

Landmark Environmental, LLC

2042 West 98th Street Bloomington, MN 55431 Phone: 952-666-2444

www.landmarkenv.com

April 14, 2016

Mr. Ryan Allen Minnesota Department of Administration Real Estate and Construction Services 309 Administration Building 50 Sherburne Avenue St. Paul, MN 55155

Re: Pre-Demolition Asbestos and Hazardous Building Material Survey

Building 17 South and a Portion of Building 18, Minnesota Veterans Home, Minneapolis,

MN

Dear Ryan:

Landmark Environmental, LLC (Landmark) and Applied Environmental Sciences, Inc. (AES) conducted a Pre-Demolition Asbestos Survey (Survey) at the above-referenced property (Property). The attached report included in Attachment A summarizes the asbestos containing material (ACM) and hazardous building material survey results, includes the applicable federal and state regulation summary, includes the laboratory reports for samples collected and analyzed, and a list of hazardous building materials and the location. This Pre-Demolition Asbestos Survey supplements the Preliminary Survey conducted in May 2014 included as Attachment B. The Survey results document ACM and hazardous building materials located in the buildings necessary for removal prior to demolition.

Landmark recommends that prior to demolition, a licensed asbestos abatement company properly removes regulated ACM in accordance with the regulations and that hazardous building materials also be properly removed from the buildings and properly managed and recycled and/or disposed in accordance with applicable regulations.

Once again, we appreciate the opportunity to work with you and provide environmental services to you. If you have any questions or comments, please feel free to contact me at (952) 666-2420.

Sincerely,

Sherry Van Duyn, PE

Shy Kilan

President

Enclosures

Attachment A Pre-Demolition Asbestos and Hazardous Building Material Survey, April 12, 2016

Attachment B Preliminary Asbestos Survey, May 2014

Level K

Consultant's Report

Attachment A

Pre-Demolition Asbestos and Hazardous Building Material Survey April 12, 2016

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ENVIRONMENTAL HEALTH SURVEY REPORT PRE-DEMOLITION HAZARDOUS MATERIALS SURVEY

OF

BUILDING 17 - SOUTH MINNEAPOLIS VETERANS HOME MINNEAPOLIS, MINNESOTA

PREPARED FOR

LANDMARK ENVIRONMENTAL, L.L.C. 2042 WEST 98TH STREET BLOOMINGTON, MINNESOTA 55431

APRIL 12, 2016

4-E-S

Applied Environmental Sciences, Inc.

8441 Wayzata Blvd. - Suite 103 - Minneapolis, MN 55426

ENVIRONMENTAL HEALTH SURVEY REPORT PRE-DEMOLITION HAZARDOUS MATERIALS SURVEY

AT

BUILDING 17 - SOUTH MINNEAPOLIS VETERANS HOME MINNEAPOLIS, MINNESOTA

Date of Survey:

April 4-6, 2016

Conducted by:

Mark Meier,

Asbestos Building Inspector MN #AI-3893

Applied Environmental Sciences, Inc. 8441 Wayzata Blvd., Suite #103

Minneapolis, MN 55426

(763) 545-5510

Aaron Kuck, Eric Gabrielson,

Shannon Russell,

Asbestos Building Inspector MN #AI-12661 Asbestos Building Inspector MN #AI-10463 Asbestos Building Inspector MN #AI-13125

Landmark Environmental, LLC 2042 W. 98th Street

Bloomington, MN 55431

(952) 887 9605

I hereby certify that the survey and inspection referenced by this report, and the report itself, were conducted in accordance with intent of the AHERA regulations to the best of my ability and knowledge.

Mark Meier, Asbestos Building Inspector

I have reviewed this report and hereby certify that the information contained within satisfies the intent of the AHERA regulations to the best of my ability and knowledge.

Patrick DiBartolomeo, CIH, CSP

Certification # 2204

And Or Valtorine

F16-136 Landmark Minneapolis Veterans Home.mmpc

1.0 EXECUTIVE SUMMARY

Applied Environmental Sciences, Inc. (AES) was retained by Landmark Environmental, LLC to perform a pre-demolition hazardous materials survey of Building 17 South and a portion of Buildings 18 at the Minneapolis Veterans Home located in Minneapolis, Minnesota. The surveyed area is scheduled to be demolished in the future.

