Inc.

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

E-mail: apexresearch@chartermi.net

Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216
Lansing, MI 48901

City, St., Zip: Lansing, MI 48901

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

Date of Survey: 5-22-16

Project: 2528 Jordan St.

Project #:

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour 72 hour

Other: All Samples Except Plaster
TEM: AHERA 7400 Bulk/NOB EPA Level II

Asbestos: Bulk Wipe Point Count PCM

Lead: Bulk Wipe Air Paint Soil

Mold: Bulk Tape BioSIS Other Viable

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	RS-HM-06B	Black Linoleum			
13	RS-HM-07A	Red Linoleum			
14	RS-HM-07B	Red Linoleum			
15	RS-HM-08A	Drywall			
16	RS-HM-08B	Drywall			
17	RS-HM-09A	Glazing			
18	RS-HM-09B	Glazing			
19	RS-HS-01A	Plaster			
20	RS-HS-01B	Plaster			
21	RS-HS-01C	Plaster			
22	RS-HS-01D	Plaster			

Relinquished by:

Received by: **RECEIVED**

Date: 5-23-16

Date: MAY 23 2016

Relinquished by:

Received by:

Date:

Date:

65038

Pg. 3 of 3

APEX Research, Inc.

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



E-mail: apexresearch@charterminet

Fax: 734-449-9991

Client Name: Red Cedar Consulting

Date of Survey: 5.29.16

Address: PO Box 13216
Lansing, MI 48901

Project: 2528 Riordan St.

City, St., Zip: Phone: (888) 449-4566 Fax: (888) 448-8739

Project #: Contact Person: Aaron Paquet

Turn Around Times: (Circle One) PIM EPA 600, PC all samples with a detection of <5% ACM. apaquet@redcedarconsulting.net

Rush 24 hour Asbestos: Bulk Wipe Point Count PCM

48 hour 72 hour Lead: Bulk Wipe Air Paint Soil

Other: Mold: Bulk Tape Other Viable
 All Samples Except Plaster TEM: AHERA 7400 Bulk/NOB EPA Level II

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
	23	Plaster			
	25-HS-01E				

Relinquished by: [Signature] RECEIVED

Date: 5-13-16 Received by: [Signature] MAY 23 2016

Relinquished by: Received by:

Date: Date:

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	Friable	Material 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/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

M = Miscellaneous building material

Abbreviations

NQ = Not quantified

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2528 Riordan St., Muskegon Heights, Michigan

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

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

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

Table 3 - Summary of Presumed Asbestos Containing Materials, 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:

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*
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.

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.

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.)

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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).

Project No.: 16-1070
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



Certificate of Laboratory 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	Non-Asbestos
Lab ID #: 65042 - 01 Cust. #: ST-HM-01A Material: Asphalt Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 65042 - 01a Cust. #: ST-HM-01A Material: Brown Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 65042 - 01b Cust. #: ST-HM-01A Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 3 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Other - 50%

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

Robert T. Letarte Jr., Laboratory Director

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



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

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Project: 2529 Maffett St

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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 - 02 Cust. #: ST-HM-01B Material: Asphalt Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 65042 - 02a Cust. #: ST-HM-01B Material: Brown Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 65042 - 02b Cust. #: ST-HM-01B Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 3 of 3	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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Date Analyzed: 05/25/16
Date Reported: 05/25/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 65042 - 03 Cust. #: ST-HM-02A Material: Asphalt Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Fiberglass - 30% Other - 70%
Lab ID #: 65042 - 04 Cust. #: ST-HM-02B Material: Asphalt Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Fiberglass - 30% Other - 70%
Lab ID #: 65042 - 05 Cust. #: ST-HM-03A Material: White Linoleum Location: Appearance: white, fibrous, nonhomogenous Layer: 1 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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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	Asbestos Present: NO No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 65042 - 05b Cust. #: ST-HM-03A Material: Green Linoleum Location: Appearance: green, fibrous, nonhomogenous Layer: 3 of 3	Asbestos Present: YES Chrysotile - 30%	Other - 70%
Lab ID #: 65042 - 06 Cust. #: ST-HM-03B Material: White Linoleum Location: Appearance: white, fibrous, nonhomogenous Layer: 1 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

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



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Date Analyzed: 05/25/16
Date Reported: 05/25/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 65042 - 06a Cust. #: ST-HM-03B Material: Brown Linoleum Location: Appearance: brown, fibrous, nonhomogenous Layer: 2 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 65042 - 06b Cust. #: ST-HM-03B Material: Green Linoleum Location: Appearance: Layer: 3 of 3	Asbestos Present: NOT ANALYZED	
Lab ID #: 65042 - 07 Cust. #: ST-HM-04A Material: Beige Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%

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

Robert T. Letarte Jr., Laboratory Director

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



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ARI Report # 16-65042
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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 - 08 Cust. #: ST-HM-04B Material: Beige Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 65042 - 09 Cust. #: ST-HM-05A Material: Brown Linoleum Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
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

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



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ARI Report # 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 - 11 Cust. #: ST-HM-06A 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 #: 65042 - 12 Cust. #: ST-HM-06B 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 #: 65042 - 13 Cust. #: ST-HM-07A Material: Green 12x12 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.



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Date Reported: 05/25/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
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 - 80% Other - 20%
Lab ID #: 65042 - 15 Cust. #: ST-HM-08A Material: White 2x4 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 #: 65042 - 16 Cust. #: ST-HM-08B Material: White 2x4 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

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



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 2529 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 - 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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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 - 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 - 70% Other - 30%
Lab ID #: 65042 - 21 Cust. #: ST-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 #: 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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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 - 23 Cust. #: ST-HM-12A Material: Glazing Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 65042 - 24 Cust. #: ST-HM-12B Material: Glazing Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65042 - 25 Cust. #: ST-HM-13A Material: Old Linoleum Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	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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Certificate of Laboratory Analysis

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Project: 2529 Maffett St

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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 - 26 Cust. #: ST-HM-13B Material: Old Linoleum Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 65042 - 27 Cust. #: ST-HS-01A Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65042 - 27a Cust. #: ST-HS-01A Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Hair - 5% Other - 95%

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

Robert T. Letarte Jr., Laboratory Director

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Certificate of Laboratory Analysis

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Project: 2529 Maffett St

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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 - 28 Cust. #: ST-HS-01B Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65042 - 28a Cust. #: ST-HS-01B Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Hair - 5% Other - 95%
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	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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



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Certificate of Laboratory Analysis

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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 - 29a Cust. #: ST-HS-01C Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Hair - 5% Other - 95%
Lab ID #: 65042 - 30 Cust. #: ST-HS-01D Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65042 - 30a Cust. #: ST-HS-01D Material: Plaster Base Coat Location: Appearance: grey, 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

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NVLAP Lab Code 102118-0



Certificate of Laboratory 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	Non-Asbestos
Lab ID #: 65042 - 31 Cust. #: ST-HS-01E Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65042 - 31a Cust. #: ST-HS-01E Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Hair - 5% Other - 95%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0

65042

ARPA Research, Inc.

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

E-mail: apexresearch@chartermi.net

Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

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

Date of Survey: 5.22.16

Project: 259a Maffett St.

Project #:

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour 72 hour

Other: TTP All Samples Except Plaster

Asbestos: Bulk Wipe Point Count PCM

Lead: Bulk Wipe Air Paint Soil

Mold: Bulk Tape BIOSIS Other Viable

TEM: AHERA 7400 Bulk/NOB EPA Level II

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	ST-HM-01A	Asphalt Shingle			
2	ST-HM-01B	Asphalt Shingle			
3	ST-HM-02A	Asphalt Shingle			
4	ST-HM-02B	Asphalt Shingle			
5	ST-HM-03A	White Linoleum			
6	ST-HM-03B	White Linoleum			
7	ST-HM-04A	Beige Linoleum			
8	ST-HM-04B	Beige Linoleum			
9	ST-HM-05A	Brown Linoleum			
10	ST-HM-05B	Brown Linoleum			
11	ST-HM-060A	White 1x1 Ceiling Tile			

Lab Use Only
 Log-In _____
 Report _____

Relinquished by: [Signature]

Received by: [Signature]

Date: 5-23-16

Date: MAY 23 2016

Relinquished by: _____

Received by: _____

Date: _____

Date: _____

65042

pg. 2 of 3

APEX Research, Inc.

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



Client Name: Red Cedar Consulting

Date of Survey: 5.22.16

Address: PO Box 13216

Project: 252a Maffett St.

City, St., Zip: Lansing, MI 48901

Project #:

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

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush 24 hour
48 hour 72 hour

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

TTP All Samples Except Plaster

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	ST-HM-067B	White 1x1 Ceiling Tile			
13	ST-HM-07A	Green 12x12 Ceiling Tile			
14	ST-HM-07B	Green 12x12 Ceiling Tile			
15	ST-HM-08A	White 2x4 ceiling Tile			
16	ST-HM-08B	White 2x4 ceiling Tile			
17	ST-HM-09A	White Pitted 2x2 Ceiling Tile			
16	ST-HM-09B	White Pitted 2x2 Ceiling Tile			
19	ST-HM-10A	White Smooth 2x2 Ceiling Tile			
20	ST-HM-10B	White Smooth 2x2 Ceiling Tile			
21	ST-HM-11A	Daywall			
22	ST-HM-11B	Daywall			

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

RECEIVED

Date: 5-23-16 Date: MAY 23 2016

Relinquished by: _____ Received by: _____

Date: _____ Date: _____

65042

pg. 3 of 3

APEX Research, Inc.

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



Client Name: Red Cedar Consulting

Date of Survey: _____

Address: PO Box 13216

Project #: _____

City, St., Zip: Lansing, MI 48901

Contact Person: Aaron Paquet

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

Turn Around Times: (Circle One) PLM EPA 600, PC all samples with a detection of <5% ACM. apaquet@redcedarconsulting.net

Rush 24 hour
48 hour 72 hour

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

TTT All Samples Except Plaster

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
23	ST-Hm-12A	Glazing			
24	ST-Hm-12B	Glazing			
25	ST-Hm-13A	Old Linoleum			
26	ST-Hm-13B	Old Linoleum			
27	ST-HS-01A	Plaster			
28	ST-HS-01B	Plaster			
29	ST-HS-01C	Plaster			
30	ST-HS-01D	Plaster			
31	ST-HS-01E	Plaster			

RECEIVED

Relinquished by: _____ Received by: _____

Date: 5-13-16 Date: MAY 23 2016

Relinquished by: _____ Received by: _____

Date: _____ Date: _____

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

Notes:

Material Types

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

Abbreviations

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

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

Table 3 - Summary of Presumed Asbestos Containing Materials, 2529 Maffet 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.) 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.

Notes:

Material Types

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

Abbreviations

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

Table 4 - Summary of All Asbestos Containing Materials, 2529 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.)	HVAC Duct Wrap	Yes	144 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.)			
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.

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
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.

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.

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

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inspection was completed. If Category I or Category II friable materials are discovered prior to or during the demolition/renovation process, these materials must be abated prior to commencement of any demolition/renovation activities at the Subject Property.

Hazardous Materials

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

- Smoke Detector (2)

REGULATORY REQUIREMENTS

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

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

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

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

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

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

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

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

Project No.: 16-1070
Muskegon County Land Bank
Parcel ID: 61-26-185-143-0016-00

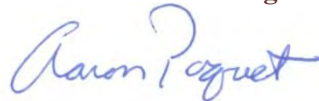
DISCLAIMER

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



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

Red Cedar Consulting

Attachment 1
APEX Research Laboratory Analytical Results



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 64731 - 02 Cust. #: JF-HM-01B Material: Asphalt Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
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 - 60% Other - 40%

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

Robert T. Letarte Jr., Laboratory Director

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Date Reported: 05/18/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64731 - 04 Cust. #: JF-HM-02B Material: Felt Paper Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 60% Other - 40%
Lab ID #: 64731 - 05 Cust. #: JF-HM-03A Material: Brown Linoleum Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 50%	Other - 50%
Lab ID #: 64731 - 06 Cust. #: JF-HM-03B Material: Brown Linoleum Location: Appearance: Layer: of	Asbestos Present: NOT ANALYZED	

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Robert T. Letarte Jr., Laboratory Director

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64731 - 07 Cust. #: JF-HM-04A Material: Blue Linoleum Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 64731 - 08 Cust. #: JF-HM-04B Material: Blue Linoleum Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 64731 - 09 Cust. #: JF-HM-05A Material: Floor Tile Location: Appearance: white, fibrous, homogenous Layer: 1 of 2	Asbestos Present: YES Chrysotile - 5%	Other - 95%

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Date Analyzed: 05/17/16
Date Reported: 05/18/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64731 - 09a Cust. #: JF-HM-05A Material: White Linoleum Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: YES Chrysotile - 30%	Other - 70%
Lab ID #: 64731 - 10 Cust. #: JF-HM-05B Material: White Linoleum Location: Appearance: Layer: of	Asbestos Present: NOT ANALYZED	
Lab ID #: 64731 - 11 Cust. #: JF-HM-06A Material: Beige Linoleum Location: Appearance: blue, fibrous, homogenous Layer: 1 of 2	Asbestos Present: YES Chrysotile - 5%	Cellulose - 20% Other - 75%

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

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64731 - 11a Cust. #: JF-HM-06A Material: Beige Linoleum Location: Appearance: white, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 64731 - 12 Cust. #: JF-HM-06B Material: Beige Linoleum Location: Appearance: Layer: of	Asbestos Present: NOT ANALYZED	
Lab ID #: 64731 - 13 Cust. #: JF-HM-07A Material: Glazing Location: Appearance: brown, 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.

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Date Reported: 05/18/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64731 - 14 Cust. #: JF-HM-07B Material: Glazing Location: Appearance: grey,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64731 - 15 Cust. #: JF-HM-08A Material: Green Linoleum Location: Appearance: brown,fibrous,nonhomogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 64731 - 15a Cust. #: JF-HM-08A Material: Green Linoleum Location: Appearance: yellow,fibrous,homogenous Layer: 2 of 2	Asbestos Present: YES Chrysotile - 30%	Other - 70%

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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	Asbestos Present: NOT ANALYZED	
Lab ID #: 64731 - 17 Cust. #: JF-HM-09A Material: Brown Linoleum Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 64731 - 18 Cust. #: JF-HM-09B Material: Brown Linoleum Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	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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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%

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

Robert T. Letarte Jr., Laboratory Director

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 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	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 64731 - 23 Cust. #: JF-HM-12A Material: Yellow Linoleum Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 64731 - 24 Cust. #: JF-HM-12B Material: Yellow Linoleum Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%

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Date Reported: 05/18/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
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	Other - 100%
Lab ID #: 64731 - 25a Cust. #: JF-HS-01A Material: Mortar Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 64731 - 26 Cust. #: JF-HS-01B Material: Plaster Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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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 - 26a Cust. #: JF-HS-01B Material: Mortar Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 64731 - 27 Cust. #: JF-HS-01C Material: Plaster Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64731 - 27a Cust. #: JF-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

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



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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 - 28 Cust. #: JF-HS-01D Material: Plaster Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 64731 - 29 Cust. #: JF-HS-01E Material: Plaster Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64731 - 29a Cust. #: JF-HS-01E 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.



NVLAP Lab Code 102118-0

Apex # **64731**

Pg. 1 of 3

APEX Research, Inc.

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



E-mail: apexresearch@chartermi.net

Fax: 734-449-9991

Client Name: Red Cedar Consulting

Date of Survey: 5-7-16

Address: PO Box 13216

Project: 2532 Jefferson St.

City, St., Zip: Lansing, MI 48901

Project #:

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

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush 24 hour

Asbestos: Bulk Wipe Point Count PCM

48 hour 72 hour

Lead: Bulk Wipe Air Paint Soil

Other: 5 Day **ITP** All Samples Except Plaster

Mold: Bulk Tape BioSIS Other Viable
 TEM: AHERA 7400 Bulk/NOB EPA Level II

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	JF-HM-01A	Asphalt Shingle			
2	JF-HM-01B	Asphalt Shingle			
3	JF-HM-02A	Felt Paper			
4	JF-HM-02B	Felt Paper			
5	JF-HM-03A	Brown Linoleum			
6	JF-HM-03B	Brown Linoleum			
7	JF-HM-04A	Blue Linoleum			
8	JF-HM-04B	Blue Linoleum			
9	JF-HM-05A	White Linoleum			
10	JF-HM-05B	White Linoleum			
11	JF-HM-06A	Beige Linoleum			

Lab Use Only
 Log-In _____
 Report _____

Relinquished by: *[Signature]* Received by: *[Signature]*
 Date: 5-10-16 Date: 5-16-16

Relinquished by: *[Signature]* Received by: *[Signature]*
 Date: MAY 11 2016

6473/

pg. 2 of 3

APEX Research, Inc.

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

E-mail: apexresearch@chartermi.net

Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216
Lansing, MI 48901

City, St., Zip: Lansing, MI 48901

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

Date of Survey: 5-7-16

Project: 2532 Jefferson St.

Project #:

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour 72 hour

Other: 5000

(TTP) All Samples Except Plaster

Asbestos: Bulk Wipe Point Count PCM

Lead: Bulk Wipe Air Paint Soil

Mold: Bulk Tape BIOSIS Other Viable

TEM: AHERA 7400 Bulk/NOB EPA Level II

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	JF-HM-060B	Beige Linoleum			
13	JF-HM-07A	Glazing			
14	JF-HM-07B	Glazing			
15	JF-HM-08A	Green Linoleum			
16	JF-HM-08B	Green Linoleum			
17	JF-HM-09A	Brown Linoleum			
18	JF-HM-09B	Brown Linoleum			
19	JF-HM-10A	White 2'x4' Ceiling Tile			
20	JF-HM-10B	White 2'x4' Ceiling Tile			
21	JF-HM-11A	Fiber board			
22	JF-HM-11B	Fiber board			

RECEIVED

Lab Use Only
 Log-In _____
 Report _____

Relinquished by: *Ernst* Received by: *UPB*

Date: 5-10-16 Date: 5-10-16

Relinquished by: *Max* Received by: _____

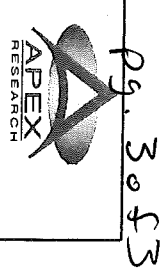
Date: _____ Date: _____

64731

APEX Research, Inc.

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

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



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

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

Date of Survey: 5-7-16

Project: 2532 Jefferson St.

Project #:

Contact Person: Aaron Paquet

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

Rush 24 hour

48 hour 72 hour

Other: 5 Dec



All Samples Except Plaster

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

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
23	JF-Hm-12A	Yellow Linoleum			
24	JF-Hm-12B	Yellow Linoleum			
25	JF-HS-01A	Plaster			
26	JF-HS-01B	Plaster			
27	JF-HS-01C	Plaster			
28	JF-HS-01D	Plaster			
29	JF-HS-01E	Plaster			

Relinquished by: [Signature]

Date: 5-10-16

Received by: [Signature]

Date: 5-18-16

Relinquished by: [Signature]

Date: 5-11-2016

Received by: [Signature]

Date: [Blank]

Tables

Table 1 - Summary of Hazardous Materials, 2532 Jefferson St., Muskegon Heights, Michigan

Hazardous Materials Description and Location		
Location	Material Description	Quantity
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

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, 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.) Basement (misc. HVAC wrap on Ductwork, 15 sq. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	170 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, 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.)	HVAC Duct Wrap	Yes	170 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.)			
Total			170 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, 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

Project No.: 16-1070
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.

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.

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*

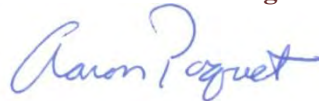
DISCLAIMER

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



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

Red Cedar Consulting

Attachment 1
APEX Research Laboratory Analytical Results



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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 - 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	Asbestos Present: NO No Asbestos Observed	Cellulose - 25% Other - 75%

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

Robert T. Letarte Jr., Laboratory Director

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Certificate of Laboratory Analysis

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 - 01c Cust. #: ST-HM-01A Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 4 of 4	Asbestos Present: NO No Asbestos Observed	Cellulose - 25% Other - 75%
Lab ID #: 65047 - 02 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 Layer: 2 of 5	Asbestos Present: NO No Asbestos Observed	Cellulose - 25% Other - 75%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
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%
Lab ID #: 65047 - 02c Cust. #: ST-HM-01B Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 4 of 5	Asbestos Present: NO No Asbestos Observed	Cellulose - 25% Other - 75%
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%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
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	Cellulose - 95% Other - 5%
Lab ID #: 65047 - 04 Cust. #: ST-HM-02B Material: Fiberlap Siding Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 95% Other - 5%
Lab ID #: 65047 - 05 Cust. #: ST-HM-03A Material: Brown Stone Linoleum Multilayer Location: Appearance: red, fibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Other - 50%

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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	Asbestos Present: YES Chrysotile - 35%	Other - 65%
Lab ID #: 65047 - 06 Cust. #: ST-HM-03B Material: Brown Stone Linoleum Multilayer Location: Appearance: red, fibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 65047 - 06a Cust. #: ST-HM-03B Material: Linoleum Location: Appearance: Layer: 2 of 2	Asbestos Present: NOT ANALYZED	

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 65047 - 07 Cust. #: ST-HM-04A Material: Green Linoleum Multilayer Location: Appearance: brown, fibrous, homogenous Layer: 1 of 5	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 65047 - 07a Cust. #: ST-HM-04A Material: Linoleum Location: Appearance: green, fibrous, homogenous Layer: 2 of 5	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 65047 - 07b Cust. #: ST-HM-04A Material: Linoleum Location: Appearance: black, fibrous, homogenous Layer: 3 of 5	Asbestos Present: YES Chrysotile - 35%	Other - 65%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 65047 - 07c Cust. #: ST-HM-04A Material: Linoleum Location: Appearance: white, fibrous, homogenous Layer: 4 of 5	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 65047 - 07d Cust. #: ST-HM-04A Material: Linoleum Location: Appearance: green, fibrous, homogenous Layer: 5 of 5	Asbestos Present: YES Chrysotile - 20%	Cellulose - 10% Other - 70%
Lab ID #: 65047 - 08 Cust. #: ST-HM-04B Material: Green Linoleum Multilayer Location: Appearance: brown, fibrous, homogenous Layer: 1 of 5	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Other - 50%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 65047 - 08a Cust. #: ST-HM-04B Material: Linoleum Location: Appearance: green, fibrous, homogenous Layer: 2 of 5	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Other - 50%
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 No Asbestos Observed	Cellulose - 50% Other - 50%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 65047 - 08d Cust. #: ST-HM-04B Material: Linoleum Location: Appearance: Layer: 5 of 5	Asbestos Present: NOT ANALYZED	
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 Cust. #: ST-HM-05A Material: Linoleum Location: Appearance: brown, fibrous, homogenous Layer: 2 of 5	Asbestos Present: YES Chrysotile - 30%	Other - 70%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 65047 - 09b Cust. #: ST-HM-05A Material: Linoleum Location: Appearance: green, fibrous, homogenous Layer: 3 of 5	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 65047 - 09c Cust. #: ST-HM-05A Material: Linoleum Location: Appearance: beige, fibrous, homogenous Layer: 4 of 5	Asbestos Present: YES Chrysotile - 25%	Other - 75%
Lab ID #: 65047 - 09d Cust. #: ST-HM-05A Material: Linoleum Location: Appearance: green, fibrous, homogenous Layer: 5 of 5	Asbestos Present: YES Chrysotile - 20%	Cellulose - 10% Other - 70%

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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 Material: Linoleum Location: Appearance: Layer: 2 of 5	Asbestos Present: NOT ANALYZED	
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%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 65047 - 10c Cust. #: ST-HM-05B Material: Linoleum Location: Appearance: Layer: 4 of 5	Asbestos Present: NOT ANALYZED	
Lab ID #: 65047 - 10d Cust. #: ST-HM-05B Material: Linoleum Location: Appearance: Layer: 5 of 5	Asbestos Present: NOT ANALYZED	
Lab ID #: 65047 - 11 Cust. #: ST-HM-06A Material: Light Wood Grain Linoleum/Tan 12x12 Location: Appearance: brown, nonfibrous, homogenous Layer: 1 of 4	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
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	Other - 100%
Lab ID #: 65047 - 11b Cust. #: ST-HM-06A Material: Floor Tile Location: Appearance: beige,nonfibrous,homogenous Layer: 3 of 4	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65047 - 11c Cust. #: ST-HM-06A Material: Mastic Location: Appearance: yellow,nonfibrous,homogenous Layer: 4 of 4	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 65047 - 12 Cust. #: ST-HM-06B Material: Light Wood Grain Linoleum/Tan 12x12 Location: Appearance: brown,nonfibrous,homogenous Layer: 1 of 4	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65047 - 12a Cust. #: ST-HM-06B Material: Mastic Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 4	Asbestos Present: NO No Asbestos Observed	Other - 100%
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	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
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%
Lab ID #: 65047 - 13 Cust. #: ST-HM-07A 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 - 13a Cust. #: ST-HM-07A Material: Mastic Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
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 Material: Mastic Location: Appearance: clear, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65047 - 15 Cust. #: ST-HM-08A Material: Gold Linoleum Multilayer Location: Appearance: brown, fibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Other - 50%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 65047 - 15a Cust. #: ST-HM-08A Material: Linoleum Location: Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 65047 - 16 Cust. #: ST-HM-08B Material: Gold Linoleum Multilayer Location: Appearance: brown, fibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 65047 - 16a Cust. #: ST-HM-08B Material: Linoleum Location: Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Other - 50%

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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 - 17 Cust. #: ST-HM-09A Material: Wood Plank Linoleum Multilayer Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Fiberglass - 5% Other - 75%
Lab ID #: 65047 - 18 Cust. #: ST-HM-09B Material: Wood Plank Linoleum Multilayer Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Fiberglass - 5% Other - 75%
Lab ID #: 65047 - 19 Cust. #: ST-HM-10A Material: Beige 12x12 Vinyl Tile Location: Appearance: beige, nonfibrous, homogenous Layer: 1 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.