Survey procedures conducted by AES complied with the applicable Occupational Safety and Health Administration (OSHA), Minnesota Pollution Control Agency (MPCA), and Minnesota Department of Health (MDH) standards for surveys of buildings to be demolished. AES performed an asbestos survey of the building, but compile a list of other hazardous materials (e.g., those assumed to contain PCBs, mercury, CFCs) present on the property.

A preliminary asbestos survey of the building was conducted by AES and Landmark in 2014. Sample results from the preliminary survey were used on this pre-demolition survey.

AES took 122 bulk asbestos samples as part of the 2014 preliminary survey. The contracted laboratory separated these 122 samples into 123 individual layer samples and analyzed 122 layer samples. One sample (Sample 24) was not analyzed due to an insufficient amount of material present for the laboratory to analyze. This material was resampled during the pre-demolition survey.

The pre-demolition survey was conducted on April 4-6, 2016.

AES took 172 bulk asbestos samples as part of 2016 survey. The contracted laboratory separated these 172 samples into 174 individual layer samples and analyzed 173 layer samples. One sample (Sample 223) was not analyzed due to an insufficient amount of material present for the laboratory to analyze.

The results of the combined surveys are as follows:

- 1. Suspect building materials found to contain asbestos include white sink undercoating, pink sink undercoating, metal wall panel adhesive, 12" x 12" floor tile and floor tile mastic. Asbestos-containing material should not be cut, drilled, sanded or disturbed.
- 2. Building materials assumed to contain asbestos during the survey include **electric panels.** Asbestos-containing material should not be cut, drilled, sanded or disturbed. Coolers were observed during the survey, but are to be removed intact from the building prior to demolition by a contractor to be reused. If plans change, the coolers should be inspected prior to demolition.
- 3. No lead paint was sampled as part of this project. If building materials that are painted are to be reused or recycled as part of the project, they must be sampled to determine lead content.
- 4. Prior to demolition, all hazardous and special waste must be recycled or removed from the building according to Local, State, and Federal regulations. Caulk, which tested positive for asbestos content requires testing for PCB content as well. Since no caulk samples were found to be asbestos-containing, no PCB caulk samples were taken.
- 5. Relevant State of Minnesota, EPA and OSHA regulations are included in Appendix I.

- 6. The asbestos bulk sampling sheets are included in Appendix II.
- 7. The estimated quantity and location of identified positive materials are included in Appendix III.
- 8. Minnesota Department of Health certifications are included in Appendix IV.
- 9. A diagram, with the portions of the buildings included in the survey highlighted, has been included in Appendix V.
- 10. A complete list of building hazardous and special wastes observed in the buildings is included in Appendix VI.
- 11. Fire door sign off letters from the manufacturers have been included in Appendix VII.

This survey identifies materials as they existed on the day of the survey. Conditions may change over time.

This survey should <u>not be used</u> as a bidding document. The ACM quantities provided area estimates and must be verified prior to abatement firm bidding. AES recommends using a licensed asbestos project designer to design and bid projects.

1.1 SUMMARY OF ACM BY TYPE, QUANTITY AND SAMPLE NUMBER

The <u>approximate</u> quantity of ACM found in the building is listed below:

Thermal System Insulation - None found

Surfacing Material - None found

Miscellaneous Materials

Floor tile mastic (under ACM tiles)	Samples 65, 81, 142 & 166	2,780	square feet
White sink undercoating	Sample 112	3	sinks
Pink sink undercoating	Sample 113	1	sink
Metal wall panel adhesive	Sample 120	120	square feet
12" x 12" floor tile, white with olive	Samples 80 & 141	80	square feet
12" x 12" floor tile, gray with tan	Sample 165	740	square feet

Assumed Materials

Electric panels	125	panels
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For a full description of sample results and sample locations, see Appendix II.

The estimated quantity and location of asbestos-containing materials are included in Appendix III.

1.2 SUMMARY OF DETERIORATED LEAD-BASED PAINT

No lead paint was sampled as part of this project. If building materials that are painted are to be reused or recycled as part of the project, they must be sampled to determine lead content.

1.3 SUMMARY OF HAZARDOUS MATERIALS

Prior to demolition, all hazardous and special waste must be recycled or removed from the building according to Local, State, and Federal regulations. A contractor was removing all fluorescent light bulbs and ballasts from the building at the time of the inspection. Therefore, these materials were not included in the inspection.

Caulk, which tested positive for asbestos content requires testing for PCB content as well. Since no caulk samples were found to be asbestos-containing, no PCB caulk samples were taken.

A complete list of building hazardous and special wastes observed in the buildings is included in Appendix VI.

2.0 METHODS

2.1 ASBESTOS SURVEY APPROACH

The procedures used for this survey meet the sampling standards of EPA's Asbestos Hazard Emergency Response Act (AHERA), the OSHA asbestos standard and the EPA NESHAP rule for demolitions.

AES' approach to this survey was to identify, assess, sample and quantify all suspect asbestos-containing materials within the building. Electrical wiring and panels were not sampled. AES does not perform bulk sampling of electrical equipment unless it has been shut down and tagged by a licensed electrician. An attempt was made to locate and identify materials inside walls, doors, ducts, roofs or other areas which require destructive entry.

The quantity of each assessed material was estimated, and may be unreliable.

The survey was conducted by accredited asbestos building inspectors and supervised by Board Certified Industrial Hygienists.

AES conducted the pre-demolition inspection in Building 6 (walkway to Building 17), Building 15 (Elevator Lobby and Hallway), Building 17 (South) and Building 18.

2.1.1 ASBESTOS SURVEY LIMITATIONS

An attempt was made to locate and identify materials inside walls, doors, ducts, roofs or other areas which require destructive entry. The possibility exists that as other walls, doors, ducts, etc. are opened during the abatement and demolition of the building, suspect materials may be found. If suspect materials are encountered during demolition, the demolition should stop until these materials can be tested and, if necessary, removed by a licensed asbestos contractor.

The rooftop-cooling tower was observed and the exterior of it was inspected. The cooling tower was in use at the time and could not be fully inspected on the inside. Cooling towers have been found to contain ACM in the past.

No access was gained into the 4th floor elevator lobby side room, and therefore was not inspected. This area should be inspected prior to demolition.

Quantities of all materials are estimates and should be verified by bidding demolition contractors.

This survey identifies materials as they existed on the day of the survey. Conditions and quantities may change over time.

2.1.2 BULK ASBESTOS SAMPLING

Samples were collected utilizing random sampling procedures. Similar systems and materials were grouped into "homogeneous areas of building materials." Multiple random samples were taken of materials in accordance with the EPA-AHERA guidelines. Sample locations were determined using a random sampling process for each homogeneous material.

AMOUNT OF MATERIAL	MINIMUM # OF SAMPLES
Less than 1,000 square feet	3
Between 1,000 and 5,000 square feet	5
Greater than 5,000 square feet	7

Samples were collected by carefully removing a small representative sample of the suspect material and sealing it in a plastic bag. The sample was identified with a sample number.

2.1.3 BULK ASBESTOS ANALYSIS

The bulk samples were analyzed by polarized light microscopy (PLM) with dispersion staining, EPA method 600/R-93/116. Bulk samples were viewed under a stereoscope. Samples were prepared in various Cargille refractive index oils and examined under the polarizing microscope. The samples were evaluated under crossed polars for extinction angle, sign of elongation and morphology. Quantity determinations are made by visual estimation.

EPA NESHAP-Asbestos Rule 40 CFR Part 61 states that samples found to contain less than 10% asbestos by visual estimation may be further quantified by point count analysis.

The Asbestos Rule also states that all multi-layer systems, except for wall systems where joint compound was used only at the joints and nail holes, must be analyzed as separate materials. If any layer contains greater than one-percent asbestos, that layer must be treated as asbestoscontaining. This requires all layers in a multi-layered system to be treated as asbestos-containing if the layers cannot be separated without disturbing the asbestos-containing layer.

In each homogeneous sampling area, once a positive sample was identified, the remaining samples were not analyzed. Asbestos samples will be held for thirty (30) days after the date of this report.

2.2 HAZARDOUS MATERIALS SURVEY APPROACH

AES's approach to this survey was to visually inspect each room for building components assumed to contain hazardous and special wastes that must be removed from the building or recycled properly prior to demolition. Quantities of these materials are estimates and should be verified by bidding demolition contractors. A contractor was removing all fluorescent light bulbs and ballasts from the building at the time of the inspection. Therefore, these materials were not included in the inspection.

2.3 LEAD SURVEY APPROACH

No lead paint was sampled as part of this project. If building materials that are painted are to be reused or recycled as part of the project, they must be sampled to determine lead content.