NVLAP Lab Code 102118-0



Certificate of Laboratory 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 - 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%
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	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: 2532 Riordan St

Report To:

Mr. Aaron Paquet
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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 - 20a Cust. #: ST-HM-10B Material: Mastic Location: Appearance: clear, nonfibrous, homogenous Layer: 2 of 3	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65047 - 20b Cust. #: ST-HM-10B Material: Linoleum Location: Appearance: beige, fibrous, homogenous Layer: 3 of 3	Asbestos Present: NO No Asbestos Observed	Fiberglass - 10% Other - 90%
Lab ID #: 65047 - 21 Cust. #: ST-HM-11A Material: White 1x1 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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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 - 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	Cellulose - 95% Other - 5%
Lab ID #: 65047 - 23 Cust. #: ST-HM-12A Material: Glazing Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65047 - 24 Cust. #: ST-HM-12B Material: Glazing Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Robert T. Letarte Jr., Laboratory Director

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ARI Report # 16-65047
Date Collected: 05/22/16
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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	Cellulose - 20% Fiberglass - 10% Other - 70%
Lab ID #: 65047 - 26 Cust. #: ST-HM-13B Material: White Linoleum Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Fiberglass - 10% Other - 70%
Lab ID #: 65047 - 27 Cust. #: ST-HM-14A Material: Pebbled Linoleum Location: Appearance: brown, 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.

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Lansing, MI 48901

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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 - 28 Cust. #: ST-HM-14B Material: Pebbled Linoleum Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Other - 50%
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	Cellulose - 80% Fiberglass - 10% Other - 10%
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	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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ARI Report # 16-65047
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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	Cellulose - 80% Fiberglass - 10% Other - 10%
Lab ID #: 65047 - 30a Cust. #: ST-HM-15B Material: Glue Pod Location: Appearance: brown, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
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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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 - 32 Cust. #: ST-HM-16B Material: Drywall Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 65047 - 33 Cust. #: ST-HS-01A Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65047 - 33a Cust. #: ST-HS-01A 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

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Date Collected: 05/22/16
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Date Analyzed: 05/26/16
Date Reported: 05/26/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 65047 - 34 Cust. #: ST-HS-01B Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65047 - 34a Cust. #: ST-HS-01B Material: Plaster Base Coat Location: Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: 65047 - 35 Cust. #: ST-HS-01C Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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Mr. Aaron Paquet
Red Cedar Consulting
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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 - 35a Cust. #: ST-HS-01C Material: Plaster Base Coat Location: Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: 65047 - 36 Cust. #: ST-HS-01D Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
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

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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 - 37 Cust. #: ST-HS-01E Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65047 - 37a Cust. #: ST-HS-01E Material: Plaster Base Coat Location: Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0

65047

Pg. 1 of 4

Apex Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189

Phone: 734-449-9990



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

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

Date of Survey: 5-22-16

Project: 2532 Riedan St.

Project #:

Contact Person: Aaron Paquet

Lab Use Only
Log-In _____
Report _____

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour 72 hour

Other: _____

PTP All Samples Except Plaster

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

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	ST-HM-01A	Asphalt Shingle			
2	ST-HM-01B	Asphalt Shingle			
3	ST-HM-02A	Fiber lap Siding			
4	ST-HM-02B	Fiber lap Siding			
5	ST-HM-03A	Brown Stone Linoleum Multilayer			
6	ST-HM-03B	Brown Stone Linoleum Multilayer			
7	ST-HM-04A	Green Linoleum Multilayer			
8	ST-HM-04B	Green Linoleum Multilayer			
9	ST-HM-05A	Wood Grain Linoleum Multilayer			
10	ST-HM-05B	Wood Grain Linoleum Multilayer			
11	ST-HM-06A	Light Wood Grain Linoleum over Tan 12x12			

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Relinquished by: [Signature]

Received by: [Signature] **ISS**

Date: 5-23-16

Date: MAY 23 2016

Relinquished by: _____

Received by: _____

Date: _____

Date: _____

65047

pg. 2 of 4

APEX Research, Inc.

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



Client Name: Red Cedar Consulting

Address: PO Box 13216
Lansing, MI 48901

City, St., Zip: Lansing, MI 48901

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

Date of Survey: 5.22.16

Project: 2532 Jordan St.

Project #:

Contact Person: Aaron Paquet

Lab Use Only
Log-In _____
Report _____

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour 72 hour

Other: TTIP All Samples Except Plaster

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

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	ST-HM-06B	light wood Grain linoleum Over Tan 12x12			
13	ST-HM-07A	Tan 12x12 Vinyl Tile			
14	ST-HM-07B	Tan 12x12 Vinyl Tile			
15	ST-HM-08A	Gold Linoleum Multilayer			
16	ST-HM-08B	Gold Linoleum Multilayer			
17	ST-HM-09A	Wood Plank Linoleum Multilayer			
18	ST-HM-09B	Wood Plank Linoleum Multilayer			
19	ST-HM-10A	Beige 12x12 Vinyl Tile			
20	ST-HM-10B	Beige 12x12 Vinyl Tile			
21	ST-HM-11A	white 1x1 Ceiling Tile			
22	ST-HM-11B	white 1x1 Ceiling Tile			

Relinquished by: _____

Date: 5-23-16

Received by: _____

Date: MAY 23 2016

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Date: _____

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Date: _____

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Pg. 3 of 4

APEX Research, Inc.

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

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



Client Name: Red Cedar Consulting

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City, St., Zip: Lansing, MI 48901

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

Date of Survey: 5.22.16

Project: 2532 R Jordan St.

Project #:

Contact Person: Aaron Paquet

Lab Use Only
Log-In _____
Report _____

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour 72 hour

Other: TTP All Samples Except Plaster

Asbestos: Bulk Wipe _____ Point Count _____ PCM _____

Lead: Bulk _____ Wipe _____ Air _____ Paint _____ Soil _____

Mold: Bulk _____ Tape _____ BIOSIS _____ Other _____ Viable _____

TEM: AHERA 7400 Bulk/NOB _____ EPA Level II _____

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
23	ST-HM-19A	Glazing			
24	ST-HM-19B	Glazing			
25	ST-HM-13A	White Linoleum			
26	ST-HM-13B	White Linoleum			
27	ST-HM-14A	Pebbled Linoleum			
28	ST-HM-14B	Pebbled Linoleum			
29	ST-HM-15A	White 1x1 Ceiling Tile/Glue Pod			
30	ST-HM-15B	White 1x1 Ceiling Tile/Glue Pod			
31	ST-HM-16A	Drywall			
32	ST-HM-16B	Drywall			
33	ST-HS-01A	Plaster			

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Received by: _____

Date: 5-23-16

Date: MAY 23 2016

Date: _____

Date: _____

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APEX Research, Inc.

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



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Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour 72 hour

Other: TTP All Samples Except Plaster

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

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
34	ST-HS-01B	Plaster			
35	ST-HS-01C	Plaster			
36	ST-HS-01D	Plaster			
37	ST-HS-01E	Plaster			

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

Date: 5-23-16 Date: MAY 23 2016

Relinquished by: _____ Received by: _____

Date: _____ Date: _____

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	M	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	M	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	M	Category I	ND	2 nd Floor West Bedroom	NA
ST-HM-14B	Pebbled Linoleum	No	M	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	M	Category II	ND	2 nd Fl. East Bedroom Ceiling	NA
ST-HM-16B	Drywall	Yes	M	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

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, 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					

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, 2532 Riordan St., Muskegon Heights, Michigan

Interior - Asbestos Containing Materials			
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.
Total			397 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
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.

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.

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.)

- 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)

Project No.: 16-1070
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

Project No.: 16-1070
Muskegon County Land Bank
Parcel ID: 61-26-185-143-0015-00

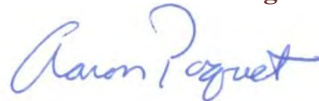
DISCLAIMER

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



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

Red Cedar Consulting

Attachment 1
APEX Research Laboratory Analytical Results



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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 - 01 Cust. #: JE-HM-01A Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Fiberglass - 30% Other - 70%
Lab ID #: 64718 - 01a Cust. #: JE-HM-01A Material: Felt Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Other - 50%
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.



NVLAP Lab Code 102118-0



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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 - 02a Cust. #: JE-HM-01B Material: Felt Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 64718 - 03 Cust. #: JE-HM-02A Material: White Linoleum Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 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%

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Robert T. Letarte Jr., Laboratory Director

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Test Method, Polarized Light Microscopy (PLM)

Project: 2536 Jefferson St.

Report To:

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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 - 05 Cust. #: JE-HM-03A Material: Beige Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 64718 - 05a Cust. #: JE-HM-03A Material: Glue Location: Appearance: brown, nonfibrous, homogenous Layer: 2 of 3	Asbestos Present: NO No Asbestos Observed	Other - 100%
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

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



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Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 2536 Jefferson St.

Report To:

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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 - 06 Cust. #: JE-HM-03B Material: Beige Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 64718 - 06a Cust. #: JE-HM-03B Material: Glue Location: Appearance: brown, nonfibrous, homogenous Layer: 2 of 3	Asbestos Present: NO No Asbestos Observed	Other - 100%
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

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



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ARI Report # 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 - 07 Cust. #: JE-HM-04A Material: Glazing Location: Appearance: beige,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 64718 - 08 Cust. #: JE-HM-04B Material: Glazing Location: Appearance: beige,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Other - 99%
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

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



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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 - 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%
Lab ID #: 64718 - 11 Cust. #: JE-HM-06A Material: Glazing Location: Appearance: beige,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 64718 - 12 Cust. #: JE-HM-06B 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

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



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Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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 - 13 Cust. #: JE-HS-01A Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64718 - 13a Cust. #: JE-HS-01A Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 5% Hair - 1% Other - 94%
Lab ID #: 64718 - 14 Cust. #: JE-HS-01B Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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 - 14a Cust. #: JE-HS-01B Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: 64718 - 15 Cust. #: JE-HS-01C Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64718 - 15a Cust. #: JE-HS-01C Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Hair - 2% Other - 98%

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

Robert T. Letarte Jr., Laboratory Director

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



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64718 - 16a Cust. #: JE-HS-01D Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Hair - 1% Other - 99%
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	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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 - 17a Cust. #: JE-HS-01E Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 3	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64718 - 17b Cust. #: JE-HS-01E Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 3 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Hair - 2% Other - 97%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

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

Robert T. Letarte Jr., Laboratory Director

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



NVLAP Lab Code 102118-0

Apex # **64718**

Page 1 of 2

APEX Research, Inc.

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



Client Name: Red Cedar Consulting

Date of Survey: 5-7-16

Address: PO Box 13216

Project: 2536 Jefferson St.

City, St., Zip: Lansing, MI 48901

Project #: _____

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

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush 24 hour

Asbestos: Bulk Wipe _____ Point Count _____ PCM _____

48 hour 72 hour

Lead: Bulk _____ Wipe _____ Air _____ Paint _____ Soil _____

Other: TTP All Samples Except Plaster

Mold: Bulk _____ Tape _____ Biosis _____ Other _____ Viable _____

TEM: AHERA 7400 Bulk/NOB _____ EPA Level II _____

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	JE-HM-01A	Shingle			
2	JE-HM-01B	Shingle			
3	JE-HM-02A	White Linoleum			
4	JE-HM-02B	White Linoleum			
5	JE-HM-03A	Beige Linoleum			
6	JE-HM-03B	Beige Linoleum			
7	JE-HM-04A	Ceramics			
8	JE-HM-04B				
9	JE-HM-05A				
10	JE-HM-05B				
11	JE-HM-06A				

Lab Use Only
 Log-In _____
 Report _____

Relinquished by: [Signature]
 Date: 5-10-16

Received by: [Signature]
 Date: MAY 11 2016

Relinquished by: _____
 Date: _____

Received by: _____
 Date: _____

APEX Research, Inc.

64718

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



pg 2 of 2

Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

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

Date of Survey: 5-7-16

Project #: 2536 Jefferson St.

Project #:

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour 72 hour

Other:

TPP All Samples Except Plaster

Mold: Bulk _____ Tape _____ BioSIS _____ Other _____ Viable _____
 TEM: AHERA 7400 _____ Bulk/NOB _____ EPA Level II _____

Asbestos: Bulk Wipe _____ Point Count _____ PCM _____

Lead: Bulk _____ Wipe _____ Air _____ Paint _____ Soil _____

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	JE-4M-68R				
13	JE-WS-01A	Colaring Plaster			
14	JE-WS-01B				
15	JE-WS-02C				
16	JE-WS-01D				
17	JE-WS-01E				

RECEIVED

Relinquished by: *[Signature]*

Received by: *[Signature]*

Date: 5-10-16

Date: 5-10-16

Relinquished by:

Received by:

Date:

Date:

Tables

Table 1 - Summary of Hazardous Materials, 2536 Jefferson St., Muskegon Heights, Michigan

Hazardous Materials Description and Location		
Location	Material Description	Quantity
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

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, 2536 Jefferson St., Muskegon Heights, Michigan

Asbestos Containing Material Description and Location					
Location	Material Description	Friable	Condition	Material Type	Approx. Quantity
Living (1 register, 15 sq. ft.) Dining (1 register, 15 sq. ft.) 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

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, 2536 Jefferson St., Muskegon Heights, Michigan

Interior - Asbestos Containing Materials			
Location	Material Description	Friable	Approx. Quantity
Living (1 register, 15 sq. ft.)	HVAC Duct Wrap	Yes	55 sq. ft.
Dining (1 register, 15 sq. ft.)			
Bathroom (1 register, 15 sq. ft.)			
Basement (misc. HVAC wrap on Ductwork, 10 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

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
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

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

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:

- 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.

Project No.: 16-1070
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

Project No.: 16-1070
Muskegon County Land Bank
Parcel ID: 61-26-185-148-0013-00

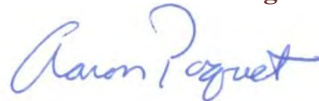
DISCLAIMER

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



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

Red Cedar Consulting

Attachment 1
APEX Research Laboratory Analytical Results



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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 - 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%
Lab ID #: 65112 - 02 Cust. #: LS-HM-01B 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 Layer: 1 of 1	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.



NVLAP Lab Code 102118-0



Certificate of Laboratory 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 - 04 Cust. #: LS-HM-02B Material: Rolled Roofing/Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Fiberglass - 30% Other - 70%
Lab ID #: 65112 - 05 Cust. #: LS-HM-03A Material: Stone Linoleum Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
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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NVLAP Lab Code 102118-0



Certificate of Laboratory 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 - 07 Cust. #: LS-HM-04A Material: Yellow Linoleum Location: Appearance: yellow, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 30%	Other - 70%
Lab ID #: 65112 - 08 Cust. #: LS-HM-04B Material: Yellow Linoleum Location: Appearance: Layer: of	Asbestos Present: NOT ANALYZED	
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

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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 - 10 Cust. #: LS-HM-05B Material: MultiColor Linoleum Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 65112 - 11 Cust. #: LS-HM-06A 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 #: 65112 - 12 Cust. #: LS-HM-06B 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

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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 - 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%
Lab ID #: 65112 - 14 Cust. #: LS-HM-07B Material: Glazing Location: Appearance: beige,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Other - 99%
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	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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P.O. Box 13216
Lansing, MI 48901

ARI Report # 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 - 16 Cust. #: LS-HM-08B Material: Glazing Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65112 - 17 Cust. #: LS-HM-09A Material: Multi Layer Linoleum Location: Appearance: black, fibrous, homogenous Layer: 1 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 65112 - 17a Cust. #: LS-HM-09A Material: Blue Sheet Flooring Location: Appearance: blue, fibrous, nonhomogenous Layer: 2 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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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	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 65112 - 18 Cust. #: LS-HM-09B Material: Multi Layer Linoleum Location: Appearance: black, fibrous, nonhomogenous Layer: 1 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
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	Cellulose - 40% Other - 60%

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

Robert T. Letarte Jr., Laboratory Director

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ARI Report # 16-65112
Date Collected: 05/24/16
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Date Analyzed: 05/31/16
Date Reported: 05/31/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 65112 - 18b Cust. #: LS-HM-09B Material: White Sheet Flooring Location: Appearance: white, fibrous, nonhomogenous Layer: 3 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 65112 - 19 Cust. #: LS-HS-01A Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65112 - 19a Cust. #: LS-HS-01A Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Other - 99%

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

Robert T. Letarte Jr., Laboratory Director

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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 - 20 Cust. #: LS-HS-01B Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65112 - 20a Cust. #: LS-HS-01B Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 65112 - 21 Cust. #: LS-HS-01C Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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ARI Report # 16-65112
Date Collected: 05/24/16
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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	Asbestos Present: NO 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	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65112 - 22a Cust. #: LS-HS-01D Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 2% Other - 98%

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

Robert T. Letarte Jr., Laboratory Director

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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 - 23 Cust. #: LS-HS-01E Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65112 - 23a Cust. #: LS-HS-01E Material: Plaster Base Coat Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0

65112

Pg. 1 of 3

APEX Research, Inc.

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



Client Name: Red Cedar Consulting

Date of Survey: 5.24.16

Address: PO Box 13216

Project: 2544 Leahy St

City, St., Zip: Lansing, MI 48901

Project #: _____

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

Contact Person: Aaron Paquet

Lab Use Only
 Log-In _____
 Report _____

Turn Around Times: (Circle One)

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

Rush 24 hour

36 hour 72 hour

Other: TTP All Samples Except Plaster

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

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	LS-HM-01A	Asphalt Shingle			
2	LS-HM-01B	Asphalt Shingle			
3	LS-HM-02A	Roller Roofing			
4	LS-HM-02B	Roller Roofing			
5	LS-HM-03A	Stone Linoleum			
6	LS-HM-03B	Stone Linoleum			
7	LS-HM-04A	Yellow Linoleum			
8	LS-HM-04B	Yellow Linoleum			
9	LS-HM-05A	Multi Color Linoleum			
10	LS-HM-05B	Multi Color Linoleum			
11	LS-HM-06A	White 1x1 Ceiling Tile			

Relinquished by: _____ Received by: AS

Relinquished by: _____ Received by: _____

Date: 5-25-16

Date: 5-25-16

RECEIVED
 Received by: Paquet 10:20
 Date: MAY 26 2016

65112

09-2053

APEX Research, Inc.

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

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



Client Name: Red Cedar Consulting

Address: PO Box 13216
Lansing, MI 48901

City, St., Zip: Lansing, MI 48901

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

Date of Survey: 5-24-16

Project: 2544 Leahy St.

Project #:

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour 72 hour

Other: TTP All Samples Except Plaster

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

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	LS-HM-060B	White 1x1 Ceiling Tile			
13	LS-HM-07A	Glazing			
14	LS-HM-07B	Glazing			
15	LS-HM-08A	Glazing			
16	LS-HM-08B	Glazing			
17	LS-HM-09A	Multi layer Linoleum			
18	LS-HM-09B	Multi layer Linoleum			
19	LS-HS-01A	Plaster			
20	LS-HS-01B	Plaster			
21	LS-HS-01C	Plaster			
22	LS-HS-01D	Plaster			

Lab Use Only
Log-In _____
Report _____

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

Date: 5-25-16 Date: 5-25-16

Relinquished by: _____ Received by: _____

Date: _____ Date: _____

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MAY 26 2016

65112

pg. 3 of 3

APEX Research, Inc.

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

E-mail: apexresearch@chartemi.net

Fax: 734-449-9991



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City, St., Zip: Lansing, MI 48901

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

Date of Survey: 5-24-16

Project: 2544 Leahy St.

Project #:

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour 72 hour

Other:

TTP All Samples Except Plaster

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

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
23	LS-HS-01E	Plaster			

RECEIVED

Relinquished by: [Signature] Date: 5-25-16
Received by: [Signature] Date: 5-25-16

Relinquished by: _____ Date: _____
Received May 26 2016 Date: _____
APEX RESEARCH

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
 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, 2544 Leahy St., Muskegon Heights, Michigan

PC = Point Count Analysis
CH = Chrysotile Asbestos

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

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

Table 3 - Summary of Presumed Asbestos Containing Materials, 2544 Leahy St., Muskegon Heights, Michigan

Asbestos Containing Material Description and 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.)	HVAC Duct Wrap	Yes	90 sq. ft.
NW Bedroom (1 register, 15 sq. ft.)			
Basement (misc. HVAC Tape on Cold Air Return Ductwork, 15 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
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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.

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 Cementitious “Transite” Siding on the Building were classified as PACM due to the age of the structure and samples were not collected.

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

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

Friable ACM's

Duct Wrap identified in the building in conjunction with the forced air heating system is classified as friable ACM. The visual assessment to quantify the extent of this material identified HVAC Duct Wrap at the following locations within the basement 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 cementitious "Transite" siding located on the exterior of the Building was classified as PACM and no samples were collected. The visual assessment to quantify the extent of this material identified 1,212 sq. ft. of cementitious (Transite) siding on the Building.

RECOMMENDATIONS

Asbestos Containing Materials

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

- 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 cementitious ACM must be removed prior to demolition due to the likelihood of becoming regulated due to the demolition process.

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

Hazardous Materials

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

- Smoke Detector (3)
- Automobile Tires (5)

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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: 61-26-610-002-0006-00

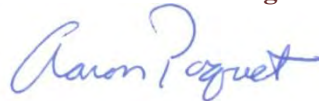
DISCLAIMER

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



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

Red Cedar Consulting

Attachment 1
APEX Research Laboratory Analytical Results



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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.



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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 65113 - 02a Cust. #: HS-HM-01B Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Fiberglass - 15% Other - 85%
Lab ID #: 65113 - 03 Cust. #: HS-HM-02A Material: Felt Paper Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
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%

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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 No Asbestos Observed	Synthetic - 3% Other - 97%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 65113 - 06a Cust. #: HS-HM-03B Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65113 - 07 Cust. #: HS-HM-04A Material: Green 12x12 Vinyl Tile Location: Appearance: green,fibrous,homogenous Layer: 1 of 3	Asbestos Present: NO No Asbestos Observed	Synthetic - 3% Other - 97%
Lab ID #: 65113 - 07a Cust. #: HS-HM-04A Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 3	Asbestos Present: NO No Asbestos Observed	Other - 100%

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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	Asbestos Present: NO No Asbestos Observed	Cellulose - 15% Synthetic - 5% Other - 80%
Lab ID #: 65113 - 08 Cust. #: HS-HM-04B Material: Green 12x12 Vinyl Tile Location: Appearance: green, fibrous, homogenous Layer: 1 of 3	Asbestos Present: NO No Asbestos Observed	Synthetic - 3% Other - 97%
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	Other - 100%

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

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 65113 - 08b Cust. #: HS-HM-04B Material: Linoleum Location: Appearance: brown, fibrous, homogenous Layer: 3 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 15% Synthetic - 5% Other - 80%
Lab ID #: 65113 - 09 Cust. #: HS-HM-05A Material: Glazing Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO Chrysotile - 0.25% POINT COUNT RESULT	Cellulose - 1% Other - 98.75%
Lab ID #: 65113 - 10 Cust. #: HS-HM-05B Material: Glazing Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO Chrysotile - 0.75% POINT COUNT RESULT	Cellulose - 1% Other - 98.25%

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

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 65113 - 11 Cust. #: HS-HS-01A Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65113 - 11a Cust. #: HS-HS-01A Material: Plaster Base Coat Location: Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Hair - 1% Other - 98%
Lab ID #: 65113 - 12 Cust. #: HS-HS-01B Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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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	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Hair - 1% Other - 98%
Lab ID #: 65113 - 13 Cust. #: HS-HS-01C Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65113 - 13a Cust. #: HS-HS-01C Material: Plaster Base Coat Location: Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Hair - 1% Other - 98%

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

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 65113 - 14 Cust. #: HS-HS-01D Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65113 - 14a Cust. #: HS-HS-01D Material: Plaster Base Coat Location: Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Hair - 1% Other - 98%
Lab ID #: 65113 - 15 Cust. #: HS-HS-01E Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 65113 - 15a Cust. #: HS-HS-01E Material: Plaster Base Coat Location: Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Hair - 1% Other - 98%
Lab ID #: 65113 - 16 Cust. #: HS-HM-06A 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 #: 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	Cellulose - 80% Other - 20%

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Apex Research, Inc.



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

Client Name: Red Cedar Consulting

Address: PO Box 13216
 Lansing, MI 48901

City, St., Zip: Lansing, MI 48901

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

Turn Around Times: (Circle One) Rush 24 hour
 48 hour 72 hour

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

Date of Survey: 5-24-16
 Project: 2622 Hoyt St.
 Project #: _____
 Contact Person: Aaron Paquet

Lab Use Only
 Log-In _____
 Report _____

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

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	HS-HM-014	Shingle			
2	HS-HM-018	Shingle			
3	HS-HM-024	Felt Paper			
4	HS-HM-023	Felt Paper			
5	HS-HM-034	Brown 12x12 Vinyltile			
6	HS-HM-088	Brown 12x12 Vinyltile			
7	HS-HM-044	Green 12x12 Vinyltile			
8	HS-HM-043	Green 12x12 Vinyltile			
9	HS-HM-054	Glazing			
10	HS-HM-053	Glazing			
11	HS-HS-014	Plaster			

RECEIVED

Relinquished by: [Signature] Received by: WBS
 Date: 5-25-16 Date: 5-25-16

Relinquished by: _____ Received by: [Signature]
 Date: _____ Date: MAY 26 2016

65113

pg 2 of 2

APEX Research, Inc.

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

E-mail: apexresearch@chartermi.net

Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

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

Date of Survey: 5-24-16

Project: 2622 Heyt St.

Project #:

Contact Person: Aaron Paquet

Lab Use Only
Log-In _____
Report _____

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour 72 hour

Other: **TTIP** All Samples Except Plaster

Asbestos: Bulk Wipe _____ Point Count _____ PCM _____

Lead: Bulk _____ Wipe _____ Air _____ Paint _____ Soil _____

Mold: Bulk _____ Tape _____ Biosis _____ Other _____ Viable _____

TEM: AHERA 7400 _____ Bulk/NOB _____ EPA Level II _____

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	HS-WS-01B	Plaster			
13	HS-WS-01C				
14	HS-WS-01D				
15	HS-WS-01E	↓			
16	HS-Wm-06A	White w/ Ceiling Tile			
17	HS-Wm-06B	White w/ Ceiling Tile			

Relinquished by: [Signature]

Received by: WS

Date: 5-25-16

Date: 5-25-16

Relinquished by: _____

Received by: [Signature]

Date: _____

Date: MAY 26 2016

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	M	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	M	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 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, 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

Project No.: 16-1070
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.

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.

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. ¼" 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.)

Project No.: 16-1070
Muskegon County Land Bank
Parcel ID: 61-26-185-216-0003-00

- Basement (Misc. ¼” 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.

Project No.: 16-1070
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

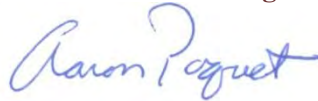
DISCLAIMER

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



Certificate of Laboratory 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 - 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%
Lab ID #: 64887 - 01a Cust. #: ST-HM-01A Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 3	Asbestos Present: NO No Asbestos Observed	Fiberglass - 20% Other - 80%
Lab ID #: 64887 - 01b Cust. #: ST-HM-01A 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.



NVLAP Lab Code 102118-0



Certificate of Laboratory 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 - 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%
Lab ID #: 64887 - 02a Cust. #: ST-HM-01B Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 3	Asbestos Present: NO No Asbestos Observed	Fiberglass - 20% Other - 80%
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.



NVLAP Lab Code 102118-0



Certificate of Laboratory 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 - 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%
Lab ID #: 64887 - 04 Cust. #: ST-HM-02B Material: Rolled Roofing/Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%
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	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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 - 06 Cust. #: ST-HM-03B Material: Glazing Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64887 - 07 Cust. #: ST-HM-04A Material: Speckled 9x9 Vinyl Tile Location: Appearance: beige, fibrous, homogenous Layer: 1 of 2	Asbestos Present: YES Chrysotile - 10%	Other - 90%
Lab ID #: 64887 - 07a Cust. #: ST-HM-04A Material: Mastic Location: Appearance: black, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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 - 08 Cust. #: ST-HM-04B Material: Speckled 9x9 Vinyl Tile Location: Appearance: Layer: 1 of 2	Asbestos Present: NOT ANALYZED	
Lab ID #: 64887 - 08a Cust. #: ST-HM-04B Material: Mastic Location: Appearance: black,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64887 - 09 Cust. #: ST-HM-05A Material: Beige 12x12 Vinyl Tile Location: Appearance: beige,fibrous,nonhomogenous Layer: 1 of 2	Asbestos Present: YES Chrysotile - 30%	Other - 70%

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

Robert T. Letarte Jr., Laboratory Director

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Test Method, Polarized Light Microscopy (PLM)

Project: 2809 Sixth St.

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

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Date Reported: 05/24/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64887 - 09a Cust. #: ST-HM-05A Material: Flooring Location: Appearance: beige, fibrous, nonhomogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 64887 - 10 Cust. #: ST-HM-05B Material: Beige 12x12 Vinyl Tile Location: Appearance: Layer: 1 of 2	Asbestos Present: NOT ANALYZED	
Lab ID #: 64887 - 10a Cust. #: ST-HM-05B Material: Flooring Location: Appearance: beige, fibrous, nonhomogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 35% Other - 65%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
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	Asbestos Present: NO No Asbestos Observed	Cellulose - 35% Other - 65%
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%

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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 No Asbestos Observed	Cellulose - 65% Mineral Wool - 30% Other - 5%
Lab ID #: 64887 - 15 Cust. #: ST-HM-08A Material: Glazing Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64887 - 16 Cust. #: ST-HM-08B Material: Glazing Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64887 - 17 Cust. #: ST-HM-09A Material: Glazing Location: Appearance: white, fibrous, homogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 1.25% POINT COUNT RESULT	Other - 98.75%
Lab ID #: 64887 - 18 Cust. #: ST-HM-09B Material: Glazing Location: Appearance: Layer: of	Asbestos Present: NOT ANALYZED	
Lab ID #: 64887 - 19 Cust. #: ST-HM-10A Material: Green 9x9 Vinyl Tile/Flooring Location: Appearance: green, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
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 No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 64887 - 21 Cust. #: ST-HM-11A Material: Yellow Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Fiberglass - 10% Other - 70%
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%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
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 - 35% Other - 65%
Lab ID #: 64887 - 25 Cust. #: ST-HM-13A Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
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	Other - 100%
Lab ID #: 64887 - 26 Cust. #: ST-HM-13B Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 64887 - 26a Cust. #: ST-HM-13B Material: Joint Compound Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64887 - 27 Cust. #: ST-HM-14A Material: Grey 12x12 Vinyl Tile Location: Appearance: brown,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64887 - 27a Cust. #: ST-HM-14A Material: Mastic Location: Appearance: yellow,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
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	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64887 - 28a Cust. #: ST-HM-14B Material: Mastic Location: Appearance: yellow,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64887 - 29 Cust. #: ST-HM-15A Material: Yellow Linoleum Location: Appearance: yellow,fibrous,nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 64887 - 30 Cust. #: ST-HM-15B Material: Yellow Linoleum Location: Appearance: yellow,fibrous,nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 35% Other - 65%

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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	Asbestos Present: NO No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 64887 - 32 Cust. #: ST-HM-16B Material: Block/White 9x Vinyl Tile/Flooring Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 35% Other - 65%
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	Cellulose - 35% Other - 65%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
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%
Lab ID #: 64887 - 35 Cust. #: ST-HM-18A Material: Tan Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 35% Other - 65%
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%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64887 - 37 Cust. #: ST-HM-19A Material: White 1x1 Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 95% Other - 5%
Lab ID #: 64887 - 38 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 - 95% Other - 5%
Lab ID #: 64887 - 39 Cust. #: ST-HM-20A Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64887 - 40 Cust. #: ST-HM-20B Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 64887 - 41 Cust. #: ST-HM-21 Material: Transite Pipe Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 25% Crocidolite - 5%	Other - 70%
Lab ID #: 64887 - 42 Cust. #: ST-HS-01A Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
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	Cellulose - 2% Other - 98%
Lab ID #: 64887 - 43 Cust. #: ST-HS-01B Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64887 - 43a Cust. #: ST-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%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64887 - 44 Cust. #: ST-HS-01C Material: Plaster Finish Coat Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64887 - 44a Cust. #: ST-HS-01C 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 #: 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	Other - 100%

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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	Asbestos Present: NO No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 64887 - 46 Cust. #: ST-HS-01E Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64887 - 46a Cust. #: ST-HS-01E Material: Plaster 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.



NVLAP Lab Code 102118-0

64887

ARFA Research, Inc.

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



Client Name: Red Cedar Consulting

Date of Survey: 5-15-16

Address: PO Box 13216

Project: 2809 Sixth St.

City, St., Zip: Lansing, MI 48901

Project #:

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

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour 72 hour

Other: 4 Days

TTP All Samples Except Plaster TEM:

AHERA 7400

Bulk/NOB

EPA Level II

Asbestos: Bulk x Wipe Point Count PCM

Lead: Bulk Wipe Air Paint Soil

Mold: Bulk Tape Biosis Other Viable

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	ST-HM-01A	Asphalt Shingle			
2	ST-HM-01B	Asphalt Shingle			
3	ST-HM-02A	Rolling Roofing			
4	ST-HM-02B	Rolling Roofing			
5	ST-HM-03A	Cladding			
6	ST-HM-03B	Cladding			
7	ST-HM-04A	Speckled Gas Vinyl Tile			
8	ST-HM-04B	Speckled Gas Vinyl Tile			
9	ST-HM-05A	Beige 12x12 Vinyl Tile			
10	ST-HM-05B	Beige 12x12 Vinyl Tile			
11	ST-HM-06A	Speckled Linoleum			

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

RECEIVED

Received by: _____

Date: 5-17-16 Date: 7:23pm 5-17-16

DATE: MAY 17 2016

Date: _____

64887

pg 2 of 5

APEX Research, Inc.

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



Client Name: Red Cedar Consulting

Date of Survey: 5-15-16

Address: PO Box 13216

Project: 2809 Sixth St.

City, St., Zip: Lansing, MI 48901

Project #:

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

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour 72 hour

Other: ST-Dry

TTP All Samples Except Plaster

Mold: Bulk
Asbestos: Bulk X
Lead: Bulk
Wipe: Bulk
Tape: Bulk

Point Count
Air
Paint
Soil
Other
Viable

BiOSIS
EPA Level II

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	ST-HM-06B	Speckled Linoleum			
13	ST-HM-07A	White 2x4 Pitted Ceiling Tile			
14	ST-HM-07B	White 2x4 Pitted Ceiling Tile			
15	ST-HM-08A	Elavring			
16	ST-HM-08B	Elavring			
17	ST-HM-09A	↓			
18	ST-HM-09B	↓			
19	ST-HM-10A	Green GRS Vinyl Tile			
20	ST-HM-10B	Green GRS Vinyl Tile			
21	ST-HM-11A	Yellow Linoleum			
22	ST-HM-11B	Yellow Linoleum			

RECEIVED

Relinquished by: [Signature]

Received by: [Signature]

Relinquished by: _____

Received by: _____

Date: 5-19-16

Date: _____

Date: _____

Date: _____

64887

Pg 3 of 5

APEX Research, Inc.

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



Client Name: Red Cedar Consulting

Date of Survey: 5-15-16

Address: PO Box 13216

Project: 2809 Sixth St.

City, St., Zip: Lansing, MI 48901

Project #: _____

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

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush 24 hour

Asbestos: Bulk Wipe _____ Point Count _____ PCM _____

48 hour 72 hour

Lead: Bulk _____ Wipe _____ Air _____ Paint _____ Soil _____

Other: 40y All Samples Except Plaster

Mold: Bulk _____ Tape _____ BioSIS _____ Other _____ Viable _____
TEM: AHERA 7400 _____ Bulk/NOB _____ EPA Level II _____

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
23	ST-HM-12A	Light Green Linoleum			
24	ST-HM-12B	Light Green Linoleum			
25	ST-HM-13A	Drywall			
26	ST-HM-13B	Drywall			
27	ST-HM-14A	Grey 12x12 vinyl tile			
28	ST-HM-14B	Grey 12x12 vinyl tile			
29	ST-HM-15A	Yellow Linoleum			
30	ST-HM-15B	Yellow Linoleum			
31	ST-HM-16A	Rock & white 5x9 vinyl tile			
32	ST-HM-16B	Rock & white 5x9 vinyl tile			
33	ST-HM-17A	Old Linoleum			

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

Relinquished by: _____ Received by: _____

Date: 5-17-16

Date: MAY 17 2016

64887

Pg 4 of 5

APEX Research, Inc.

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

E-mail: apexresearch@chartermi.net

Fax: 734-449-9991



Client Name: Red Cedar Consulting

Date of Survey: 5-15-16

Address: PO Box 13216

Project: 2809 Sixth St

City, St., Zip: Lansing, MI 48901

Project #:

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

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour 72 hour

Other: Handy



All Samples Except Plaster

Asbestos: Bulk Wipe Point Count PCM

Lead: Bulk Wipe Air Paint Soil

Mold: Bulk Tape BioSIS Other Viable

TEM: AHERA 7400 Bulk/NOB EPA Level II

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
34	ST-HM-17B	all linoleum			
35	ST-HM-18A	Tan Linoleum			
36	ST-HM-18B	Tan Linoleum			
37	ST-HM-19A	white 1x1 Ceiling Tile			
38	ST-HM-19B	white 1x1 Ceiling Tile			
39	ST-HM-20A	Drywall			
40	ST-HM-20B	Drywall			
41	ST-HM-21	Transite Pipe			
42	ST-HS-01A	Plaster			
43	ST-HS-01B				
44	ST-HS-01C	↓			

Relinquished by:

[Signature]

Received by:

[Signature]

Date: 5-17-16

Date: MAY 17 2016

Relinquished by:

Received by:

Date: _____

Date: _____

64887

pg 5 of 5

APEX Research, Inc.

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

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



Client Name: Red Cedar Consulting

Date of Survey: 5-15-16

Address: PO Box 13216

Project: 2809 Sixth St.

City, St, Zip: Lansing, MI 48901

Project #: _____

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

Contact Person: Aaron Paquet
apaquet@redcedarconsulting.net

Turn Around Times: (Circle One)

Rush 24 hour

48 hour 72 hour

TTP All Samples Except Plaster

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

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
45	ST-HS-01D	Plaster			
46	ST-HS-01E	Plaster			

Relinquished by: _____

Date: 5-17-16

Received by: *[Signature]*

Date: MAY 17 2016

Relinquished by: _____

Date: _____

Received by: _____

Date: _____

Lab Use Only
 Log-In: _____
 Report: _____

Tables

Table 1 - Summary of Hazardous Materials, 2809 6th 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	1 st Fl. Kitchen	192 sq. ft.
ST-HM-05B	Beige 12x12 Vinyl Tile	No	M	Category I	NA/ND	1 st Fl. Kitchen	NA
ST-HM-06A	Speckled Linoleum	No	M	Category I	ND	1 st Fl. Bedroom	NA
ST-HM-06B	Speckled Linoleum	No	M	Category I	ND	1 st Fl. Bedroom	NA
ST-HM-07A	White 2'x4' Pitted Ceiling Tile	Yes	M	Category II	ND	1 st Fl. Bedroom Ceiling	NA
ST-HM-07B	White 2'x4' Pitted Ceiling Tile	Yes	M	Category II	ND	1 st 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	1 st 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	M	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	M	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	1 st 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 material
 TSI = 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

Asbestos Containing Material Description and 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. ¼" 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
- S = 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.)			
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.

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 Cementitious “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.

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)

Project No.: 16-1070
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

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Muskegon County Land Bank
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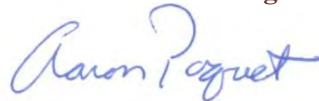
DISCLAIMER

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

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

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

Sincerely,
Red Cedar Consulting



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

Red Cedar Consulting

Attachment 1
APEX Research Laboratory Analytical Results

Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)



Project: 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 - 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% Other - 85%
Lab ID #: 64880 - 01a Cust. #: SS-HM-01A Material: Asphalt Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 3	Asbestos Present: NO No Asbestos Observed	Fiberglass - 15% Other - 85%
Lab ID #: 64880 - 01b Cust. #: SS-HM-01A 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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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64880 - 02 Cust. #: SS-HM-01B Material: Asphalt Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 3	Asbestos Present: NO No Asbestos Observed	Fiberglass - 15% Other - 85%
Lab ID #: 64880 - 02a Cust. #: SS-HM-01B Material: Asphalt Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 3	Asbestos Present: NO No Asbestos Observed	Fiberglass - 15% Other - 85%
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%

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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	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 64880 - 04 Cust. #: SS-HM-02B Material: Fiberglass Siding Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
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	Cellulose - 10% Fiberglass - 10% Other - 80%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64880 - 06 Cust. #: SS-HM-03B Material: Rolled Roofing Location: Appearance: black, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 64880 - 07 Cust. #: SS-HM-04A Material: Glazing Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64880 - 08 Cust. #: SS-HM-04B Material: Glazing Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64880 - 09 Cust. #: SS-HM-05A Material: Multilayer Linoleum/Flooring/Backing/Mastic Location: Appearance: blue, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 64880 - 10 Cust. #: SS-HM-05B Material: Multilayer Linoleum/Flooring/Backing/Mastic Location: Appearance: blue, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 64880 - 10a Cust. #: SS-HM-05B Material: Flooring/Backing Location: Appearance: beige, fibrous, nonhomogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
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 Chrysotile - 1.75% POINT COUNT RESULT	Other - 98.25%
Lab ID #: 64880 - 11a Cust. #: SS-HM-06A Material: Glue Location: Appearance: yellow, nonfibrous, homogenous Layer: 2 of 3	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64880 - 11b Cust. #: SS-HM-06A Material: Flooring/Backing Location: Appearance: beige, fibrous, nonhomogenous Layer: 3 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%

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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: NOT ANALYZED	
Lab ID #: 64880 - 12a Cust. #: SS-HM-06B Material: Glue Location: Appearance: yellow, nonfibrous, homogenous Layer: 2 of 3	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64880 - 12b Cust. #: SS-HM-06B Material: Flooring/Backing Location: Appearance: beige, fibrous, nonhomogenous Layer: 3 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
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% Other - 40%
Lab ID #: 64880 - 14 Cust. #: SS-HM-07B Material: Red Linoleum Location: Appearance: red, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 60% Other - 40%
Lab ID #: 64880 - 15 Cust. #: SS-HM-08A Material: Glazing Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64880 - 16 Cust. #: SS-HM-08B Material: Glazing Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64880 - 17 Cust. #: SS-HM-09A Material: White/Black Linoleum Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
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	Cellulose - 40% Other - 60%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64880 - 19 Cust. #: SS-HM-10A Material: Beige 12x12 Vinyl Tile Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 3	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64880 - 19a Cust. #: SS-HM-10A Material: Glue Location: Appearance: clear, nonfibrous, homogenous Layer: 2 of 3	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64880 - 19b Cust. #: SS-HM-10A Material: Sheet Flooring Location: Appearance: red, fibrous, nonhomogenous Layer: 3 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
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	Other - 100%
Lab ID #: 64880 - 20a Cust. #: SS-HM-10B Material: Glue Location: Appearance: clear, nonfibrous, homogenous Layer: 2 of 3	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64880 - 20b Cust. #: SS-HM-10B Material: Sheet Flooring Location: Appearance: red, fibrous, nonhomogenous Layer: 3 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
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	Other - 100%
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	Cellulose - 2% Other - 98%
Lab ID #: 64880 - 22 Cust. #: SS-HS-01B Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
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	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	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64880 - 23a Cust. #: SS-HS-01C Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 2% Other - 98%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
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	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	Cellulose - 2% Other - 98%
Lab ID #: 64880 - 25 Cust. #: SS-HS-01E Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0

Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)



Project: 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 - 25a Cust. #: SS-HS-01E 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 #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

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

Robert T. Letarte Jr., Laboratory Director

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



NVLAP Lab Code 102118-0

APEX Research, Inc.