2.4 CHAIN OF CUSTODY PROCEDURES

To ensure that samples collected in the field are neither lost nor their identity confused, all samples, from the point of collection to receipt in the laboratory, follow these procedures. Each sample is first assigned a unique and distinct sampling number. After a sample is placed into a plastic bag, that unique number is assigned to that bag. This same number is assigned to the chain of custody. The inspector signs the chain of custody sheet before it, along with the samples, is delivered to the lab. Upon receipt of the samples, the lab analyst verifies that each sample matches the corresponding chain of custody sample number and signs and dates the chain of custody.

2.5 QUALIFICATIONS

Asbestos sample analysis for the pre-demolition survey was conducted by EHS Laboratory in Richmond, Virginia. EHS is accredited by the National Voluntary Accreditation Program (NVLAP lab code 101882-0).

The survey was conducted by accredited asbestos building inspectors and supervised by Board Certified Industrial Hygienists.

3.0 DISCUSSION

3.1 SUMMARY OF NON-ASBESTOS-CONTAINING MATERIAL

Suspect ACM is considered negative for asbestos when all samples of the material are found to contain one percent or less asbestos.

Suspect material found to be <u>negative</u> includes:

- 1. Floor tile, 12" x 12" (Sample 1).
- 2. Floor tile mastic (Sample 2).
- 3. Sheetrock and joint compound (Sample 3).
- Ceiling tile, 2' x 4' (Sample 4). Baseboard (Sample 5). 4.
- 5.
- Baseboard adhesive (Sample 6). 6.
- White fireproofing (Sample 7).
- Door caulk (Sample 8). 8.
- Window glazing (Sample 9).
- Floor tile, 12" x 12" (Samples 14, 12, 21, 23 & 27).
- Floor tile mastic (Samples 15, 13, 22 & 28). 11.
- Ceiling tile, 2' x 2' (Samples 16 & 25). 12.
- Fireproofing (Sample 17). 13.
- Stair tread (Sample 10). 14.
- Stair tread adhesive (Sample 11). 15.
- Sheetrock and joint compound (Sample 20). 16.
- Mesh on interior walls above ceiling (Sample 18). 17.
- Brown fire stop putty (Sample 19). 18.
- 19.
- Sink undercoating (Sample 26).
 Floor tile, 12" x 12" (Samples 29, 39, 41, 46, 64 & 72).
 Floor tile mastic (Samples 30, 40, 42, 47 & 73).
 Baseboard (Samples 31, 43, 48, 66 & 86). 20.
- 22.
- Baseboard adhesive (Samples 32, 44, 49, 67 & 87). 23.
- Ceiling tile, 2' x 2' (Samples 33, 37, 45, 51, 55, 63, 71 & 79).
- Sheetrock and joint compound (Sample 36). 25.
- Fire stop putty (Sample 34). 26.
- Stucco like material on exterior walls and in loading dock (Sample 35). 27.
- 28. Fireproofing (Sample 38).
- Linoleum (Samples 50, 68, 69, 70, 74, 75, 76 & 78). 29.
- 30. Window caulk (Sample 52).
- Textured ceiling (Samples 53 & 54). 31.
- Floor sheeting (Sample 57).
- Ceiling tile, 2' x 2' (Sample 58).
- 34. Baseboard (Sample 59).