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

E-mail: apexresearch@chartermi.net

Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566

Fax: (888) 448-8739

Date of Survey: 5-17-16

Project: 2813 Sixth St.

Project #:

Contact Person: Aaron Paquet

Lab Use Only
Log-In _____
Report _____

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour 72 hour

Other: TTP All Samples Except Plaster

Asbestos: Bulk Wipe _____ Point Count _____ PCM _____

Lead: Bulk _____ Wipe _____ Air _____ Paint _____ Soil _____

Mold: Bulk _____ Tape _____ Other _____ Viable _____

TEM: AHERA 7400 _____ Bulk/NOB _____ EPA Level II _____

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	SS-14M-01A	Asphalt Shingle			
2	SS-14M-01B	Asphalt Shingle			
3	SS-14M-02A	Fiberlign Siding			
4	SS-14M-02B	Fiberlign Siding			
5	SS-14M-03A	Roller Roofs			
6	SS-14M-03B	Roller Roofs			
7	SS-14M-04A	Cladding			
8	SS-14M-04B	Cladding			
9	SS-14M-05A	Multi-layer Linoleum			
10	SS-14M-05B	Multi-layer Linoleum			
11	SS-14M-06A	Beige 12x12 vinyl Tile			

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

Date: 5-17-16 Date: MAY 17 2016 1523

Relinquished by: _____ Received by: _____

Date: _____ Date: _____

REMOVED

64880

13 2 25 3

APEX Research, Inc.

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



Client Name: Red Cedar Consulting

Address: PO Box 13216
Lansing, MI 48901

City, St., Zip: Lansing, MI 48901

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

Date of Survey: 5-16-16

Project: 2813 Sixth St

Project #:

Contact Person: Aaron Paquet

Lab Use Only
Log-In _____
Report _____

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour 72 hour

Other: _____

TTP All Samples Except Plaster
TEM: AHERA 7400

Asbestos: Bulk Wipe _____ Point Count _____ PCM _____

Lead: Bulk _____ Wipe _____ Air _____ Paint _____ Soil _____

Mold: Bulk _____ Tape _____ BioSIS _____ Other _____ Viable _____

Plaster: _____ Bulk/NOB _____ EPA Level II _____

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	SS-HM-0613	Beige 12x12 vinyl tile			
13	SS-HM-0714	Red Linoleum			
14	SS-HM-0713	Red Linoleum			
13	SS-HM-0814	Glazing			
16	SS-HM-0813	Glazing			
17	SS-HM-0914	White & Red Linoleum			
14	SI-HM-0913	White & Black			
19	SS-HM-1014	Beige 12x12 vinyl tile			
20	SS-HM-1013	Beige 12x12 vinyl tile			
21	SS-HM-0114	Plaster			
22	SS-HM-0113	Plaster			

RECEIVED

Relinquished by: [Signature] Received by: [Signature] MAY 17 2016

Date: 5-17-16 Date: _____

Relinquished by: _____ Received by: _____

Date: _____ Date: _____

64880

Page 3 of 3

APEX Research, Inc.

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

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



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

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

Date of Survey: 5-15-16

Project: 2813 Sixth St.

Project #: _____

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour 72 hour

Other: _____

Asbestos: Bulk Wipe _____ Point Count _____ PCM _____

Lead: Bulk _____ Wipe _____ Air _____ Paint _____ Soil _____

Mold: Bulk _____ Tape _____ Biosis _____ Other _____ Viable _____

TEM: AHERA 7400 _____ Bulk/NOB _____ EPA Level II _____



All Samples Except Plaster

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
23	SS-MS-01C	Plaster			
24	SS-MS-01D				
25	SS-MS-01E	↓			

Relinquished by: [Signature] Received by: [Signature] Date: 5-17-16 Date: 5-17-2016

RECEIVED

Relinquished by: _____ Received by: _____

Date: _____ Date: _____

Lab Use Only
Log-In _____
Report _____

Tables

Table 1 - Summary of Hazardous Materials, 2813 6th 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	2
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	M	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

Notes:

Table 2 - Summary of Sample Descriptions and Asbestos Laboratory Results, 2813 6th St., Muskegon Heights, Michigan

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, 2813 6th St., Muskegon Heights, Michigan

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.

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, 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.)	HVAC Duct Wrap	Yes	40 sq. ft.
Rear Apt. (Misc. HVAC wrap in crawlspace, 25 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.

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
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

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

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.)

Project No.: 16-1070
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.

Project No.: 16-1070
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

Project No.: 16-1070
Muskegon County Land Bank
Parcel ID: 61-26-635-249-0024-00

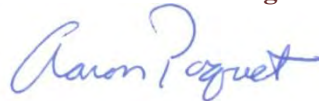
DISCLAIMER

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



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

Red Cedar Consulting

Attachment 1
APEX Research Laboratory Analytical Results



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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
Lab ID #: 65037 - 01 Cust. #: RI-HM-01A Material: Asphalt Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Fiberglass - 30% Other - 70%
Lab ID #: 65037 - 01a Cust. #: RI-HM-01A Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 60% Other - 40%
Lab ID #: 65037 - 02 Cust. #: RI-HM-01B Material: Asphalt Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 2	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.



NVLAP Lab Code 102118-0



Certificate of Laboratory 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
Lab ID #: 65037 - 02a Cust. #: RI-HM-01B Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 60% Other - 40%
Lab ID #: 65037 - 03 Cust. #: RI-HM-02A Material: Old Linoleum Location: Appearance: grey, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 65037 - 04 Cust. #: RI-HM-02B Material: Old Linoleum Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	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.



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Test Method, Polarized Light Microscopy (PLM)

Project: 2813 Riordan St.

Report To:

Mr. Aaron Paquet
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 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
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	Other - 100%
Lab ID #: 65037 - 06 Cust. #: RI-HM-03B Material: Glazing Location: Appearance: grey,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65037 - 07 Cust. #: RI-HM-04A Material: Glazing Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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
Lab ID #: 65037 - 08 Cust. #: RI-HM-04B Material: Glazing Location: Appearance: grey,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65037 - 09 Cust. #: RI-HS-01A Material: Stucco Location: Appearance: grey,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65037 - 10 Cust. #: RI-HS-01B Material: Stucco Location: Appearance: grey,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.



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Report To:
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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
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	Other - 100%
Lab ID #: 65037 - 12 Cust. #: RI-HS-01D Material: Stucco Location: Appearance: grey,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65037 - 13 Cust. #: RI-HS-01E Material: Stucco Location: Appearance: grey,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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
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	Other - 100%
Lab ID #: 65037 - 14a Cust. #: RI-HS-02A Material: Mortar Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 2% Other - 98%
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.



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Certificate of Laboratory 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	Non-Asbestos
Lab ID #: 65037 - 15a Cust. #: RI-HS-02B Material: Plaster Location: Appearance: white,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65037 - 16 Cust. #: RI-HS-02C Material: Plaster Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65037 - 16a Cust. #: RI-HS-02C 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.



NVLAP Lab Code 102118-0



Certificate of Laboratory 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
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	Other - 100%
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	Cellulose - 2% Other - 98%
Lab ID #: 65037 - 18 Cust. #: RI-HS-02E Material: Plaster Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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
Lab ID #: 65037 - 18a Cust. #: RI-HS-02E Material: Mortar Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

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

Robert T. Letarte Jr., Laboratory Director

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



NVLAP Lab Code 102118-0

Apex Research, Inc.

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



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

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

Date of Survey: 5.22.16

Project: 2813 Riordan St.

Project #:

Contact Person: Aaron Paquet

Lab Use Only
 Log-In _____
 Report _____

Turn Around Times: (Circle One)

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

Rush 24 hour

48 hour 72 hour

Other: **TFP** All Samples Except Plaster

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

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	R1-HM-01A	Asphalt Shingle			
2	R1-HM-01B	Asphalt Shingle			
3	R1-HM-02A	Old Linoleum			
4	R1-HM-02B	Old Linoleum			
5	R1-HM-03A	Glazing			
6	R1-HM-03B	Glazing			
7	R1-HM-04A	Glazing			
8	R1-HM-04B	Glazing			
9	R1-HS-01A	Stucco			
10	R1-HS-01B	Stucco			
11	R1-HS-01C	Stucco			

Relinquished by: [Signature] Received by: [Signature] 1955

Date: 5/23/16 Date: MAY 23 2016

Relinquished by: _____ Received by: _____

Date: _____ Date: _____

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



Client Name: Red Cedar Consulting

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Lab Use Only
Log-In _____
Report _____

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

Rush 24 hour

48 hour 72 hour

Other: TTP All Samples Except Plaster
Mold: Bulk _____ Tape _____ Biosis _____ Other _____ Viable _____
Asbestos: Bulk Wipe _____ Point Count _____ PCM _____
Lead: Bulk _____ Wipe _____ Air _____ Paint _____ Soil _____
TEM: AHERA 7400 Bulk/NOB _____ EPA Level II _____

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	R1-HS-01D	Stucco			
13	R1-HS-01E	Stucco			
14	R1-HS-02A	Plaster			
15	R1-HS-02B	Plaster			
16	R1-HS-02C	Plaster			
17	R1-HS-02D	Plaster			
18	R1-HS-02E	Plaster			

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

Date: 5-23-16 Date: MAY 23 2016

Relinquished by: _____ Received by: _____

Date: _____ Date: _____

Tables

Table 1 - Summary of Hazardous Materials, 2813 Riordan St., Muskegon Heights, Michigan

Hazardous Materials Description and Location		
Location	Material Description	Quantity
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

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, 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.) Basement (Misc. HVAC Tape on Basement Beam, 1 sq. ft.)	HVAC Duct Wrap	Yes	Fair	TSI	141 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, 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.)	HVAC Duct Wrap	Yes	141 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.)			
	Total		141 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*
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.

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 Cementitious “Transite” Siding on the Building was classified as PACM due to the age of the structure and samples were not collected.

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

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

Friable ACM's

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

Category I ACM

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

Category II ACM

The cementitious "Transite" siding located on the exterior of the Building was classified as PACM and no samples were collected. The visual assessment to quantify the extent of this material identified 1,150 sq. ft. of cementitious (Transite) siding on the Building.

RECOMMENDATIONS

Asbestos Containing Materials

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

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

Hazardous Materials

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

- 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.

Project No.: 16-1070
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

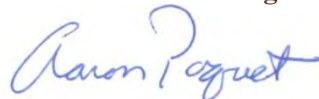
DISCLAIMER

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)

Red Cedar Consulting

Attachment 1
APEX Research Laboratory Analytical Results



Certificate of Laboratory 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	Non-Asbestos
Lab ID #: 65032 - 01 Cust. #: RD-HM-01A Material: Asphalt Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 65032 - 02 Cust. #: RD-HM-01B Material: Asphalt Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 65032 - 03 Cust. #: RD-HM-02A Material: Tan Linoleum Location: Appearance: beige, 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

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



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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 - 04 Cust. #: RD-HM-02B Material: Tan Linoleum Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 65032 - 05 Cust. #: RD-HM-03A Material: White Linoleum Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
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	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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Certificate of Laboratory 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	Non-Asbestos
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	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65032 - 07 Cust. #: RD-HM-04A Material: Drywall 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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Certificate of Laboratory 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	Non-Asbestos
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	Cellulose - 20% Other - 80%
Lab ID #: 65032 - 08a Cust. #: RD-HM-04B Material: Joint Compound Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65032 - 09 Cust. #: RD-HM-05A Material: Glazing Location: Appearance: beige, 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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NVLAP Lab Code 102118-0



Certificate of Laboratory 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	Non-Asbestos
Lab ID #: 65032 - 10 Cust. #: RD-HM-05B Material: Glazing Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 65032 - 11 Cust. #: RD-HM-06A Material: White 2x4 Ceiling Tile Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 25% Mineral Wool - 25% Other - 50%
Lab ID #: 65032 - 12 Cust. #: RD-HM-06B Material: White 2x4 Ceiling Tile Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 25% Mineral Wool - 25% Other - 50%

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

Robert T. Letarte Jr., Laboratory Director

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Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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 - 13 Cust. #: RD-HS-01A Material: Plaster Location: Appearance: grey, fibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 65032 - 13a Cust. #: RD-HS-01A Material: Mortar Location: Appearance: grey, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65032 - 14 Cust. #: RD-HS-01B Material: Plaster Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



Certificate of Laboratory 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	Non-Asbestos
Lab ID #: 65032 - 14a Cust. #: RD-HS-01B Material: Mortar Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 65032 - 15 Cust. #: RD-HS-01C Material: Plaster Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65032 - 15a Cust. #: RD-HS-01C 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.



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Certificate of Laboratory Analysis

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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 - 16 Cust. #: RD-HS-01D Material: Plaster Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65032 - 16a Cust. #: RD-HS0-1D Material: Mortar Location: Appearance: grey,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
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	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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 - 17a Cust. #: RD-HS-01E Material: Mortar Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0

65032

ALPHA Research, Inc.

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



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

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

Date of Survey: 5-22-16

Project: 2819 Riordan St.

Project #:

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush

24 hour

48 hour 72 hour

Other: TTIP All Samples Except Plaster
Asbestos: Bulk Wipe Point Count PCM
Lead: Bulk Wipe Air Paint Soil
Mold: Bulk Tape BioSIS Other Viable
TEEM: AHERA 7400 Bulk/NOB EPA Level II

Lab Use Only
Log-In _____
Report _____

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	RD-HM-01A	Asphalt Shingle			
2	RD-HM-01B	Asphalt Shingle			
3	RD-HM-02A	Tan Linoleum			
4	RD-HM-02B	Tan Linoleum			
5	RD-HM-03A	White Linoleum			
6	RD-HM-03B	White Linoleum			
7	RD-HM-04A	Drywall			
8	RD-HM-04B	Drywall			
9	RD-HM-05A	Glazing			
10	RD-HM-05B	Glazing			
11	RD-HM-06A	White Dry Ceiling Tile			

Relinquished by: [Signature] Received by: [Signature] MAY 23 2016

Date: 5-23-16

Date: _____

Relinquished by: _____ Received by: _____

Date: _____

Date: _____

65032

pg. 2 of 2

APEX Research, Inc.

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



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

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

Date of Survey: 5.22.16

Project: 2819 Riordan St.

Project #:

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

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

Rush

24 hour

Asbestos: Bulk

Wipe

Point Count

PCM

48 hour

72 hour

Lead: Bulk

Wipe

Air

Paint

Soil

Other:

TTIP

All Samples Except Plaster

Mold: Bulk

Tape

BioSIS

Other

Viable

TEMI: AHERA 7400

Bulk/NOB

EPA Level II

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	RD-4M-06B	White 2x4 Ceiling Tile			
13	RD-HS-01A	Plaster			
14	RD-HS-01B	Plaster			
15	RD-HS-01C	Plaster			
16	RD-HS-01D	Plaster			
17	RD-HS-01E	Plaster			

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

Date: 5-23-16 Date: MAY 23 2016

Relinquished by: _____ Received by: _____

Date: _____ Date: _____

Lab Use Only
Log-In: _____
Report: _____

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
 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

Asbestos Containing Material Description and 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 Materials			
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.

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.

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.

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).

Project No.: 16-1070
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



Certificate of Laboratory 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 - 01 Cust. #: ST-HM-01A Material: Asphalt Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 64732 - 02 Cust. #: ST-HM-01B Material: Asphalt Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 64732 - 03 Cust. #: ST-HM-02A Material: Asphalt Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	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.



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 2829 Jefferson St.

Report To:
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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 - 04 Cust. #: ST-HM-02B Material: Asphalt Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Fiberglass - 30% Other - 70%
Lab ID #: 64732 - 05 Cust. #: ST-HM-03A Material: White Linoleum Location: Appearance: white, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%
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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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 - 07 Cust. #: ST-HM-04A Material: Beige Linoleum Location: Appearance: grey,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64732 - 07a Cust. #: ST-HM-04A Material: Glue Location: Appearance: yellow,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64732 - 08 Cust. #: ST-HM-04B Material: Beige Linoleum Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



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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	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64732 - 09 Cust. #: ST-HM-05A Material: Joint Compound Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
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	Cellulose - 20% Other - 80%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



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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%
Lab ID #: 64732 - 10a Cust. #: ST-HM-05B Material: Joint Compound Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
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	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



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ARI Report # 16-64732
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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 - 12 Cust. #: ST-HM-06B Material: Glazing Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64732 - 13 Cust. #: ST-HM-07A Material: Brown Linoleum Location: Appearance: grey, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64732 - 14 Cust. #: ST-HM-07B Material: Brown Linoleum Location: Appearance: grey, 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

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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 - 15 Cust. #: ST-HS-01A Material: Plaster Location: Appearance: grey,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
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	Cellulose - 2% Other - 98%
Lab ID #: 64732 - 17 Cust. #: ST-HS-01C Material: Plaster Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



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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	Cellulose - 2% Other - 98%
Lab ID #: 64732 - 18 Cust. #: ST-HS-01D Material: Plaster Location: Appearance: grey, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64732 - 19 Cust. #: ST-HS-01E Material: Plaster Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0

Apex #
64732

pg. 1 of 2

APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990



E-mail: apexresearch@charterni.net Fax: 734-449-9991

Client Name: Red Cedar Consulting

Date of Survey: 5-7-16

Address: PO Box 13216

Project: 2829 Jefferson St.

City, St., Zip: Lansing, MI 48901

Project #:

Phone: (888) 449-4566 Fax: (888) 448-8739

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. apaquet@redcedarconsulting.net

Rush 24 hour

Asbestos: Bulk Wipe Point Count PCM

48 hour 72 hour

Lead: Bulk Wipe Air Paint Soil

Other: 5 Day **TTP** All Samples Except Plaster Mold: Bulk Tape BiosIS Other Viable
TEMI: AHERA 7400 Bulk/NOB EPA Level II

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	ST-Hm-01A	Asphalt Shingle			
2	ST-Hm-01B	Asphalt Shingle			
3	ST-Hm-02A	Asphalt Shingle			
4	ST-Hm-02B	Asphalt Shingle			
5	ST-Hm-03A	White Linoleum			
6	ST-Hm-03B	White Linoleum			
7	ST-Hm-04A	Beige Linoleum			
8	ST-Hm-04B	Beige Linoleum			
9	ST-Hm-05A	Daywall			
10	ST-Hm-05B	Daywall			
11	ST-Hm-06A	Glazing			

Lab Use Only
Log-In _____
Report _____

Relinquished by: Carmen Paquet Received by: WPS

Relinquished by: [Signature]

Received by: _____

Date: 5-10-16

Date: 5-10-16

Date: MAY 11 2016

Date: _____

64732

APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189
Phone: 734-449-9990
E-mail: apexresearch@chartermi.net
Fax: 734-449-9991



pg. 2 of 2

Client Name: Red Cedar Consulting

Address: PO Box 13216
Lansing, MI 48901

City, St., Zip: Phone: (888) 449-4566 Fax: (888) 448-8739

Project #: 2829 Jefferson St.

Turn Around Times: (Circle One) Rush 24 hour 48 hour 72 hour Other: 5 Day

PLM EPA 600, PC all samples with a detection of <5% ACM.
apaguett@redcedarconsulting.net

Contact Person: Aaron Paquet

Lab Use Only
Log-In _____
Report _____

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
B	ST-HM-06B	Glazing			
13	ST-HM-07A	Brown Linoleum			
14	ST-HM-07B	Brown Linoleum			
15	ST-HS-01A	Plaster			
16	ST-HS-01B	Plaster			
17	ST-HS-01C	Plaster			
18	ST-HS-01D	Plaster			
19	ST-HS-01E	Plaster			

Asbestos: Bulk Wipe _____ Point Count _____ PCM _____
 Lead: Bulk _____ Wipe _____ Air _____ Paint _____ Soil _____
 Mold: Bulk _____ Tape _____ BIOSIS _____ Other _____ Viable _____
 TEM: AHERA 7400 _____ Bulk/NOB _____ EPA Level II _____

Relinquished by: [Signature] Received by: [Signature]
 Date: 5-10-16 Date: 5-10-16

Relinquished by: [Signature] Received by: _____
 Date: _____ Date: _____

RECEIVED

MAY 11 2016

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

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, 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					

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, 2829 Jefferson St., Muskegon Heights, Michigan

Exterior - Asbestos Containing Materials			
Location	Material Description	Friable	Approx. Quantity
No Asbestos Containing Materials Identified			

Notes:

Abbreviations

lin. ft. = linear feet

sq. ft. = square feet

Shaded/Bolded = Friable ACM and any Category I and Category II non-friable ACM that has a high probability of becoming crumbled, pulverized, or reduced to powder by the demolition or renovation activities that must be properly abated prior to commencement of any demolition/renovation activities.

Demolition/renovation activities completed with intact Category I non-friable ACM are regulated by OSHA and must be completed following the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) which limits employee exposure to asbestos.

Please note that a Negative Pressure Enclosure must be utilized during abatement when Site Conditions Warrant. Examples of these conditions include the abatement of Plaster and Vermiculite insulation, HVAC Duct Wrap in Poor Condition, and Air-O-Cell/Mag Pipe Wrap. Conditions outside of these should be assessed on a case by case basis during the Asbestos Abatement Contractors site walk and Work Plan Preparation.



P.O. Box 13216
Lansing, MI 48901
Phone: 888.449.4566
Fax: 888.448.8739
www.redcedarconsulting.net

May 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.

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.

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.

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.

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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

Project No.: 16-1070
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



Aaron Paquet
Michigan/EPA Certified Asbestos Building Inspector
(A30955)

Red Cedar Consulting

Attachment 1
APEX Research Laboratory Analytical Results



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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 - 01 Cust. #: HS-HM-01A Material: Asphalt Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 65039 - 02 Cust. #: HS-HM-01B Material: Asphalt Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 65039 - 03 Cust. #: HS-HM-02A Material: Rolled Roofing Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	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.



NVLAP Lab Code 102118-0



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Date Analyzed: 05/25/16
Date Reported: 05/25/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
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	Cellulose - 5% Other - 95%
Lab ID #: 65039 - 05 Cust. #: HS-HM-03A Material: Blue 12x12 Vinyl Tile Location: Appearance: green, nonfibrous, homogenous Layer: 1 of 3	Asbestos Present: NO No Asbestos Observed	Other - 100%
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% Other - 80%

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Date Reported: 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	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65039 - 06 Cust. #: HS-HM-03B Material: Blue 12x12 Vinyl Tile Location: Appearance: green, nonfibrous, homogenous Layer: 1 of 3	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65039 - 06a Cust. #: HS-HM-03B Material: Red Linoleum Location: Appearance: brown, fibrous, homogenous Layer: 2 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%

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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 Layer: 3 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
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 No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 65039 - 07a Cust. #: HS-HM-04A Material: Pink 12x12 Vinyl Tile Multilayer Location: Appearance: beige, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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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	Asbestos Present: NO No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 65039 - 08a Cust. #: HS-HM-04B Material: Pink 12x12 Vinyl Tile Multilayer Location: Appearance: pink, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
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	Cellulose - 10% Fiberglass - 10% Other - 80%

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Date Analyzed: 05/25/16
Date Reported: 05/25/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
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	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 65039 - 11 Cust. #: HS-HM-06A Material: White 12x12 Vinyl Tile Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
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	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 65039 - 13 Cust. #: HS-HM-07A Material: Glazing Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 5%	Other - 95%
Lab ID #: 65039 - 14 Cust. #: HS-HM-07B Material: Glazing Location: Appearance: Layer: of	Asbestos Present: 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%

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Date Reported: 05/25/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 65039 - 16 Cust. #: HS-HM-08B Material: White Rose 12x12 Vinyl Tile Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65039 - 17 Cust. #: HS-HM-09A Material: Old Linoleum Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%
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	Cellulose - 40% Other - 60%

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Date Analyzed: 05/25/16
Date Reported: 05/25/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
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 - 30% Other - 70%
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 - 60% Other - 40%
Lab ID #: 65039 - 20 Cust. #: HS-HM-10B Material: Blue Linoleum Location: Appearance: blue, fibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%

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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 - 20a Cust. #: HS-HM-10B Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 60% Other - 40%
Lab ID #: 65039 - 21 Cust. #: HS-HM-11A Material: Joint Compound Location: Appearance: white, fibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 65039 - 21a Cust. #: HS-HM-11A Material: Drywall Location: Appearance: grey, 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.



NVLAP Lab Code 102118-0



Certificate of Laboratory 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 - 22 Cust. #: HS-HM-11B Material: Joint Compound Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65039 - 22a Cust. #: HS-HM-11B Material: Drywall Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
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	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



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Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 2905 Howden St

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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 #: 65039 - 23a Cust. #: HS-HS-01A Material: Mortar Location: Appearance: grey,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65039 - 24 Cust. #: HS-HS-01B Material: Plaster Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65039 - 24a Cust. #: HS-HS-01B 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.



NVLAP Lab Code 102118-0



Certificate of Laboratory 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 - 25 Cust. #: HS-HS-01C Material: Plaster Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65039 - 25a Cust. #: HS-HS-01C Material: Mortar Location: Appearance: grey,fibrous,homogenous Layer: 2 of 2	Asbestos Present: NO Chrysotile - 0.50% POINT COUNT RESULT	Other - 99.50%
Lab ID #: 65039 - 26 Cust. #: HS-HS-01D Material: Plaster Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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	Asbestos Present: NO No Asbestos Observed	Other - 100%
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	Cellulose - 20% Other - 80%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0

65039

AIR EA Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990



E-mail: apexresearch@chartermi.net

Fax: 734-449-9991

Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 5-22-16

Project: 2905 Howden St.

Project #:

Contact Person: Aaron Paquet

Lab Use Only
Log-In _____
Report _____

Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. apaquet@redcedarconsulting.net

Rush 24 hour

48 hr 72 hour

Other: _____

TTIP All Samples Except Plaster

Asbestos: Bulk Wipe _____ Point Count _____ PCM _____
 Lead: Bulk _____ Wipe _____ Air _____ Paint _____ Soil _____
 Mold: Bulk _____ Tape _____ Biosis _____ Other _____ Viable _____
 TEM: AHERA 7400 Bulk/NOB _____ EPA Level II _____

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	HS-Hm-01A	Asphalt Shingle			
2	HS-Hm-01B	Asphalt Shingle			
3	HS-Hm-02A	Roller Roofing			
4	HS-Hm-02B	Roller Roofing			
5	HS-Hm-03A	Red Linoleum over Blue 12x12 Vinyl Tile			
6	HS-Hm-03B	Red Linoleum over Blue 12x12 Vinyl Tile			
7	HS-Hm-04A	Pink 12x12 Vinyl Tile Multilayer			
8	HS-Hm-04B	Pink 12x12 Vinyl Tile Multilayer			
9	HS-Hm-05A	Stone Linoleum			
10	HS-Hm-05B	Stone Linoleum			
11	HS-Hm-06A	White 12x12 Vinyl Tile			

Relinquished by: _____ Received by: _____

Date: 5-23-16 Date: MAY 23 2016

Relinquished by: _____ Received by: _____

Date: _____ Date: _____

RECEIVED

65639

pg. 2 of 3

APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189

Phone: 734-449-9990
E-mail: apexresearch@chartermi.net
Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216
Lansing, MI 48901

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 5.22.16

Project: 2905 Howard St.

Project #:

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

Rush 24 hour
48 hour 72 hour
Other: All Samples Except Plaster

Asbestos: Bulk Wipe Point Count PCM

Lead: Bulk Wipe Air Paint Soil

Mold: Bulk Tape BioSIS Other Viable

TEM: AHERA 7400 Bulk/NOB EPA Level II

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	HS-HM-06B	White 12x12 Vinyl Tile			
13	HS-HM-07A	Glazing			
14	HS-HM-07B	Glazing			
15	HS-HM-08A	White Rose 12x12 Vinyl Tile			
16	HS-HM-08B	White Rose 12x12 Vinyl Tile			
17	HS-HM-09A	Old Linoleum			
18	HS-HM-09B	Old Linoleum			
19	HS-HM-10A	Blue Linoleum			
20	HS-HM-10B	Blue Linoleum			
21	HS-HM-11A	Daywall			
22	HS-HM-11B	Daywall			

RECEIVED

Relinquished by:

Received by:

Date: 5-23-16

Date: MAY 23 2016

Relinquished by: _____

Received by: _____

Date: _____

Date: _____

65039

pg. 3 of 3

APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990



E-mail: apexresearch@chartermi.net Fax: 734-449-9991

Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: _____

Project: _____

Project #: _____

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. apaquet@redcedarconsulting.net

Rush 24 hour

48 hour 72 hour

Other: _____

Asbestos: Bulk Wipe _____ Point Count _____ PCM _____

Lead: Bulk _____ Wipe _____ Air _____ Paint _____ Soil _____

Mold: Bulk _____ Tape _____ Biosis _____ Other _____ Viable _____

TEM: AHERA 7400 _____ Bulk/NOB _____ EPA Level II _____

TTP All Samples Except Plaster

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
23	HS-HS-01A	Plaster			
24	HS-HS-01B	Plaster			
25	HS-HS-01C	Plaster			
26	HS-HS-01D	Plaster			
27	HS-HS-01E	Plaster			

RECEIVED

Relinquished by: [Signature] Received by: [Signature]

Date: 5-23-16 Date: MAY 23 2016

Relinquished by: _____ Received by: _____

Date: _____ Date: _____

Lab Use Only
Log-In _____
Report _____

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	M	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:

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, 2905 Howden St., Muskegon Heights, Michigan

Asbestos Containing Material Description and 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

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, 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.)	¼" ACM Board	Yes	70 sq. ft.
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) 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) 2 nd Fl. Dining (2 windows 34" wide x 52" tall) 2 nd Fl. Living (4 windows 34" wide x 52" tall) 2 nd Fl. W Room (10 windows 26" wide x 36" tall) 2 nd Fl. E Bedroom (1 window 34" wide x 52" tall)	Glazing	Yes	2 Windows 1 Window 1 Window 1 Window 2 Windows 1 Window 2 Windows 4 Windows 10 Windows 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
	Total		648 sq. ft. at 4" depth

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
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.

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.

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.

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

Project No.: 16-1070
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



Certificate of Laboratory 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	Non-Asbestos
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	Fiberglass - 20% Other - 80%
Lab ID #: 64729 - 01b Cust. #: JS-HM-01A Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 3 of 4	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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Sample Information	Asbestos Type/Percent	Non-Asbestos
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%
Lab ID #: 64729 - 02 Cust. #: JS-HM-01B Material: Asphalt Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 4	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 64729 - 02a Cust. #: JS-HM-01B Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 4	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
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 - 30% Other - 70%
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	Cellulose - 35% Other - 75%
Lab ID #: 64729 - 03 Cust. #: JS-HM-02A Material: Wood Grain Vinyl Tile Location: Appearance: brown, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
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	Other - 100%
Lab ID #: 64729 - 04 Cust. #: JS-HM-02B Material: Wood Grain Vinyl Tile Location: Appearance: brown,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64729 - 04a Cust. #: JS-HM-02B Material: Mastic Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
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 - 20% Fiberglass - 10% Other - 70%
Lab ID #: 64729 - 05a Cust. #: JS-HM-03A Material: Flooring Location: Appearance: orange, fibrous, nonhomogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 64729 - 06 Cust. #: JS-HM-03B Material: Brown Linoleum Multilayer Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Fiberglass - 10% Other - 70%

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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	Asbestos Present: NO No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 64729 - 07 Cust. #: JS-HM-04A Material: Mottled Beige 12"x12" Vinyl Tile Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64729 - 07a Cust. #: JS-HM-04A Material: Mastic Location: Appearance: yellow, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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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	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	Other - 100%
Lab ID #: 64729 - 09 Cust. #: JS-HM-05A Material: Beige Linoleum Multilayer Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 6	Asbestos Present: NO No Asbestos Observed	Fiberglass - 10% Other - 90%

For Layered Samples, each component will be analyzed and reported separately.

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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%
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%
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	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

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Sample Information	Asbestos Type/Percent	Non-Asbestos
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	Other - 100%
Lab ID #: 64729 - 09e Cust. #: JS-HM-05A Material: Flooring Location: Appearance: beige,fibrous,nonhomogenous Layer: 6 of 6	Asbestos Present: NO No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 64729 - 10 Cust. #: JS-HM-05B Material: Beige Linoleum Multilayer Location: Appearance: beige,fibrous,nonhomogenous Layer: 1 of 6	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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Date Reported: 05/18/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64729 - 10a Cust. #: JS-HM-05B Material: Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 2 of 6	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Fiberglass - 10% Other - 70%
Lab ID #: 64729 - 10b Cust. #: JS-HM-05B Material: Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 3 of 6	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Fiberglass - 10% Other - 70%
Lab ID #: 64729 - 10c Cust. #: JS-HM-05B Material: Floor Tile Location: Appearance: beige, nonfibrous, homogenous Layer: 4 of 6	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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Sample Information	Asbestos Type/Percent	Non-Asbestos
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	Other - 100%
Lab ID #: 64729 - 10e Cust. #: JS-HM-05B Material: Flooring Location: Appearance: beige,fibrous,nonhomogenous Layer: 6 of 6	Asbestos Present: NO No Asbestos Observed	Cellulose - 35% Other - 65%
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.

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64729 - 11a Cust. #: JS-HM-06A Material: Floor Tile Location: Appearance: grey,nonfibrous,homogenous Layer: 2 of 3	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64729 - 11b Cust. #: JS-HM-06A Material: Mastic Location: Appearance: clear,nonfibrous,homogenous Layer: 3 of 3	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64729 - 12 Cust. #: JS-HM-06B Material: Grey Linoleum Location: Appearance: beige,fibrous,nonhomogenous Layer: 1 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Fiberglass - 10% Other - 70%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
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	Other - 100%
Lab ID #: 64729 - 12b Cust. #: JS-HM-06B Material: Mastic Location: Appearance: clear,nonfibrous,homogenous Layer: 3 of 3	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64729 - 13 Cust. #: JS-HM-07A Material: Old Linoleum Location: Appearance: brown,fibrous,nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 35% Other - 65%

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Date Analyzed: 05/17/16
Date Reported: 05/18/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64729 - 14 Cust. #: JS-HM-07B Material: Old Linoleum Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 64729 - 15 Cust. #: JS-HM-08A Material: Stone Linoleum Multilayer Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Fiberglass - 10% Other - 70%
Lab ID #: 64729 - 15a Cust. #: JS-HM-08A Material: Flooring Location: Appearance: brown, fibrous, nonhomogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%

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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
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Sample Information	Asbestos Type/Percent	Non-Asbestos
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 - 20% Fiberglass - 10% Other - 70%
Lab ID #: 64729 - 16a Cust. #: JS-HM-08B Material: Flooring Location: Appearance: brown, fibrous, nonhomogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 64729 - 17 Cust. #: JS-HM-09A Material: Fiberboard over Linoleum/Flooring Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 35% Other - 65%

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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	Asbestos Present: NO No Asbestos Observed	Cellulose - 85% Other - 15%
Lab ID #: 64729 - 18 Cust. #: JS-HM-09B Material: Fiberboard over Linoleum/Flooring Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 35% Other - 65%
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	Cellulose - 85% Other - 15%

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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	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Fiberglass - 10% Other - 70%
Lab ID #: 64729 - 19a Cust. #: JS-HM-10A Material: Floor Tile Location: Appearance: black, nonfibrous, homogenous Layer: 2 of 6	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64729 - 19b Cust. #: JS-HM-10A Material: Mastic Location: Appearance: clear, nonfibrous, homogenous Layer: 3 of 6	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
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	Other - 100%
Lab ID #: 64729 - 19d Cust. #: JS-HM-10A Material: Mastic Location: Appearance: clear,nonfibrous,homogenous Layer: 5 of 6	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64729 - 19e Cust. #: JS-HM-10A Material: Flooring Location: Appearance: beige,fibrous,nonhomogenous Layer: 6 of 6	Asbestos Present: NO No Asbestos Observed	Cellulose - 35% Other - 65%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64729 - 20 Cust. #: JS-HM-10B Material: Grey Linoleum Multilayer Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 6	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Fiberglass - 10% Other - 70%
Lab ID #: 64729 - 20a Cust. #: JS-HM-10B Material: Floor Tile Location: Appearance: black, nonfibrous, homogenous Layer: 2 of 6	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64729 - 20b Cust. #: JS-HM-10B Material: Mastic Location: Appearance: clear, nonfibrous, homogenous Layer: 3 of 6	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
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	Other - 100%
Lab ID #: 64729 - 20d Cust. #: JS-HM-10B Material: Mastic Location: Appearance: clear,nonfibrous,homogenous Layer: 5 of 6	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64729 - 20e Cust. #: JS-HM-10B Material: Flooring Location: Appearance: beige,fibrous,nonhomogenous Layer: 6 of 6	Asbestos Present: NO No Asbestos Observed	Cellulose - 35% Other - 65%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64729 - 21 Cust. #: JS-HM-11A 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%
Lab ID #: 64729 - 22 Cust. #: JS-HM-11B 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%
Lab ID #: 64729 - 23 Cust. #: JS-HM-12A Material: Glue Pod Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 1.25% POINT COUNT RESULT	Other - 98.75%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64729 - 24 Cust. #: JS-HM-12B Material: Glue Pod Location: Appearance: Layer: of	Asbestos Present: NOT ANALYZED	
Lab ID #: 64729 - 25 Cust. #: JS-HM-13A Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
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	Cellulose - 20% Other - 80%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64729 - 26a Cust. #: JS-HM-13B Material: Joint Compound Location: Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: YES Chrysotile - 1.50% POINT COUNT RESULT	Other - 98.50%
Lab ID #: 64729 - 27 Cust. #: JS-HM-14A Material: Glazing Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64729 - 28 Cust. #: JS-HM-14B Material: Glazing Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
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	Fiberglass - 15% Other - 85%
Lab ID #: 64729 - 29a Cust. #: JS-HM-15B Material: Mastic Location: Appearance: yellow, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64729 - 30 Cust. #: JS-HM-15B Material: Tan Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Fiberglass - 15% Other - 85%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64729 - 30a Cust. #: JS-HM-15B Material: Mastic Location: Appearance: yellow,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64729 - 31 Cust. #: JS-HM-16A Material: Rust Linoleum Location: Appearance: beige,nonfibrous,homogenous Layer: 1 of 4	Asbestos Present: NO No Asbestos Observed	Other - 100%
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	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64729 - 31b Cust. #: JS-HM-16A Material: Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 3 of 4	Asbestos Present: NO No Asbestos Observed	Fiberglass - 15% Other - 85%
Lab ID #: 64729 - 31c Cust. #: JS-HM-16A Material: Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 4 of 4	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Fiberglass - 10% Other - 70%
Lab ID #: 64729 - 32 Cust. #: JS-HM-16B Material: Rust Linoleum Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 4	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64729 - 32a Cust. #: JS-HM-16B Material: Mastic Location: Appearance: clear, nonfibrous, homogenous Layer: 2 of 4	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64729 - 32b Cust. #: JS-HM-16B Material: Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 3 of 4	Asbestos Present: NO No Asbestos Observed	Fiberglass - 15% Other - 85%
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%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
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	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64729 - 33a Cust. #: JS-HM-17A Material: Mastic Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
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	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64729 - 34a Cust. #: JS-HM-17B Material: Mastic Location: Appearance: clear, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64729 - 35 Cust. #: JS-HM-18A Material: Slate Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Fiberglass - 10% Other - 90%
Lab ID #: 64729 - 36 Cust. #: JS-HM-18B Material: Slate Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Fiberglass - 10% Other - 90%

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Date Reported: 05/18/16

Sample Information	Asbestos Type/Percent	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	Asbestos Present: NO No Asbestos Observed	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

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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 - 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 - 95% Other - 5%
Lab ID #: 64729 - 41 Cust. #: JS-HM-21A Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 64729 - 42 Cust. #: JS-HM-21B Material: Texture Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

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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	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 64729 - 43 Cust. #: JS-HM-22A Material: Fiberboard/Ceiling Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 95% Other - 5%
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 - 95% Other - 5%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

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Project: 2916 Jefferson St.

Report To:

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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 - 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%
Lab ID #: 64729 - 46 Cust. #: JS-HM-23B Material: Felt Paper Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 64729 - 47 Cust. #: JS-HM-24A Material: Green 12"x12" Vinyl Tile Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

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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 - 47a Cust. #: JS-HM-24A Material: Mastic Location: Appearance: yellow,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	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	Asbestos Present: NO No Asbestos Observed	Other - 100%
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	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

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Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

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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 - 49 Cust. #: JS-HM-25A Material: Glazing Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64729 - 50 Cust. #: JS-HM-25B Material: Glazing Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64729 - 51 Cust. #: JS-HS-01A Material: Plaster Finish Coat Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

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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 - 51a Cust. #: JS-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 #: 64729 - 52 Cust. #: JS-HS-01B Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
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%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

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Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 2916 Jefferson St.

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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 - 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	Other - 98.25%
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	Cellulose - 2% Other - 98%
Lab ID #: 64729 - 54 Cust. #: JS-HS-01D Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

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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 - 54a Cust. #: JS-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%
Lab ID #: 64729 - 55 Cust. #: JS-HS-01E Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64729 - 55a Cust. #: JS-HS-01E Material: Plaster 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

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NVLAP Lab Code 102118-0

64729

ARPA Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

E-mail: apexresearch@chartemi.net Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St, Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 5-7-16

Project: 2916 Jefferson St.

Project #:

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. apaquet@redcedarconsulting.net

Rush 24 hour

48 hour 72 hour

Other: 5 Day

TTP All Samples Except Plaster

Asbestos: Bulk X Wipe _____

Lead: Bulk _____ Wipe _____

Point Count _____ PCM _____

Air _____ Paint _____

Soil _____

Mold: Bulk _____ Tape _____

Biosis _____ Other _____

Viabile _____

TEEM: AHERA 7400 Bulk/NOB _____ EPA Level II _____

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	JS-HM-01A	Asphalt Shingle			
2	JS-HM-01B	Asphalt Shingle			
3	JS-HM-02A	Wood Grain Vinyl Tile			
4	JS-HM-02B	Wood Grain Vinyl Tile			
5	JS-HM-03A	Brown Linoleum Multilayer			
5	JS-HM-03B	Brown Linoleum Multilayer			
7	JS-HM-04A	Mottled Beige 12"x12" Vinyl Tile			
8	JS-HM-04B	Mottled Beige 12"x12" Vinyl Tile			
9	JS-HM-05A	Beige Linoleum Multilayer			
10	JS-HM-05B	Beige Linoleum Multilayer			
11	JS-HM-06A	Gray Linoleum			

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Date: 5-10-16

Date: 5-10-16

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Date: _____ Date: _____

APEX RESEARCH

611 Fax

PS. 2055

APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

E-mail: apexresearch@chartermi.net Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216 Lansing, MI 48901

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 5-7-16

Project: 2alle Jefferson St.