- 35. Baseboard adhesive (Sample 60).
- 36. Window caulk (Sample 61).
- 37. Sheetrock and joint compound (Sample 62).
- 38. Gray duct sealant (Sample 77).
- 39. Floor tile, 2' x 2' gray with circles (Sample 82).
- 40. Floor tile mastic (Sample 83).
- 41. Stair tread (Sample 84).
- 42. Stair tread adhesive (Sample 85).
- 43. Hard fittings on fiberglass (Sample 88).
- 44. Black baseboard and adhesive (Samples 100 & 101).
- 45. Brown window caulk (Sample 102).
- 46. Fiberglass wall panel adhesive (Sample 103).
- 47. 2" brown ceramic floor tile mortar and grout (Samples 104 & 105).
- 48. 4" white ceramic wall tile mortar and grout (Samples 106 & 107).
- 49. Tan chair rail adhesive (Sample 108).
- 50. Tan windowsill adhesive (Sample 109).
- 51. Linoleum, darker with blue and red (Sample 110).
- 52. Linoleum, white with brown spots (Sample 111).
- 53. 12" x 12" floor tile, darker tan mottled & mastic (Samples 114 & 115).
- 54. 12" beige ceramic floor tile mortar and grout (Samples 116 & 117).
- 55. 4" multicolor ceramic wall tile mortar and grout (Samples 118 & 119).
- 56. Linoleum, tan marble (Sample 121).
- 57. Wainscoting adhesive, tan (Sample 122).
- 58. Wainscoting adhesive, blue (Sample 123).
- 59. 12" floor tile, cream & mastic (Samples 124 & 125).
- 60. 2" tan ceramic floor tile mortar and grout (Samples 126 & 127).
- 61. 6" tan and purple ceramic wall tile mortar & grout (Samples 128 & 129).
- 62. 2' x 2' ceiling tile, white with holes (Sample 130).
- 63. Gray duct sealant (Sample 131).
- 64. Gray floor sheeting & adhesive (Samples 132 & 133).
- 65. Tan wall panel adhesive (Sample 134).
- 66. Plaster like patch (Sample 135).
- 67. Tan adhesive on fiberglass pipe insulation (Sample 136).
- 68. Green baseboard & adhesive (Samples 137 & 138).
- 69. Fire door, 1.5 hour rating (Sample 139).
- 70. 2' x 2' ceiling tile, white reveal with dents and holes (Sample 140).
- 71. White door insulation (Sample 143).
- 72. Fire door frame insulation (Sample 144).
- 73. 4" cream ceramic wall tile mortar and grout (Samples 145 & 146).
- 74. Plaster (Samples 147 & 158).
- 75. 2' x 2' ceiling tile, white wavy (Sample 149).
- 76. Gray sink undercoating (Sample 150).
- 77. 2' x 2' ceiling tile, white light rough (Sample 151).
- 78. Adhesive on foam (Sample 152).
- 79. Black tarpaper (Sample 153).
- 80. 2' x 2' ceiling tile, white reveal with texture (Sample 154).
- 81. Linoleum, white with blue (Sample 155).
- 82. Round column texture (Sample 156).
- 83. Linoleum, orange (Sample 157).
- 84. Darker gray duct sealant (Sample 159).
- 85. Hard white coating on conduit (Sample 160).
- 86. Fiberglass wall panel adhesive (Sample 161).
- 87. White duct sealant (Sample 162).
- 88. 2' x 4' ceiling tile, white sheetrock (Sample 163).

- 89. 2' x 2' ceiling tile, white with dents and holes (Sample 164).
- 90. 2' x 2' ceiling tile, white chicken track (Sample 167).
- 91. Fire door, white Warnock Heresy 30-min (Sample 168).
- 92. 2" light tan ceramic floor tile mortar & grout (Samples 169 & 170).
- 93. 4" light tan ceramic wall tile mortar & grout (Samples 171 & 172).
- 94. 12" x 12" floor tile, cream with tan & mastic (Samples 173 & 174).
- 95. Built up roofing materials (Samples 175 & 185).
- 96. Roof flashing (Samples 176 & 186).
- 97. White duct caulk (Sample 177).
- 98. Gray duct caulk (Sample 178).
- 99. White cloth vibration dampener (Sample 179).
- 100. Black hole filler (Samples 180 & 189).
- 101. Flashing sealant (Samples 181 & 187).
- 102. Tan metal flashing sealant (Samples 182 & 190).
- 103. White metal flashing sealant (Samples 183 & 188).
- 104. Cream metal flashing sealant (Sample 184).
- 105. Tan caulk on cooling tower (Sample 191).
- 106. Rubber roof membrane adhesive (Sample 192).
- 107. Black rubber roof sealant (Sample 193).
- 108. Vibration damper (Sample 194).
- 109. White duct sealant (Sample 195).
- 110. Light gray duct sealant (Sample 196).
- 111. Darker gray duct sealant (Sample 197).
- 112. Black duct sealant (Sample 198).
- 113. Tan flashing sealant (Sample 199).
- 114. Stucco (Sample 200).
- 115. 2' x 4' ceiling tile, white with dents and holes (Sample 201).
- 116. 2' x 2' ceiling tile, white with deep fissures (Sample 202).
- 117. Navy baseboard & adhesive (Samples 204 & 205).
- 118. Hard white pipe insulation (Sample 206).
- 119. 2' x 2' ceiling tile, white rough (Sample 207).
- 120. 12" x 12" floor tile, cream with tan floor tile & mastic (Samples 208 & 209).
- 121. 12" x 12" floor tile, pink mottled & mastic (Samples 210 & 211).
- 122. 6" brown ceramic floor tile mortar and grout (Samples 212 & 213).
- 123. 2' x 2' ceiling tile, black with dents and holes (Sample 214).
- 124. 2" cream ceramic floor tile mortar & grout (Samples 215 & 216).
- 125. 4" cream ceramic wall tile mortar and grout (Samples 217 & 218).
- 126. Sheetrock and joint compound (Sample 219).
- 127. Tan adhesive behind sheetrock (Sample 220).
- 128. 6" cream ceramic wall tile mortar and grout (Samples 221 & 222).
- 129. Black mastic (Samples 223 & 24 (resampled)).
- 130. 2' x 2' ceiling tile, white with deep fissures (Sample 224).
- 131. Window glazing, white soft (Sample 225).
- 132. Gray fireproofing with white (Sample 226).
- 133. 2'x 2' ceiling tile, white with fissures (Sample 227).
- 134. 12" x 12" floor tile, gray with brown and white & mastic (Samples 228 & 229).
- 135. Fire door, Warnock Hersey 1.5 hour rating (Sample 230).
- 136. Black tar on exterior block wall (Sample 231).
- 137. Black felt and tar on exterior foundation (Sample 232).
- 138. Gray roof sealant (Sample 233).
- 139. Caulk on roof around columns (Sample 234).
- 140. Caulk, shingles to siding (Sample 235).
- 141. Shingles and ice dam sheet (Samples 236, 237 & 238).
- 142. Black interior of window caulk (Sample 239).