Project #:

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. apaquet@redcedarconsulting.net

Rush 24 hour

48 hour 72 hour

Other: **TRP** All Samples Except Plaster TEM: AHERA 7400 Bulk/NOB EPA Level II

Asbestos: Bulk Wipe Point Count PCM

Lead: Bulk Wipe Air Paint Soil

Mold: Bulk Tape Biosis Other Viable

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	JS-HM-060B	Gray Linoleum			
13	JS-HM-07A	Old Linoleum			
14	JS-HM-07B	Old Linoleum			
15	JS-HM-08A	Stone Linoleum Multilayer			
16	JS-HM-08B	Stone Linoleum Multilayer			
17	JS-HM-09A	Fiberboard over Linoleum			
18	JS-HM-09B	Fiberboard over Linoleum			
19	JS-HM-10A	Gray Linoleum Multilayer			
20	JS-HM-10B	Gray Linoleum Multilayer			
21	JS-HM-11A	White 1x1' Ceiling Tile			
22	JS-HM-11B	White 1x1' Ceiling Tile			

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Date: 5-11-2016 Date: _____

64729

APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189

Phone: 734-449-9990

E-mail: apexresearch@chartermi.net

Fax: 734-449-9991



PS. 3055

Client Name: Red Cedar Consulting

Address: PO Box 13216
Lansing, MI 48901

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 5-7-16

Project: Dale Jefferson St.

Project #:

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. apaquet@redcedarconsulting.net

Rush 24 hour

48 hour 72 hour

Other: 5 Day

TTP All Samples Except Plaster

Asbestos: Bulk X Wipe Point Count PCM
Lead: Bulk Wipe Air Paint Soil
Mold: Bulk Tape BioSIS Other Viable
TEM: AHERA 7400 Bulk/NOB EPA Level II

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
23	JS-Hm-12A	Glue Rod			
24	JS-Hm-12B	Glue Rod			
25	JS-Hm-13A	Drywall			
26	JS-Hm-13B	Drywall			
27	JS-Hm-14A	Glazing			
28	JS-Hm-14B	Glazing			
29	JS-Hm-15A	Tan Linoleum			
30	JS-Hm-15B	Tan Linoleum			
31	JS-Hm-16A	Rust Linoleum			
32	JS-Hm-16B	Rust Linoleum			
33	JS-Hm-17A	Brown 12"x12" Vinyl Tile over Fiberboard			

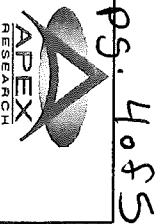
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Date: MAY 11 2016

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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



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 5-7-16

Project: 2916 Jefferson St.

Project #:

Contact Person: Aaron Paquet

PLM EPA 600, PC all samples with a detection of <5% ACM. apaquet@redcedarconsulting.net

Turn Around Times: (Circle One)

Rush 24 hour

48 hour 72 hour

Other: 5 Day TTP All Samples Except Plaster
 Mold: Bulk Tape Other Viable
 Asbestos: Bulk Wipe Point Count PCM
 Lead: Bulk Wipe Air Paint Soil
 TEM: AHERA 7400 Bulk/NOB EPA Level II

Lab Use Only
 Log-In _____
 Report _____

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
34	JS-Hm-17B	Brown 12"x12" Vinyl Tile over Fiberboard			
35	JS-Hm-18A	Slate Linoleum			
36	JS-Hm-18B	Slate Linoleum			
37	JS-Hm-19A	White Striated 1'x1' Ceiling Tile			
38	JS-Hm-19B	White Striated 1'x1' Ceiling Tile			
39	JS-Hm-20A	White 1'x1' Ceiling Tile			
40	JS-Hm-20B	White 1'x1' Ceiling Tile			
41	JS-Hm-21A	Daywall			
42	JS-Hm-21B	Daywall			
43	JS-Hm-22A	Fiberboard			
44	JS-Hm-22B	Fiberboard			

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Date: _____ Date: _____

647309 APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189
 Phone: 734-449-9990
 E-mail: apexresearch@chartemi.net
 Fax: 734-449-9991



ps. 5 of 5

Client Name: Red Cedar Consulting

Address: PO Box 13216
 Lansing, MI 48901

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 5-7-16

Project: 2916 Jefferson St.

Project #:

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

Rush 24 hour
 48 hour 72 hour
 Other: 5 day

Asbestos: Bulk Wipe Point Count PCM

Rush 24 hour

48 hour 72 hour

Lead: Bulk Wipe Air Paint Soil

Mold: Bulk Tape BiosIS Other Viable

TEM: AHERA 7400 Bulk/NOB EPA Level II



All Samples Except Plaster

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
45	JS-HM-23A	Felt Paper			
46	JS-HM-23B	Felt Paper			
47	JS-HM-24A	Green 12"x12" Vinyl Tile			
48	JS-HM-24B	Green 12"x12" Vinyl Tile			
49	JS-HM-25A	Glazing			
50	JS-HM-25B	Glazing			
51	JS-HS-01A	Plaster			
52	JS-HS-01B	Plaster			
53	JS-HS-01C	Plaster			
54	JS-HS-01D	Plaster			
55	JS-HS-01E	Plaster			

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Date: 5-10-16

Date: 5-10-16

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Date: 5-10-16

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Tables

Table 1 - Summary of Hazardous Materials, 2916 Jefferson St., Muskegon Heights, Michigan

Hazardous 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	M	Category I	ND/ND/ND/ ND/ND/ND	Kitchen	NA
JS-HM-05B	Beige Linoleum Multi-Layer	No	M	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	M	Category I	ND/ND/ND/ND	2 nd Fl. Bathroom	NA
JS-HM-17A	Brown 12x12 Vinyl Tile over Fiberboard	No	M	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	M	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

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, 2916 Jefferson 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 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
1st 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
1 st Floor	Ceiling Plaster	No	732 sq. ft.
1 st 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.

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

material. Each material, if identified, was documented along with the approximate location. Any materials identified as hazardous are included in Table 1.

INSPECTION RESULTS AND RECOMMENDATIONS

During the completion of the asbestos inspection, twenty seven samples of suspect ACM were collected and are documented in Table 2 along with the Red Cedar sample number, description, friability, material type, ACM classification, sample location, material quantity and laboratory analytical results.

ACM, as defined by the USEPA NESHAP is “any material containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763 Section 1, Polarized Light Microscopy”.

Friable ACM is defined by NESHAP as any material containing more than 1 percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Friable ACM is a concern due the ease of unintentionally disturbing the ACM which may result in “visible emissions” which is known as a Fiber Release Episode.

Non-friable asbestos-containing material is defined as “material containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACM’s are separated into Category I and Category II ACM. Category I ACM is any asbestos containing packing’s, gaskets, resilient floor coverings (vinyl floor tile and linoleum are examples of these) and asphalt roofing products. Category II ACM is stated by NESHAP as any material excluding Category I non-friable ACM such as drywall, plaster or fiberboard insulation.

Presumed Asbestos Containing Material

Presumed Asbestos Containing Materials (PACM) are suspect surfacing, TSI and miscellaneous materials found in buildings constructed prior to 1980 which are classified as and due to the age of the structure, are assumed to be ACM and do not require sample collection and analysis. OSHA dictates that PACM may be “rebutted” following a complete inspection pursuant to AHERA protocol.

The HVAC Duct Wrap located in the Building and the Cementitious “Transite” 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.)

- 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 cementitious "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 cementitious (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 cementitious ACM must be removed prior to demolition due to the likelihood of becoming regulated due to the demolition process.

Plaster identified on the interior of the Building must be abated prior to completion of any renovation/demolition activities at the Subject Property. Any Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations must be properly abated.

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Muskegon County Land Bank
Parcel ID: 61-26-770-001-0016-00

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 NESHP (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 NESHP (40 CFR Part 61).

Project No.: 16-1070
Muskegon County Land Bank
Parcel ID: 61-26-770-001-0016-00

Additional information regarding the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61) can be obtained by contacting the associated agency below.

NESHAP Asbestos Program
Department of Environmental Quality
Phone: 517-284-6777

MIOSHA-CSHD-Asbestos Program
State of Michigan
Phone: 517-284-7680
Email: asbestos@michigan.gov

DISCLAIMER

Red Cedar Consulting performed destructive testing methods in an attempt to access and inspect all areas of the Building. Unfortunately, due to the age of construction along with multiple additions/renovations that may have been completed on the Building, additional inspections may be required if suspect ACM material not documented within this report is encountered during renovation/demolition activities.

This report was prepared at the request and for exclusive use by the Muskegon County Land Bank and may not be reproduced or sold without written permission from Red Cedar Consulting.

We appreciate the opportunity to provide the requested services. Please contact us at (888) 449-4566 with any questions or concerns.

Sincerely,
Red Cedar Consulting



Aaron Paquet
Michigan/EPA Certified Asbestos Building Inspector
(A30955)

Red Cedar Consulting

Attachment 1
APEX Research Laboratory Analytical Results



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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 - 01 Cust. #: PS-HM-01A Material: Asphalt Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Fiberglass - 15% Other - 85%
Lab ID #: 65110 - 01a Cust. #: PS-HM-01A Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 65110 - 02 Cust. #: PS-HM-01B Material: Asphalt 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.



NVLAP Lab Code 102118-0



Certificate of Laboratory 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
Lab ID #: 65110 - 02a Cust. #: PS-HM-01B Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 65110 - 03 Cust. #: PS-HM-02A Material: Asphalt Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Fiberglass - 15% Other - 85%
Lab ID #: 65110 - 03a Cust. #: PS-HM-02A Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 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.



NVLAP Lab Code 102118-0



Certificate of Laboratory 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
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% Other - 85%
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	Fiberglass - 15% Other - 85%
Lab ID #: 65110 - 05 Cust. #: PS-HM-03A Material: Blue 12x12 Vinyl Tile Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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 - 05a Cust. #: PS-HM-03A Material: Mastic Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65110 - 06 Cust. #: PS-HM-03B Material: Blue 12x12 Vinyl Tile Location: Appearance: beige,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
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	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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 - 07 Cust. #: PS-HM-04A Material: Stone Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 65110 - 08 Cust. #: PS-HM-04B Material: Stone Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Other - 50%
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	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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 - 09a Cust. #: PS-HM-05A Material: Mastic Location: Appearance: brown,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65110 - 10 Cust. #: PS-HM-05B Material: White 12x12 Vinyl Tile Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65110 - 10a Cust. #: PS-HM-05B Material: Mastic Location: Appearance: brown,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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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 - 11 Cust. #: PS-HM-06A Material: White Linoleum Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65110 - 12 Cust. #: PS-HM-06B Material: White Linoleum Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
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	Other - 100%

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Date Collected: 05/24/16
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Date Analyzed: 05/31/16
Date Reported: 06/01/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
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%
Lab ID #: 65110 - 15 Cust. #: PS-HM-08A Material: Black 12x12 Vinyl Tile Multi Layer Location: Appearance: black,nonfibrous,homogenous Layer: 1 of 4	Asbestos Present: NO No Asbestos Observed	Other - 100%
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	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

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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	Non-Asbestos
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 - 50% Other - 50%
Lab ID #: 65110 - 15c Cust. #: PS-HM-08A Material: Flooring/Backing/Glue Location: Appearance: grey, fibrous, nonhomogenous Layer: 4 of 4	Asbestos Present: NO No Asbestos Observed	Cellulose - 60% Other - 40%
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	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

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Lansing, MI 48901

ARI Report # 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 - 16a Cust. #: PS-HM-08B Material: Mastic Location: Appearance: clear, nonfibrous, homogenous Layer: 2 of 4	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65110 - 16b Cust. #: PS-HM-08B Material: Linoleum/Backing Location: Appearance: beige, fibrous, nonhomogenous Layer: 3 of 4	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 65110 - 16c Cust. #: PS-HM-08B Material: Backing/Glue Location: Appearance: brown, fibrous, nonhomogenous Layer: 4 of 4	Asbestos Present: NO No Asbestos Observed	Cellulose - 90% Other - 10%

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Robert T. Letarte Jr., Laboratory Director

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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 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%

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Date Reported: 06/01/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 65110 - 19a Cust. #: PS-HM-10A Material: Mastic Location: Appearance: black,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65110 - 20 Cust. #: PS-HM-10B Material: Brown 9x9 Vinyl Tile Location: Appearance: Layer: 1 of 2	Asbestos Present: NOT ANALYZED	
Lab ID #: 65110 - 20a Cust. #: PS-HM-10B Material: Mastic Location: Appearance: black,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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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	Non-Asbestos
Lab ID #: 65110 - 21 Cust. #: PS-HM-11A Material: Old Linoleum/Backing Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 65110 - 21a Cust. #: PS-HM-11A Material: Backing Location: Appearance: black, fibrous, nonhomogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Other - 50%
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%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

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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	Non-Asbestos
Lab ID #: 65110 - 22a Cust. #: PS-HM-11B Material: Backing Location: Appearance: black, fibrous, nonhomogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 65110 - 23 Cust. #: PS-HS-01A Material: Plaster Texture Location: Appearance: beige, fibrous, homogenous Layer: 1 of 3	Asbestos Present: YES Chrysotile - 1.25% POINT COUNT RESULT	Other - 98.75%
Lab ID #: 65110 - 23a Cust. #: PS-HS-01A Material: Plaster Finish Coat Location: Appearance: white, fibrous, homogenous Layer: 2 of 3	Asbestos Present: NO Chrysotile - 0.50% POINT COUNT RESULT	Other - 99.50%

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Lansing, MI 48901

ARI Report # 16-65110
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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	Asbestos Present: YES Chrysotile - 1.25% POINT COUNT RESULT	Hair - 2% Other - 96.75%
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% POINT COUNT RESULT	Other - 98.75%
Lab ID #: 65110 - 24a Cust. #: PS-HS-01B Material: Plaster Finish Coat Location: Appearance: white, fibrous, homogenous Layer: 2 of 3	Asbestos Present: NO Chrysotile - 0.25% POINT COUNT RESULT	Other - 99.75%

For Layered Samples, each component will be analyzed and reported separately.

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ARI Report # 16-65110
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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 - 24b Cust. #: PS-HS-01B Material: Plaster Base Coat Location: Appearance: beige, fibrous, homogenous Layer: 3 of 3	Asbestos Present: YES Chrysotile - 1.50% POINT COUNT RESULT	Hair - 2% Other - 96.50%
Lab ID #: 65110 - 25 Cust. #: PS-HS-01C Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65110 - 25a Cust. #: PS-HS-01C Material: Plaster Base Coat Location: Appearance: grey, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Vermiculite - 20% Other - 80%

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Date Analyzed: 05/31/16
Date Reported: 06/01/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 65110 - 26 Cust. #: PS-HS-01D Material: Plaster Finish Coat Location: Appearance: white, fibrous, homogenous Layer: 1 of 2	Asbestos Present: YES Chrysotile - 1.25% POINT COUNT RESULT	Other - 98.75%
Lab ID #: 65110 - 26a Cust. #: PS-HS-01D Material: Plaster Base Coat Location: Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO Chrysotile - 1.00% POINT COUNT RESULT	Hair - 2% Other - 97.00%
Lab ID #: 65110 - 27 Cust. #: PS-HS-01E Material: Plaster Finish Coat Location: Appearance: white, fibrous, homogenous Layer: 1 of 2	Asbestos Present: NO Chrysotile - 0.25% POINT COUNT RESULT	Other - 99.75%

For Layered Samples, each component will be analyzed and reported separately.

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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 Chrysotile - 1.25% POINT COUNT RESULT	Hair - 2% Other - 96.75%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

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NVLAP Lab Code 102118-0

APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990



E-mail: apexresearch@charterni.net Fax: 734-449-9991

Client Name: Red Cedar Consulting

Date of Survey: 5-24-16

Address: PO Box 13216
Lansing, MI 48901

Project: 3031 Peck St.

City, St., Zip: Lansing, MI 48901

Project #: _____

Phone: (888) 449-4566 Fax: (888) 448-8739

Contact Person: Aaron Raquet

Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. apaquet@redcedarconsulting.net

Rush 24 hour

Asbestos: Bulk x

Point Count _____ PCM _____

48 hour 72 hour

Lead: Bulk _____ Wipe _____

Air _____ Paint _____ Soil _____

Other: TTP All Samples Except Plaster

Mold: Bulk _____ Tape _____

BioSIS _____ Other _____ Viable _____

TEM: AHERA 7400

Bulk/NOB _____

EPA Level II _____

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	PS-HM-01A	Asphalt Shingle			
2	PS-HM-01B	Asphalt Shingle			
3	PS-HM-02A	Asphalt Shingle			
4	PS-HM-02B	Asphalt Shingle			
5	PS-HM-03A	Blue 12x12 Vinyl Tile			
6	PS-HM-03B	Blue 12x12 Vinyl Tile			
7	PS-HM-04A	Stone Linoleum			
8	PS-HM-04B	Stone Linoleum			
9	PS-HM-05A	White 12x12 Vinyl Tile			
10	PS-HM-05B	White 12x12 Vinyl Tile			
11	PS-HM-06A	White Linoleum			

Lab Use Only
Log-In _____
Report _____

Relinquished by: [Signature] Received by: AR

Relinquished by: _____ Received by: _____

Date: 5-25-16

Date: 5-25-16

Date: _____

Date: MAY 26 2016

RECEIVED

65110

Pg. 2 of 3

APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

E-mail: apexresearch@chartermi.net Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 5.24.16

Project: 3031 Peck St.

Project #:

Contact Person: Aaron Paquet

Lab Use Only
Log-In _____
Report _____

Turn Around Times: (Circle One)

PJM EPA 600, PC all samples with a detection of <5% ACM. apaquet@redcedarconsulting.net

Rush 24 hour

48 hour 72 hour

Other: TTP All Samples Except Plaster

Asbestos: Bulk Wipe _____ Point Count _____ PCM _____
Lead: Bulk _____ Wipe _____ Air _____ Paint _____ Soil _____
Mold: Bulk _____ Tape _____ Biosis _____ Other _____ Viable _____
TEM: AHERA 7400 Bulk/NOB _____ EPA Level II _____

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	PS-HM-010B	White Linoleum			
13	PS-HM-07A	Glazing			
14	PS-HM-07B	Glazing			
15	PS-HM-08A	Black 12x12 Vinyl Tile Mott Layer			
16	PS-HM-08B	Black 12x12 Vinyl Tile Mott Layer			
17	PS-HM-09A	White 1x1 Ceiling Tile			
18	PS-HM-09B	White 1x1 Ceiling Tile			
19	PS-HM-10A	Brown 9x9 Vinyl Tile			
20	PS-HM-10B	Brown 9x9 Vinyl Tile			
21	PS-HM-11A	Old Linoleum			
22	PS-HM-11B	Old Linoleum			

Relinquished by:

Received by:

Date: 5-25-16

Date: 5-25-16

Relinquished by: _____

Received by:

Date: _____

Date: MAY 26 2016

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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 /1.5%CH	Front Apt. Kitchen Wall	NA
PS-HS-01C	Plaster	No	S	Category II	ND/ND	Front Apt. Kitchen Ceiling	NA
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

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, 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
 S = 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.)	HVAC Duct Wrap	Yes	55 sq. ft.
Basement SE Room (misc. HVAC Paper/Debris on Floor, 30 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
1 st 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

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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.

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 Cementitious “Transite” Siding on the Building was classified as PACM due to the age of the structure and samples were not collected.

Table 3 lists the location, material description, friability, condition, material type (surfacing, thermal or miscellaneous) and approximate quantity of all PACM documented at the Subject Property.

Table 4 provides a summary all ACM documented at the Subject Property which includes the material location, description, and approximate quantity.

Friable ACM's

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 cementitious "Transite" siding located on the exterior of the Building was classified as PACM and no samples were collected. The visual assessment to quantify the extent of this material identified 3,348 sq. ft. of cementitious (Transite) siding on the Building.

RECOMMENDATIONS

Asbestos Containing Materials

HVAC material identified in the Building system and listed below is classified as friable ACM and should be removed prior to any renovation/demolition activities.

- 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 cementitious ACM must be removed prior to demolition due to the likelihood of becoming regulated due to the demolition process.

The Category I roofing materials 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

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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).

Project No.: 16-1070
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



Certificate of Laboratory 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 - 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: 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 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.



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 3045 Maffett St.

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Mr. Aaron Paquet
Red Cedar Consulting
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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	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 65045 - 01d Cust. #: MS-HM-01A Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 5 of 5	Asbestos Present: NO No Asbestos Observed	Cellulose - 35% Other - 65%
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%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

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Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 3045 Maffett St.

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Mr. Aaron Paquet
Red Cedar Consulting
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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 - 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%
Lab ID #: 65045 - 02b Cust. #: MS-HM-01B Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 3 of 4	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 65045 - 02c Cust. #: MS-HM-01B Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 4 of 4	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.



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Certificate of Laboratory 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 - 03 Cust. #: MS-HM-02A Material: Rolled Roofing Location: Appearance: black, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: YES Chrysotile - 5%	Cellulose - 10% Other - 85%
Lab ID #: 65045 - 03a Cust. #: MS-HM-02A Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 65045 - 04 Cust. #: MS-HM-02B Material: Rolled Roofing 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.



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Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 3045 Maffett St.

Report To:
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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 - 04a Cust. #: MS-HM-02B Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 65045 - 05 Cust. #: MS-HM-03A Material: Speckled 9x9 Vinyl Tile Location: Appearance: beige, fibrous, homogenous Layer: 1 of 2	Asbestos Present: YES Chrysotile - 5%	Other - 95%
Lab ID #: 65045 - 05a Cust. #: MS-HM-03A Material: Mastic Location: Appearance: brown, 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.



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Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

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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	Asbestos Present: NOT ANALYZED	
Lab ID #: 65045 - 06a Cust. #: MS-HM-03B Material: Mastic Location: Appearance: brown, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65045 - 07 Cust. #: MS-HM-04A Material: Stone 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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NVLAP Lab Code 102118-0



Certificate of Laboratory 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
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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	Asbestos Present: NO No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 65045 - 09 Cust. #: MS-HM-05A Material: Brown 9x9 Vinyl Tile Location: Appearance: brown, fibrous, homogenous Layer: 1 of 2	Asbestos Present: YES Chrysotile - 10%	Other - 90%
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	Other - 100%

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Robert T. Letarte Jr., Laboratory Director

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Date Reported: 05/26/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 65045 - 10 Cust. #: MS-HM-05B Material: Brown 9x9 Vinyl Tile Location: Appearance: Layer: 1 of 2	Asbestos Present: NOT ANALYZED	
Lab ID #: 65045 - 10a Cust. #: MS-HM-05B Material: Mastic Location: Appearance: black,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65045 - 11 Cust. #: MS-HM-06A Material: Grey Linoleum Location: Appearance: beige,fibrous,nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 35% Other - 65%

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Robert T. Letarte Jr., Laboratory Director

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 65045 - 12 Cust. #: MS-HM-06B Material: Grey Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 65045 - 13 Cust. #: MS-HM-07A Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 15% Fiberglass - 5% Other - 80%
Lab ID #: 65045 - 14 Cust. #: MS-HM-07B Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 15% Fiberglass - 10% Other - 75%

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Date Reported: 05/26/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
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%
Lab ID #: 65045 - 16 Cust. #: MS-HM-08B Material: Glazing Location: Appearance: beige,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65045 - 17 Cust. #: MS-HM-09A Material: Tan Linoleum Location: Appearance: grey,fibrous,nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 35% Other - 65%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 65045 - 18 Cust. #: MS-HM-09B Material: Tan Linoleum Location: Appearance: grey, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 65045 - 19 Cust. #: MS-HM-10A 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 - 19a Cust. #: MS-HM-10A Material: Adhesive Location: Appearance: brown, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
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	Asbestos Present: NO No Asbestos Observed	Other - 100%
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	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
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	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	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65045 - 22a Cust. #: MS-HM-11B Material: Mastic Location: Appearance: yellow,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
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: YES Chrysotile - 10%	Other - 90%
Lab ID #: 65045 - 23a Cust. #: MS-HM-12A Material: Mastic Location: Appearance: black, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65045 - 24 Cust. #: MS-HM-12B Material: Light Brown 9x9 Vinyl Tile Location: Appearance: Layer: 1 of 2	Asbestos Present: NOT ANALYZED	

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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	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65045 - 25 Cust. #: MS-HS-01A Material: Plaster Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 2% Other - 98%
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	Cellulose - 2% Other - 98%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
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 No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 65045 - 29 Cust. #: MS-HS-01E Material: Plaster Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 2% Other - 98%

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Date Reported: 05/26/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 65045 - 30 Cust. #: MS-HS-02A Material: Wallboard/Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 65045 - 30a Cust. #: MS-HS-02A Material: Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 2% Other - 98%
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	Other - 100%

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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%
Lab ID #: 65045 - 32 Cust. #: MS-HS-02C Material: Wallboard/Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
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	Cellulose - 2% Other - 98%

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Date Reported: 05/26/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
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 No Asbestos Observed	Other - 100%
Lab ID #: 65045 - 33a Cust. #: MS-HS-02D Material: Base Coat Location: Appearance: grey,fibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 65045 - 34 Cust. #: MS-HS-02E Material: Wallboard/Plaster Finish Coat Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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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	Cellulose - 2% Other - 98%
Lab ID #: 65045 - 35 Cust. #: MS-HS-02F Material: Wallboard/Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
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%

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Date Reported: 05/26/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
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	Other - 100%
Lab ID #: 65045 - 36a Cust. #: MS-HS-02G Material: Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

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65045

Pg. 1 of 4



ARELA research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

E-mail: apexresearch@chartermi.net

Fax: 734-449-9991

Client Name: Red Cedar Consulting

Date of Survey: 5.22.16

Address: PO Box 13216

Project: 3045 Maffett St.

City, St., Zip: Lansing, MI 48901

Project #:

Phone: (888) 449-4566 Fax: (888) 448-8739

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. apaquet@redcedarconsulting.net

Rush 24 hour

Asbestos: Bulk Wipe Point Count PCM

48 hour 72 hour

Lead: Bulk Wipe Air Paint Soil

Other: TTP All Samples Except Plaster

Mold: Bulk Tape BioSIS Other Viable

TEM: AHERA 7400 Bulk/NOB EPA Level II

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	MS-HM-01A	Asphalt Shingle			
2	MS-HM-01B	Asphalt Shingle			
3	MS-HM-02A	Rolled Roofing			
4	MS-HM-02B	Rolled Roofing			
5	MS-HM-03A	Speckled 9x9 Vinyl Tile			
6	MS-HM-03B	Speckled 9x9 Vinyl Tile			
7	MS-HM-04A	Stone Linoleum			
8	MS-HM-04B	Stone Linoleum			
9	MS-HM-05A	Brown 9x9 Vinyl Tile			
10	MS-HM-05B	Brown 9x9 Vinyl Tile			
11	MS-HM-06A	Gray Linoleum			

RECEIVED

Relinquished by: [Signature] Received by: [Signature] MAY 23 2016

Date: 5-23-16 Date: _____

Relinquished by: _____ Received by: _____

Date: _____ Date: _____

65645

pg. 2 of 4

APEX Research, Inc.

11054 HI Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

E-mail: apexresearch@chartermi.net Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 5.22.16

Project: 3045 Maffett St.

Project #:

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. apaquet@redcedarconsulting.net

Rush 24 hour

48 hour 72 hour

Other: TTP All Samples Except plaster

Asbestos: Bulk Wipe Point Count PCM

Lead: Bulk Wipe Air Paint Soil

Mold: Bulk Tape BioSIS Other Viable

TEM: AHERA 7400 Bulk/NOB EPA Level II

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	MS-HM-010B	Gray Linoleum			
13	MS-HM-07A	Drywall			
14	MS-HM-07B	Drywall			
15	MS-HM-08A	Glazing			
16	MS-HM-08B	Glazing			
17	MS-HM-09A	Tan Linoleum			
18	MS-HM-09B	Tan Linoleum			
19	MS-HM-10A	Tan 9x9 Vinyl Tile			
20	MS-HM-10B	Tan 9x9 Vinyl Tile			
21	MS-HM-11A	Red & white 12x12 Vinyl Tile			
22	MS-HM-11B	Red & white 12x12 Vinyl Tile			

Relinquished by: [Signature] Received by: [Signature]

Date: 5-23-16 Date: MAY 23 2016

RECEIVED

Relinquished by: _____ Received by: _____

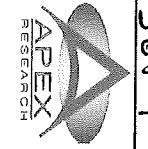
Date: _____ Date: _____

65045

pg. 3 of 4

APEX Research, Inc.

11054 HI Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990



E-mail: apexresearch@chartermi.net

Fax: 734-449-9991

Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 5.22.16

Project: 3045 Maffett St.

Project #:

Contact Person: Aaron Paquet

Lab Use Only
Log-In _____
Report _____

Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. apaquet@redcedarconsulting.net

Rush 24 hour

48 hour 72 hour

Other: TTP All Samples Except Plaster

Asbestos: Bulk Wipe _____ Point Count _____ PCM _____
Lead: Bulk _____ Wipe _____ Air _____ Paint _____ Soil _____
Mold: Bulk _____ Tape _____ Biosis _____ Other _____ Viable _____
TEM: AHERA 7400 Bulk/NOB _____ EPA Level II _____

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
23	MS-HM-12A	Light Brown 9x9 Vinyl Tile			
24	MS-HM-12B	Light Brown 9x9 Vinyl Tile			
25	MS-HS-01A	Plaster			
26	MS-HS-01B	Plaster			
27	MS-HS-01C	Plaster			
28	MS-HS-01D	Plaster			
29	MS-HS-01E	Plaster			
30	MS-HS-02A	Wallboard/Plaster			
31	MS-HS-02B	Wallboard/Plaster			
32	MS-HS-02C	Wallboard/Plaster			
33	MS-HS-02D	Wallboard/Plaster			

RECEIVED

Relinquished by: _____

[Signature]

Received by: _____

[Signature]

Date: 5-23-16

Date: MAY 23 2016

Relinquished by: _____

Received by: _____

Date: _____

Date: _____

pg. 4 of 4

APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990
E-mail: apexresearch@chartermi.net Fax: 734-449-9991



Client Name: Red Cedar Consulting

Date of Survey: 5-22-16

Address: PO Box 13216

Project: 3045 Maffett St.

City, St., Zip: Lansing, MI 48901

Project #:

Phone: (888) 449-4566 Fax: (888) 448-8739

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM.
apaquet@redcedarconsulting.net

Rush 24 hour

48 hour 72 hour

Other: TTP All Samples Except Plaster

Asbestos: Bulk Wipe Point Count PCM
Lead: Bulk Wipe Air Paint Soil
Mold: Bulk Tape Biosis Other Viable
TEM: AHERA 7400 Bulk/NOB EPA Level II

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
34	MS-HS-02E	Wallboard/plaster			
35	MS-HS-02F	Wallboard/plaster			
36	MS-HS-02G	Wallboard/plaster			

Relinquished by: [Signature]

Received by: _____

Date: 5-23-16

Date: _____

Relinquished by: _____

Received by: _____

Date: _____

Date: _____

Lab Use Only
Log-In: _____
Report: _____

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

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, 3045 Maffett 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	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

Abbreviations

lin. ft. = linear feet
 sq. ft. = square feet

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

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

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.

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.

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

Project No.: 16-1070
Muskegon County Land Bank
Parcel ID: 61-26-770-038-0039-00

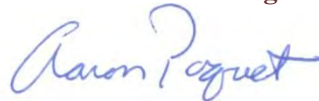
DISCLAIMER

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



Aaron Paquet
Michigan/EPA Certified Asbestos Building Inspector
(A30955)

Red Cedar Consulting

Attachment 1
APEX Research Laboratory Analytical Results



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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 - 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%
Lab ID #: 64719 - 01a Cust. #: ST-HM-01A Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 4	Asbestos Present: NO No Asbestos Observed	Fiberglass - 30% Other - 70%
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.



NVLAP Lab Code 102118-0



Certificate of Laboratory 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 - 01c Cust. #: ST-HM-01A Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 4 of 4	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 64719 - 02 Cust. #: ST-HM-01B Material: Shingle 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 Layer: 2 of 4	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.



NVLAP Lab Code 102118-0



Certificate of Laboratory 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 - 02b Cust. #: ST-HM-01B Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 3 of 4	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 64719 - 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 #: 64719 - 03 Cust. #: ST-HM-02A Material: Yellow Linoleum Location: Appearance: yellow, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 15% Fiberglass - 15% Other - 70%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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 - 04 Cust. #: ST-HM-02B Material: Yellow Linoleum Location: Appearance: yellow, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 15% Fiberglass - 15% Other - 70%
Lab ID #: 64719 - 05 Cust. #: ST-HM-03A Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
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 POINT COUNT RESULT	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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 - 06 Cust. #: ST-HM-03B Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 64719 - 06a Cust. #: ST-HM-03B Material: Joint Compound Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 64719 - 07 Cust. #: ST-HM-04A Material: Glazing Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	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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NVLAP Lab Code 102118-0



Certificate of Laboratory 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	
Lab ID #: 64719 - 09 Cust. #: ST-HS-01A Material: Plaster Finish Coat Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
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 - 98%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64719 - 10a Cust. #: ST-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%
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	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.



NVLAP Lab Code 102118-0



Certificate of Laboratory 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 - 12 Cust. #: ST-HS-01D Material: Plaster Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 5% Other - 95%
Lab ID #: 64719 - 13 Cust. #: ST-HS-01E Material: Plaster Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 5% Other - 95%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0

APEX Research, Inc.

Apex **64719**
 11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990
 E-mail: apexresearch@chartermi.net Fax: 734-449-9991



Pg 1 of 2

Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 5-8-16

Project: 3600 Birch St.

Project #:

Contact Person: Aaron Paquet

Lab Use Only
 Log-In _____
 Report _____

Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. apaquet@redcedarconsulting.net

Rush 24 hour

48 hour 72 hour

Other: TTP All Samples Except Plaster

Asbestos: Bulk x Wipe Point Count PCM
 Lead: Bulk Wipe Air Paint Soil
 Mold: Bulk Tape BioSIS Other Viable
 TEM: AHERA 7400 Bulk/NOB EPA Level II

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	ST-HM-01A	Shingle			
2	ST-HM-01B	Shingle			
3	ST-HM-02A	Yellow Linoleum			
4	ST-HM-02B	Yellow Linoleum			
5	ST-HM-03A	Drywall			
6	ST-HM-03B	Drywall			
7	ST-HM-04A	Coating			
8	ST-HM-04B	Coating			
9	ST-HS-01A	Plaster			
10	ST-HS-01B				
11	ST-HS-01C				

RECEIVED

Relinquished by: *[Signature]*

Received by: *[Signature]*

Date: 5-10-16

Date: _____

Relinquished by: _____

Received by: _____

Date: _____

Date: _____

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



Client Name: Red Cedar Consulting

Address: PO Box 13216
 Lansing, MI 48901

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 5-8-16

Project: 3100 Ninth St.

Project #: _____

Contact Person: Aaron Paquet

Turn Around Times: (Circle One) PLM EPA 600, PC all samples with a detection of <5% ACM.
 aapaquet@redcedarconsulting.net

Rush 24 hour

48 hour 72 hour

Other: All Samples Except Plaster
 TEM: AHERA 7400 Bulk/NOB EPA Level II

Asbestos: Bulk x Wipe Point Count PCM

Lead: Bulk Wipe Air Paint Soil

Mold: Bulk Tape Biosis Other Viable

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	ST-HS-01D	Plaster			
13	ST-HS-01E	Plaster			

RECEIVED

Lab Use Only
 Log-In _____
 Report _____

Relinquished by: *[Signature]*

Date: 5-10-16

Received by: *[Signature]*

Date: APEX RESEARCH

Relinquished by: _____

Date: _____

Received by: _____

Date: _____

Tables

Table 1 - Summary of Hazardous Materials, 3100 9th 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 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, 3100 9th St., Muskegon Heights, Michigan

Asbestos Containing Material Description and 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.

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.

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.

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.

Project No.: 16-1070
Muskegon County Land Bank
Parcel ID: 61-26-770-019-0005-00

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).

Project No.: 16-1070
Muskegon County Land Bank
Parcel ID: 61-26-770-019-0005-00

Additional information regarding the OSHA Asbestos Standards for Construction (29 CFR 1926.1101) and the USEPA NESHAP (40 CFR Part 61) can be obtained by contacting the associated agency below.

NESHAP Asbestos Program
Department of Environmental Quality
Phone: 517-284-6777

MIOSHA-CSHD-Asbestos Program
State of Michigan
Phone: 517-284-7680
Email: asbestos@michigan.gov

DISCLAIMER

Red Cedar Consulting performed destructive testing methods in an attempt to access and inspect all areas of the Building. Unfortunately, due to the age of construction along with multiple additions/renovations that may have been completed on the Building, additional inspections may be required if suspect ACM material not documented within this report is encountered during renovation/demolition activities.

This report was prepared at the request and for exclusive use by the Muskegon County Land Bank and may not be reproduced or sold without written permission from Red Cedar Consulting.

We appreciate the opportunity to provide the requested services. Please contact us at (888) 449-4566 with any questions or concerns.

Sincerely,
Red Cedar Consulting



Aaron Paquet
Michigan/EPA Certified Asbestos Building Inspector
(A30955)

Red Cedar Consulting

Attachment 1
APEX Research Laboratory Analytical Results



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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 - 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%
Lab ID #: 64879 - 01a Cust. #: GS-HM-01A Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 5	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 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

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Sample Information	Asbestos Type/Percent	Non-Asbestos
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 - 30% Other - 70%
Lab ID #: 64879 - 01d Cust. #: GS-HM-01A Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 5 of 5	Asbestos Present: NO No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 64879 - 02 Cust. #: GS-HM-01B Material: Asphalt Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 5	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64879 - 02a Cust. #: GS-HM-01B Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 2 of 5	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 64879 - 02b Cust. #: GS-HM-01B Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 3 of 5	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 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%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64879 - 02d Cust. #: GS-HM-01B Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 5 of 5	Asbestos Present: NO No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 64879 - 03 Cust. #: GS-HM-02A Material: Tan Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: YES Chrysotile - 30%	Other - 70%
Lab ID #: 64879 - 03a Cust. #: GS-HM-02A Material: Flooring Location: Appearance: beige, fibrous, nonhomogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 35% Other - 65%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64879 - 04 Cust. #: GS-HM-02B Material: Tan Linoleum Location: Appearance: Layer: 1 of 2	Asbestos Present: NOT ANALYZED	
Lab ID #: 64879 - 04a Cust. #: GS-HM-02B Material: Flooring Location: Appearance: beige, fibrous, nonhomogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 35% Other - 65%
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 No Asbestos Observed	Other - 100%

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Robert T. Letarte Jr., Laboratory Director

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Sample Information	Asbestos Type/Percent	Non-Asbestos
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	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	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64879 - 06a Cust. #: GS-HM-03B Material: Mastic Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Date Reported: 05/20/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
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%
Lab ID #: 64879 - 08 Cust. #: GS-HM-04B Material: Yellow Linoleum Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 35% Other - 65%
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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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64879 - 10 Cust. #: GS-HM-05B 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%
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% POINT COUNT RESULT	Other - 97.50%
Lab ID #: 64879 - 12 Cust. #: GS-HM-06B Material: Glazing Location: Appearance: Layer: of	Asbestos Present: NOT ANALYZED	

For Layered Samples, each component will be analyzed and reported separately.

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64879 - 13 Cust. #: GS-HM-07A Material: Texture Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64879 - 13a Cust. #: GS-HM-07A Material: Drywall Location: Appearance: white,fibrous,nonhomogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 15% Fiberglass - 5% Other - 80%
Lab ID #: 64879 - 14 Cust. #: GS-HM-07B Material: Texture Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Date Analyzed: 05/20/16
Date Reported: 05/20/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64879 - 14a Cust. #: GS-HM-07B Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 15% Fiberglass - 5% Other - 80%
Lab ID #: 64879 - 15 Cust. #: GS-HM-08A Material: White Linoleum Multi Layer Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Fiberglass - 10% Other - 70%
Lab ID #: 64879 - 15a Cust. #: GS-HM-08A Material: Flooring Location: Appearance: green, fibrous, nonhomogenous Layer: 2 of 2	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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Date Analyzed: 05/20/16
Date Reported: 05/20/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
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 - 20% Fiberglass - 10% Other - 70%
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	Cellulose - 30% Other - 70%
Lab ID #: 64879 - 17 Cust. #: GS-HM-09A Material: Brown 12"x12" Vinyl Tile Location: Appearance: brown, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Date Reported: 05/20/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
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	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	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64879 - 18a Cust. #: GS-HM-09B Material: Mastic Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Date Analyzed: 05/20/16
Date Reported: 05/20/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64879 - 19 Cust. #: GS-HS-01A Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64879 - 19a Cust. #: GS-HS-01A Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: YES Chrysotile - 1.50% POINT COUNT RESULT	Cellulose - 2% Other - 96.50%
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	Other - 100%

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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: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: YES Chrysotile - 1.50% POINT COUNT RESULT	Cellulose - 2% Other - 96.50%
Lab ID #: 64879 - 21 Cust. #: GS-HS-01C Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64879 - 21a Cust. #: GS-HS-01C 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

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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 - 22 Cust. #: GS-HS-01D Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64879 - 22a Cust. #: GS-HS-01D Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: YES Chrysotile - 1.50% POINT COUNT RESULT	Cellulose - 2% Other - 96.50%
Lab ID #: 64879 - 23 Cust. #: GS-HS-01E Material: Plaster Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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 - 23a Cust. #: GS-HS-01E Material: Plaster Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: YES Chrysotile - 1.25% POINT COUNT RESULT	Cellulose - 2% Other - 96.75%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0

64879

09.1053

APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990
 E-mail: apexresearch@chartermi.net Fax: 734-449-9991



Client Name: Red Cedar Consulting
 Address: PO Box 13216
 City, St., Zip: Lansing, MI 48901
 Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 5-15-16
 Project: 3109 Glendale St
 Project #: _____
 Contact Person: Aaron Paquet

Lab Use Only
 Log-In _____
 Report _____

Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM.
 apaquet@redcedarconsulting.net

Rush 24 hour
 48 hour 72 hour
 Other: _____
 Asbestos: Bulk Wipe _____ Point Count _____ PCM _____
 Lead: Bulk _____ Wipe _____ Air _____ Paint _____ Soil _____
 Mold: Bulk _____ Tape _____ BioSIS _____ Other _____ Viable _____
 TEM: AHERA 7400 _____ Bulk/NOB _____ EPA Level II _____

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	GS-HM-01A	Asphalt Shingle			
2	GS-HM-01B	Asphalt Shingle			
3	GS-HM-02A	Tan Linoleum			
4	GS-HM-02B	Tan Linoleum			
5	GS-HM-03A	White 12" x 12" Vinyl Tile			
6	GS-HM-03B	White 12" x 12" Vinyl Tile			
7	GS-HM-04A	Yellow Linoleum			
8	GS-HM-04B	Yellow Linoleum			
9	GS-HM-05A	White Striated 1'x1' Ceiling Tile			
10	GS-HM-05B	White Striated 1'x1' Ceiling Tile			
11	GS-HM-06A	Glazing			

Relinquished by: [Signature] Date: 5-17-16
 Received by: [Signature] Date: MAY 17 2016

Relinquished by: _____ Date: _____
 Received by: _____ Date: _____

64879

pg. 2 of 3

APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

E-mail: apexresearch@charternet.net Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 5-15-16

Project: 3109 Glendale St.

Project #:

Contact Person: Aaron Paquet

Lab Use Only
Log-In _____
Report _____

Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. apaquet@redcedarconsulting.net

Rush 24 hour

48 hour 72 hour

Other: TRP All Samples Except Plaster

Asbestos: Bulk Wipe _____ Point Count _____ PCM _____
Lead: Bulk _____ Wipe _____ Air _____ Paint _____ Soil _____
Mold: Bulk _____ Tape _____ BIOSIS _____ Other _____ Viable _____
TEM: AHERA 7400 _____ Bulk/NOB _____ EPA Level II _____

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	GS-HM-016B	Glazing			
13	GS-HM-07A	Daywall			
14	GS-HM-07B	Daywall			
15	GS-HM-08A	White Linoleum Multi-Layer			
16	GS-HM-08B	White Linoleum Multi-Layer			
17	GS-HM-09A	Brown 12"x12" Vinyl Tile			
18	GS-HM-09B	Brown 12"x12" Vinyl Tile			
19	GS-HS-01A	Plaster			
20	GS-HS-01B	Plaster			
21	GS-HS-01C	Plaster			
22	GS-HS-01D	Plaster			

Relinquished by: [Signature]

Received by: [Signature]

Date: 5-17-16

Date: MAY 17 2016

Relinquished by: _____

Received by: _____

Date: _____

Date: _____

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

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, 3109 Glendale 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.) 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. 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.)	HVAC Duct Wrap	Yes	185 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.)			

Table 4 - Summary of All Asbestos Containing Materials, 3109 Glendale St., Muskegon Heights, Michigan

2 nd 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			
Location	Material Description	Friable	Approx. Quantity
1 st Floor	Wall Plaster	No	2,484 sq. ft.
1 st Floor	Ceiling Plaster	No	832 sq. ft.
2 nd Floor	Wall Plaster	No	2,768 sq. ft.
2 nd Floor	Ceiling Plaster	No	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.

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.