- 143. Black door caulk (Sample 240).
- 144. Window caulk, tan (Sample 241).
- 145. White hole filler (Sample 242).
- 146. Tan with black window caulk (Sample 243).
- 147. Tan door caulk (Sample 244).
- 148. Gray caulk expansion joint (Sample 245).
- 149. Gray siding on corridor (Sample 246).

3.2 RECOMMENDATIONS

3.2.1 ASBESTOS

This survey was conducted to locate asbestos-containing materials that must legally be removed prior to demolition of the building. The EPA/MPCA NESHAP regulations require that asbestos-containing materials which are friable, or will become friable during demolition, must be removed from the building prior to demolition by a licensed asbestos abatement contractor.

Suspect building materials found to contain asbestos include – white sink undercoating, pink sink undercoating, metal wall panel adhesive, 12" x 12" floor tile and floor tile mastic. Asbestos-containing material should not be cut, drilled, sanded or disturbed.

Building materials assumed to contain asbestos include – **electric panels.** Asbestos-containing material should not be cut, drilled, sanded or disturbed.

The possibility exists that asbestos-containing floor tile mastic exists under the ceramic floor tile in the kitchen office area. One sample (Sample 170 was found to contain <1% asbestos.

The rooftop-cooling tower was observed and the exterior was inspected. The cooling tower was in use at the time and the interior of it could not be fully inspected. Cooling towers have been found to contain ACM in the past.

No access was gained into the 4^{th} floor elevator lobby side room, and therefore was not inspected. This area should be inspected prior to demolition.

3.2.2 HAZARDOUS MATERIALS

Prior to demolition, all hazardous and special waste must be recycled or removed from the building according to Local, State, and Federal regulations. A contractor was removing all fluorescent light bulbs and ballasts from the building at the time of the inspection. Therefore, these materials were not included in the inspection. A complete list of building hazardous and special wastes observed in the buildings is included in Appendix VI.

3.2.3 LEAD

No lead paint was sampled as part of this project. If building materials that are painted are to be reused or recycled as part of the project, they must be sampled to determine lead content.

This survey should <u>not be used</u> as a bidding document. The ACM quantities provided area estimates and must be verified prior to abatement firm bidding. AES recommends using a licensed asbestos project designer to design and bid projects.

APPENDIX I

1.0 STANDARDS REGULATING ASBESTOS

1.1 MINNESOTA

The State of Minnesota enforces two asbestos-related rules that affect building owners. One rule states that friable asbestos-containing materials must be maintained in a good state of repair. The second rule states that an inspection survey for asbestos must be performed prior to the undertaking of either a renovation or demolition project where there is reason to suspect asbestos might be present. These rules are enforced by Minnesota OSHA.

Minnesota Department of Health regulations require building owners to keep records of all asbestos abatement or asbestos maintenance work performed at their facility for the current calendar year. These records must be retained for three years.

1.2 EPA

The EPA has specific rules governing the disposal of asbestos-containing materials (ACM), removal of ACM before building demolition and notification before removal of ACM. The Minnesota Pollution Control Agency enforces these rules.