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)

Project No.: 16-1070
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

Project No.: 16-1070
Muskegon County Land Bank
Parcel ID: 61-26-770-022-0006-00

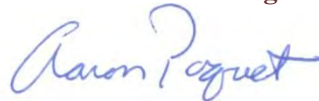
DISCLAIMER

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



Aaron Paquet
Michigan/EPA Certified Asbestos Building Inspector
(A30955)

Red Cedar Consulting

Attachment 1
APEX Research Laboratory Analytical Results



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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 - 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%
Lab ID #: 64736 - 02 Cust. #: FS-HM-01B Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
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

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NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 3113 Fifth St.

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Sample Information	Asbestos Type/Percent	Non-Asbestos
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 - 50% Other - 50%
Lab ID #: 64736 - 05 Cust. #: FS-HM-03A Material: Fiberboard Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 64736 - 06 Cust. #: FS-HM-03B Material: Fiberboard Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 80% Other - 20%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
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: YES Chrysotile - 1.75% POINT COUNT RESULT	Other - 98.25%
Lab ID #: 64736 - 07a Cust. #: FS-HM-04A Material: Red 9x9 Vinyl Tile Location: Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64736 - 08 Cust. #: FS-HM-04B Material: Stone 12x12 Vinyl Tile, Red 9x9 Vinyl Tile Location: Appearance: Layer: 1 of 2	Asbestos Present: NOT ANALYZED	

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Sample Information	Asbestos Type/Percent	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	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64736 - 09 Cust. #: FS-HM-05A Material: Brown Linoleum Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 64736 - 10 Cust. #: FS-HM-05B Material: Brown Linoleum Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64736 - 11 Cust. #: FS-HM-06A Material: Tan Linoleum Location: Appearance: grey, fibrous, homogenous Layer: 1 of 3	Asbestos Present: YES Chrysotile - 5%	Other - 95%
Lab ID #: 64736 - 11a Cust. #: FS-HM-06A Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 2 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 60% Other - 40%
Lab ID #: 64736 - 11b Cust. #: FS-HM-06A Material: White 9x9 Vinyl Tile Location: Appearance: beige, fibrous, homogenous Layer: 3 of 3	Asbestos Present: YES Chrysotile - 45%	Other - 55%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64736 - 12 Cust. #: FS-HM-06B Material: Tan Linoleum/White 9x9 Vinyl Tile Location: Appearance: Layer: of	Asbestos Present: NOT ANALYZED	
Lab ID #: 64736 - 13 Cust. #: FS-HM-07A Material: Speckled Linoleum Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64736 - 14 Cust. #: FS-HM-07B Material: Speckled Linoleum Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64736 - 15 Cust. #: FS-HM-08A Material: Joint Compound Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64736 - 15a Cust. #: FS-HM-08A Material: Drywall Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 64736 - 16 Cust. #: FS-HM-08B Material: Drywall/Joint Compound Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64736 - 17 Cust. #: FS-HM-09A Material: Glazing Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	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	Cellulose - 20% Other - 80%
Lab ID #: 64736 - 18 Cust. #: FS-HM-09B Material: Glazing Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%

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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% POINT COUNT RESULT	Other - 99.50%
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	Other - 100%

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Sample Information	Asbestos Type/Percent	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	Other - 98.50%
Lab ID #: 64736 - 21 Cust. #: FS-HM-11A Material: White 12x12 Vinyl Tile Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64736 - 22 Cust. #: FS-HM-11B Material: White 12x12 Vinyl Tile Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
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%
Lab ID #: 64736 - 24 Cust. #: FS-HM-12B Material: Glazing Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64736 - 25 Cust. #: FS-HM-13A Material: White Linoleum Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
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	Cellulose - 20% Other - 80%
Lab ID #: 64736 - 27 Cust. #: FS-HS-01A Material: Plaster Location: Appearance: grey, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
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	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
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%
Lab ID #: 64736 - 30 Cust. #: FS-HS-01D Material: Plaster Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
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	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64736 - 31 Cust. #: FS-HS-01E Material: Plaster Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64736 - 31a Cust. #: FS-HS-01E Material: Mortar Location: Appearance: grey,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64736 - 32 Cust. #: FS-HS-01F Material: Plaster Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
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: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
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%

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Apex # **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



734-1-853

Client Name: Red Cedar Consulting

Address: PO Box 13216
Lansing, MI 48901

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 5-8-16

Project: 3113 Fifth St

Project #:

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. apaquet@redcedarconsulting.net

Rush 24 hour

Asbestos: Bulk X

Wipe Point Count PCM

48 hour 72 hour

Lead: Bulk

Wipe

Air

Paint

Soil

Other: 5 Day



All Samples Except Plaster

TEM: AHERA 7400

Bulk/NOB

EPA Level II

Other Viable

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	FS-HM-01A	Shingle			
2	FS-HM-01B	Shingle			
3	FS-HM-02A	Fiber lap Siding			
4	FS-HM-02B	Fiber lap Siding			
5	FS-HM-03A	Fiber board			
6	FS-HM-03B	Fiber board			
7	FS-HM-04A	Stone 12x12 vinyl tile / Red 9x9 vinyl tile			
8	FS-HM-04B	Stone 12x12 vinyl tile / Red 9x9 vinyl tile			
9	FS-HM-05A	Brown Linoleum			
10	FS-HM-05B	Brown Linoleum			
11	FS-HM-06A	Tan Linoleum / White 9x9 vinyl tile			

RECEIVED

Relinquished by: *[Signature]*

Received by: *[Signature]*

Date: 5-10-16

Date: MAY 11 2016

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



Pg 2 of 3

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Date of Survey: 5-8-16

Project: 3113 Fifth St.

Project #:

Contact Person: Aaron Paquet

Lab Use Only
 Log-In _____
 Report _____

Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. apaquet@redcedarconsulting.net

Rush 24 hour

48 hour 72 hour

Other: 5 Day

TTP All Samples Except Plaster

Asbestos: Bulk Wipe _____ Point Count _____ PCM _____
 Lead: Bulk _____ Wipe _____ Air _____ Paint _____ Soil _____
 Mold: Bulk _____ Tape _____ Biosis _____ Other _____ Viable _____
 TEM: AHERA 7400 Bulk/NOB _____ EPA Level II _____

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	FS-KM-06B	Ten Linoleum/white 9x9 vinyl tile			
13	FS-KM-07A	Speckled Linoleum			
14	FS-KM-07B	Speckled Linoleum			
15	FS-KM-08A	Drywall			
16	FS-KM-08B	Drywall			
17	FS-KM-09A	Glazing			
18	FS-KM-09B	Glazing			
19	FS-KM-10A	Brown 6x6 vinyl tile / 2 layer Linoleum			
20	FS-KM-10B	Brown 6x6 vinyl tile / 2 layer Linoleum			
21	FS-KM-11A	White 12x12 vinyl tile			
22	FS-KM-11B	White 12x12 vinyl tile			

Relinquished by: [Signature]
 Date: 5-10-16

Received by: [Signature]
 Date: MAY 11 2016

Relinquished by: _____
 Date: _____

Received by: _____
 Date: _____

64736

APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189

Phone: 734-449-9990



Client Name: Red Cedar Consulting

Address: PO Box 13216
Lansing, MI 48901

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 5-8-16

Project: 3113 Fifth St.

Project #:

Contact Person: Aaron Paquet

Lab Use Only
Log-In _____
Report _____

Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. apaquet@redcedarconsulting.net

Rush 24 hour

48 hour 72 hour

Other: 5 days



All Samples Except Plaster

Asbestos: Bulk Wipe _____
Mold: Bulk _____ Tape _____
Lead: Bulk _____ Wipe _____
Point Count _____ PCM _____
Air _____ Paint _____ Soil _____
Other _____ Other _____ Viable _____
BioSIS _____
EPA Level II _____
HERA 7400 Bulk/NOB _____

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
23	FS-HM-12A	ceiling			
24	FS-HM-12B	ceiling			
25	FS-HM-13A	white linoleum			
26	FS-HM-13B	white linoleum			
27	FS-HS-01A	Plaster			
28	FS-HS-01B				
29	FS-HS-01C				
30	FS-HS-01D				
31	FS-HS-01E				
32	FS-HS-01F				
33	FS-HS-01G				

RECEIVED

Relinquished by: *[Signature]* Received by: *[Signature]*

Date: 5-10-16

Date: APEX RESEARCH

Relinquished by: _____

Received by: _____

Tables

Table 1 - Summary of Hazardous Materials, 3113 5th 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:

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, 3113 5th 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, 3113 5th St., Muskegon Heights, Michigan

Interior - Asbestos Containing Materials			
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.

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.

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

Project No.: 16-1070
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

Project No.: 16-1070
Muskegon County Land Bank
Parcel ID: 61-26-770-022-0015-00

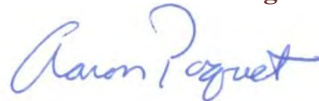
DISCLAIMER

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



Aaron Paquet
Michigan/EPA Certified Asbestos Building Inspector
(A30955)

Red Cedar Consulting

Attachment 1
APEX Research Laboratory Analytical Results



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 64734 - 02 Cust. #: FH-HM-01B Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%
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	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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 - 04 Cust. #: FH-HM-02B Material: Glazing Location: Appearance: beige,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64734 - 05 Cust. #: FH-HM-03A Material: Red 9x9 Vinyl Tile Location: Appearance: red,fibrous,homogenous Layer: 1 of 2	Asbestos Present: YES Chrysotile - 5%	Other - 95%
Lab ID #: 64734 - 05a Cust. #: FH-HM-03A Material: Mastic Location: Appearance: black,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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 - 06 Cust. #: FH-HM-03B Material: Red 9x9 Vinyl Tile Location: Appearance: Layer: 1 of 2	Asbestos Present: NOT ANALYZED	
Lab ID #: 64734 - 06a Cust. #: FH-HM-03B Material: Mastic Location: Appearance: black,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
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	Cellulose - 30% Other - 70%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 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 - 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	Cellulose - 2% Other - 98%
Lab ID #: 64734 - 08 Cust. #: FH-HM-04B Material: White 12x12 Vinyl Tile Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 3	Asbestos Present: NO No Asbestos Observed	Other - 100%
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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NVLAP Lab Code 102118-0



Certificate of Laboratory 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	Non-Asbestos
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 - 30% Other - 70%
Lab ID #: 64734 - 09 Cust. #: FH-HM-05A Material: Beige Linoleum Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 70% Other - 30%
Lab ID #: 64734 - 10 Cust. #: FH-HM-05B Material: Beige 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

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Project: 3129 Fifth St.

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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 - 11 Cust. #: FH-HM-06A Material: Brown Linoleum Location: Appearance: black,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64734 - 11a Cust. #: FH-HM-06A Material: Backing Location: Appearance: brown,fibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 60% Other - 40%
Lab ID #: 64734 - 12 Cust. #: FH-HM-06B Material: Brown Linoleum Location: Appearance: black,nonfibrous,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

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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 - 12a Cust. #: FH-HM-06B Material: Backing Location: Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 64734 - 13 Cust. #: FH-HM-07A Material: Speckled 9x9 Vinyl Tile Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 64734 - 14 Cust. #: FH-HM-07B Material: Speckled 9x9 Vinyl Tile Location: Appearance: beige, 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

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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 - 15 Cust. #: FH-HM-08A Material: Drywall Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 25% Other - 75%
Lab ID #: 64734 - 16 Cust. #: FH-HM-08B Material: Drywall Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 64734 - 17 Cust. #: FH-HM-09A Material: Glazing Location: Appearance: beige, 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

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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	Non-Asbestos
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	Other - 100%
Lab ID #: 64734 - 19 Cust. #: FH-HM-10A Material: Glazing Location: Appearance: beige,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64734 - 20 Cust. #: FH-HM-10B Material: Glazing Location: Appearance: beige,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

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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 - 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	Asbestos Present: NO No Asbestos Observed	Other - 100%
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%

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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 - 24 Cust. #: FH-HS-01B Material: Plaster Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64734 - 25 Cust. #: FH-HS-01C Material: Plaster Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
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%

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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 - 26 Cust. #: FH-HS-01D Material: Plaster Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	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	Cellulose - 2% Other - 98%
Lab ID #: 64734 - 27 Cust. #: FH-HS-01E Material: Plaster Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

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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 - 27a Cust. #: FH-HS-01E Material: Mortar Location: Appearance: grey,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

For Layered Samples, each component will be analyzed and reported separately.

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NVLAP Lab Code 102118-0

Apex # **64734**

29 of 3

APEX Research, Inc. 11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990

E-mail: apexresearch@chartermi.net Fax: 734-449-9991



Client Name: Red Cedar Consulting

Date of Survey: 5-8-16

Address: PO Box 13216 Lansing, MI 48901

Project: 3029 Fifth St.

City, St., Zip: Lansing, MI 48901

Project #:

Phone: (888) 449-4566 Fax: (888) 448-8739

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. apaquet@redcedarconsulting.net

Rush 24 hour

Asbestos: Bulk Wipe Point Count PCM

48 hour 72 hour

Lead: Bulk Wipe Air Paint Soil

Other: Shed

Mold: Bulk Tape BioSIS Other Viable
TEM: AHERA 7400 Bulk/NOB EPA Level II

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	EH-HM-01A	Shingle			
2	EH-HM-01B	Shingles			
3	EH-HM-02A	Colozing			
4	EH-HM-02B	Colozing			
5	EH-HM-03A	Red G99 Vinyl Tile			
6	EH-HM-03B	Red G99 Vinyl Tile			
7	EH-HM-04A	White 12x12 Vinyl Tile mat layer			
8	EH-HM-04B	White 12x12 Vinyl Tile mat layer			
9	EH-HM-05A	Beige Linsleum			
10	EH-HM-05B	Beige Linsleum			
11	EH-HM-06A	Brown Linsleum			

RECEIVED

Relinquished by: [Signature]

Received by: [Signature]

Relinquished by: _____

Received by: _____

Date: 5-10-16

Date: _____

Date: _____

Date: _____

641734

P3 2 of 3

APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189
Phone: 734-449-9990
E-mail: apexresearch@chartemi.net
Fax: 734-449-9991



Client Name: Red Cedar Consulting

Address: PO Box 13216
Lansing, MI 48901

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 5-8-16

Project: 229 Fifth St.

Project #:

Contact Person: Aaron Paquet

Lab Use Only
Log-In _____
Report _____

Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM.
apaquet@redcedarconsulting.net

Rush 24 hour

48 hour 72 hour

Other: STD



All Samples Except Plaster

Asbestos: Bulk Wipe _____ Point Count _____ PCM _____
Lead: Bulk _____ Wipe _____ Air _____ Paint _____ Soil _____
Mold: Bulk _____ Tape _____ Biosis _____ Other _____ Viable _____
TEM: AHERA 7400 Bulk/NOB _____ EPA Level II _____

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	FH-4M-06B	Brown Linoleum			
13	FH-4M-07A	Speckled 9x9 vinyl tile			
14	FH-4M-07B	Speckled 9x9 vinyl tile			
15	FH-4M-08A	Drywall			
16	FH-4M-08B	Drywall			
17	FH-4M-09A	Co Lazing			
18	FH-4M-09B				
19	FH-4M-10A				
20	FH-4M-10B				
21	FH-4M-11A				
22	FH-4M-11B				

Relinquished by: [Signature]

Date: 5-10-16

Received by: [Signature]

Date: _____

Relinquished by: _____

Date: _____

Received by: _____

Date: _____

MAY 11 2016

64734

APEX Research, Inc.



11054 Hi Tech Drive, Whitmore Lake, MI 48189
Phone: 734-449-9990
E-mail: apexresearch@chartermi.net
Fax: 734-449-9991

Client Name: Red Cedar Consulting

Address: PO Box 13216
Lansing, MI 48901

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 5-8-16

Project: 3029 FWH St.

Project #:

Contact Person: Aaron Paquet

Lab Use Only
Log-In _____
Report _____

Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. apaquet@redcedarconsulting.net

Rush 24 hour

48 hour 72 hour

Asbestos: Bulk Wipe _____ Point Count _____ PCM _____

Lead: Bulk _____ Wipe _____ Air _____ Paint _____ Soil _____

Mold: Bulk _____ Tape _____ BioSIS _____ Other _____ Viable _____

Other: Story All Samples Except Plaster TEM: AHERA 7400 Bulk/NOB _____ EPA Level II _____

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
23	FH-MS-01A	Plaster			
24	FH-MS-01B				
25	FH-MS-01C				
26	FH-MS-01D				
27	FH-MS-01E				

Relinquished by: [Signature]
Date: 5-16-16

Received by: [Signature]
Date: MAY 11 2016

Relinquished by: _____
Date: _____

Received by: _____
Date: _____

Tables

Table 1 - Summary of Hazardous Materials, 3129 5th 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	M	Category I	ND	Exterior	NA
FH-HM-01B	Asphalt Shingle	No	M	Category I	ND	Exterior	NA
FH-HM-02A	Glazing	Yes	M	Category II	ND	Garage	NA
FH-HM-02B	Glazing	Yes	M	Category II	ND	Garage	NA
FH-HM-03A	Red 9"x9" Vinyl Tile	No	M	Category I	5% CH/ND	Front Porch	154 sq. ft.
FH-HM-03B	Red 9"x9" Vinyl Tile	No	M	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	M	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	M	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	M	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	M	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	M	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	M	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

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, 3129 5th St., Muskegon Heights, Michigan

Asbestos Containing Material Description and 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.)	HVAC Duct Wrap	Yes	95 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.)			
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
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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.

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

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 Cementitious “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:

- 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 cementitious "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 cementitious (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.

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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

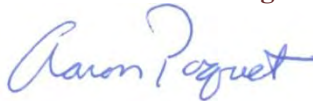
DISCLAIMER

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



Certificate of Laboratory 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 - 01 Cust. #: NS-HM-01A Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 64727 - 02 Cust. #: NS-HM-01AB Material: Shingle Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Fiberglass - 30% Other - 70%
Lab ID #: 64727 - 03 Cust. #: NS-HM-02A Material: 9x9 Beige Vinyl Tile Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 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.



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 3332 Ninth St.

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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 Material: 9x9 Beige Vinyl Tile Location: Appearance: Layer: of	Asbestos Present: NOT ANALYZED	
Lab ID #: 64727 - 05 Cust. #: NS-HM-03A Material: White Linoleum Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 5% Fiberglass - 5% Other - 90%
Lab ID #: 64727 - 06 Cust. #: NS-HM-03B Material: White Linoleum Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 5% Fiberglass - 5% Other - 90%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

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Project: 3332 Ninth St.

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Mr. Aaron Paquet
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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 - 07 Cust. #: NS-HM-04A Material: White & Black Linoleum Location: Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
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	Cellulose - 20% Fiberglass - 20% Other - 60%
Lab ID #: 64727 - 09 Cust. #: NS-HM-05A Material: 12x12 Beige Vinyl Tile Location: Appearance: beige, 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

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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 - 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	Other - 100%
Lab ID #: 64727 - 11 Cust. #: NS-HM-06A Material: Fiberboard Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 64727 - 12 Cust. #: NS-HM-06B 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

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



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Date Received: 05/11/16
Date Analyzed: 05/16/16
Date Reported: 05/16/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64727 - 13 Cust. #: NS-HM-07A Material: Joint Compound Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 64727 - 13a Cust. #: NS-HM-07A Material: Drywall Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
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	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



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Project: 3332 Ninth St.

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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 - 14a Cust. #: NS-HM-07B Material: Drywall Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 64727 - 15 Cust. #: NS-HM-08A Material: Glazing Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 5%	Other - 95%
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.



NVLAP Lab Code 102118-0

Apex # **64727**

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APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189 Phone: 734-449-9990



E-mail: apexresearch@chartermi.net

Fax: 734-449-9991

Client Name: Red Cedar Consulting

Address: PO Box 13216

City, St., Zip: Lansing, MI 48901

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 5-8-16

Project: 3332 Vinyl St.

Project #:

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

PLM EPA 600, PC all samples with a detection of <5% ACM. apaquet@redcedarconsulting.net

Rush 24 hour

48 hour 72 hour

Other: 4 Day

TTP All Samples Except Plaster

Mold: Bulk

Asbestos: Bulk x

Lead: Bulk

Wipe

Point Count

PCM

Air

Paint

Soil

Other

Viable

Bulk/NOB

EPA Level II

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
1	US-Hm-01A	Shingle			
2	US-Hm-01B	Shingle			
3	US-Hm-02A	Beige 9x9 vinyl tile			
4	US-Hm-02B	Beige 9x9 vinyl tile			
5	US-Hm-03A	White Linoleum			
6	US-Hm-03B	White Linoleum			
7	US-Hm-04A	White & Black Linoleum			
8	US-Hm-04B	White & Black Linoleum			
9	US-Hm-05A	Beige 12x12 vinyl tile			
10	US-Hm-05B	Beige 12x12 vinyl tile			
11	US-Hm-06A	Fiberboard			

Relinquished by: *[Signature]* Received by: *[Signature]*

Date: 5-10-16

Date: _____

Date: _____

Rev: 12/03

Work Forms: COC

APEX RESEARCH

APEX RESEARCH

APPEX Research, Inc.

64727

11054 Hi Tech Drive, Whitmore Lake, MI 48189
 Phone: 734-449-9990
 Fax: 734-449-9991
 E-mail: apexresearch@chartermi.net



Pg 2 of 2

Client Name: Red Cedar Consulting

Address: PO Box 13216
 Lansing, MI 48901

City, St., Zip: (888) 449-4566

Phone: (888) 449-4566 Fax: (888) 448-8739

Date of Survey: 5-8-16

Project: 3332 Vinyl St.

Project #:

Contact Person: Aaron Paquet

Turn Around Times: (Circle One)

PJM EPA 600, PC all samples with a detection of <5% ACM.
 apaquet@redcedarconsulting.net

Rush 24 hour

48 hour 72 hour

Other: 4 Day



All Samples Except Plaster

Asbestos: Bulk Wipe Point Count PCM
 Lead: Bulk Wipe Air Paint Soil
 Mold: Bulk Tape BioSIS Other Viable
 TEM: AHERA 7400 Bulk/NOB EPA Level II

Lab ID #	Client ID #	Material/Location	Volume	Area	Results
12	NS-Hm-06B	Fiberboard			
13	NS-Hm-07A	Drywall			
14	NS-Hm-07B	Drywall			
15	NS-Hm-08A	Ceiling			
16	NS-Hm-08B	Ceiling			
RECEIVED					

Lab Use Only
 Log-In _____
 Report _____

Relinquished by: *[Signature]*
 Date: 5-10-16

Received by: *[Signature]*
 Date: _____

Relinquished by: _____
 Date: _____

Received by: _____
 Date: _____

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

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, 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 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, 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	1 Window
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" depth
Total			792 sq. ft. at 4" depth

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.