EPA's Asbestos Hazard Emergency Response Act (AHERA), which regulates asbestos in schools, states that any building material containing greater than one percent asbestos must be inspected and managed.

1.3 EPA/ASHARA

The Asbestos School Hazard Abatement Reauthorization Act (ASHARA) requires that any asbestos inspection, whether done visually or by taking samples, must be done by accredited asbestos building inspectors. The regulation also stipulates that asbestos abatement projects must be designed and performed by accredited individuals.

1.4 OSHA

OSHA standards 1910.1001 (general industry), 1926.1101 (construction), and 1915.1001 (shipbuilding) regulate occupational exposures to asbestos. These standards regulate asbestos abatement, building inspections, maintenance work and custodial activities. The permissible exposure limit (PEL) for asbestos is 0.1 fibers per cubic centimeter as an eight-hour, timeweighted average (8-hour TWA).

1.5 EPA/NESHAP

The Asbestos National Emission Standard for Hazardous Air Pollutants (NESHAP) (40 CFR 61, Subpart M) addresses milling, manufacturing and fabrication operations, demolition and renovation activities, waste disposal issues, active and inactive waste disposal sites and asbestos conversion processes.

The terms friable and nonfriable are used to make the distinction between building materials that would readily release asbestos fibers when damaged or disturbed and those materials unlikely to result in significant fiber release when disturbed.

Friable asbestos-containing material (ACM) is defined by the EPA as any material containing more than one percent asbestos that, when dry, can be crumbled, pulverized or reduced to powder by hand pressure.

Nonfriable ACM is any material containing more than one percent asbestos that, when dry, cannot be crumbled, pulverized or reduced to powder by hand pressure.

The EPA defines two categories of nonfriable ACM, Category I and Category II nonfriable ACM. Category I nonfriable ACM is any asbestos-containing packing, gasket, resilient floor covering or asphalt roofing product which contains more than one percent asbestos. Category II nonfriable ACM is any material, excluding Category I nonfriable ACM, containing more than one percent asbestos, that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

"Regulated Asbestos-Containing Material" (RACM) is (a) friable asbestos material, (b) Category I nonfriable ACM that has become friable, (c) Category I nonfriable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading, or (d) Category II nonfriable 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 demolition or renovation activities.

2.0 STANDARDS REGULATING LEAD

2.1 OSHA

OSHA standards apply to any employee disturbing (creating dust or fumes) materials covered with lead-based paint. OSHA regulates lead as an airborne contaminant. Airborne concentrations during disturbance will vary with both the concentration of lead paint and with the operation (manual demolition, sanding, etc.). OSHA requires the contractor to show proof that the operations disturbing lead-based paint in any concentration will not exceed the action level of $30 \,\mu\text{g/m}^3$ or the Permissible Exposure Limit (PEL) of $50 \,\mu\text{g/m}^3$.

2.2 MPCA

The MPCA requires that paint must be removed from the site as part of the building demolition. If building materials that are painted are to be recycled or reused as part of the project, they must be sampled to determine lead content.

3.0 HAZARDOUS AND SPECIAL WASTE

3.1 MPCA

The MPCA requires that all solid, hazardous, or other special waste be recycled or removed and properly disposed of prior to demolition.

APPENDIX II



Environmental Hazards Services, L.L.C. 7469 Whitepine Rd Richmond, VA 23237

Telephone: 800.347.4010

Asbestos Bulk **Analysis Report**

Report Number: 16-04-00833

Client:

Applied Env. Sciences 8441 Wayzata Blvd.

Suite 103

St. Louis Park, MN 55426

Received Date:

04/07/2016

Analyzed Date: 04/07/2016, 04/08/2016

Reported Date: 04/08/2016

Project/Test Address: F16-136; MN Vet Home #17; Mpls, MN

Client Number:

24-1221

Laboratory Results

Fax Number:

763-545-7883

Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description	Asbestos	Other Materials
16-04-00833-001	88D		Beige Powdery; Fibrous; Homogenous	NAD	25% Cellulose 15% Fibrous Glass 60% Non-Fibrous
16-04-00833-002	88E		Beige Powdery; Fibrous; Homogenous	NAD	15% Cellulose 10% Fibrous Glass 75% Non-Fibrous
16-04-00833-003	100		Brown Vinyl-Like; Homogenous	NAD	100% Non-Fibrous
16-04-00833-004	101		Tan Adhesive; Homogenous	NAD	2% Cellulose 98% Non-Fibrous
16-04-00833-005	102		Brown Rubbery; Homogenous	NAD	100% Non-Fibrous

Client Number:

24-1221

Report Number:

16-04-00833

Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description	Asbestos	Other Materials
6-04-00833-006	103		Yellow/Clear Adhesive; Homogenous	NAD	100% Non-Fibrous
16-04-00833-007	104		Gray Granular; Homogenous	NAD	100% Non-Fibrous
16-04-00833-008	105		Black Granular; Homogenous	NAD	100% Non-Fibrous
16-04-00833-009	106		White Rubbery/Granular; Homogenous	NAD	100% Non-Fibrous
16-04-00833-010	107		White Rubbery; Homogenous	NAD	100% Non-Fibrous
16-04-00833-011	108		White Paint-Like; Tan Adhesive; Inhomogenous	NAD	2% Cellulose 98% Non-Fibrous
16-04-00833-012	2 109		Beige Adhesive; Homogenous	NAD	100% Non-Fibrous
16-04-00833-013	3 110		Beige W/ Blue/Red Streaks Vinyl-Like; Homogenous	NAD	100% Non-Fibrous

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Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description A	sbestos	Other Materials
16-04-00833-014	111		Beige Vinyl-Like; Homogenous	NAD	100% Non-Fibrous
16-04-00833-015	112		Light Purple Paint-Like; Homogenous	2% Chrysotile	98% Non-Fibrous
			Total Asbestos	: 2%	
16-04-00833-016	113		Light Pink Paint-Like; Homogenous	2% Chrysotile	98% Non-Fibrous
			Total Asbestos	: 2%	
16-04-00833-017	114		Tan Vinyl; Homogenous	NAD	4% Cellulose 96% Non-Fibrous
16-04-00833-018	115		Yellow Adhesive; Homogenous	NAD	8% Cellulose 92% Non-Fibrous
16-04-00833-019	116		Beige Granular; Homogenous	NAD	100% Non-Fibrous
16-04-00833-020	117		Brown Granular; Homogenous	NAD	100% Non-Fibrous
16-04-00833-021	118		Beige Cementitious; Homogenous	NAD	100% Non-Fibrous

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Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description	Asbestos	Other Materials
16-04-00833-022	119		Brown Granular; Homogenous	NAD	100% Non-Fibrous
16-04-00833-023	3 120		Black Brittle; Homogenous		96% Non-Fibrous
			Total Asbestos	s: 4%	
16-04-00833-024	121		Light Brown Vinyl-Like; White Fibrous; Inhomogenous	NAD	10% Synthetic 90% Non-Fibrous
16-04-00833-025	5 122		Tan Adhesive; Homogenous	NAD	100% Non-Fibrous
16-04-00833-026	6 123		Blue Adhesive; Homogenous	NAD	100% Non-Fibrous
16-04-00833-02	7 124	×	Light Brown Vinyl; Homogenous	NAD	100% Non-Fibrous
16-04-00833-026	8 125		Clear Adhesive; Homogenous	NAD	4% Cellulose 96% Non-Fibrous
16-04-00833-02	9 126	-	Gray Granular; Homogenous	NAD	100% Non-Fibrous

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Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description	Asbestos	Other Materials
16-04-00833-030	127		Beige Granular; Homogenous	NAD	100% Non-Fibrous
16-04-00833-031	128		Tan Rubbery/Granular; Homogenous	NAD	100% Non-Fibrous
16-04-00833-032	129		Brown Granular; Homogenous	NAD	100% Non-Fibrous
16-04-00833-033	130		White Paint-Like; Brown Powdery; Fibrous; Inhomogenous	NAD	10% Cellulose 85% Fibrous Glass 5% Non-Fibrous
16-04-00833-034	131A		Gray Pliable-Like; Homogenous	NAD	100% Non-Fibrous
16-04-00833-035	131B		Gray Pliable-Like; Homogenous	NAD	100% Non-Fibrous
16-04-00833-036	132		Gray Vinyl-Like; Homogenous	NAD	100% Non-Fibrous
16-04-00833-037	133		Cream Adhesive; Homogenous	NAD	5% Cellulose 95% Non-Fibrous

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Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description A	Asbestos	Other Materials
16-04-00833-038	134		Tan Adhesive; Homogenous	NAD	2% Cellulose 98% Non-Fibrous
16-04-00833-039	135A		Beige Powdery; Gold Platelets; Brown Fibrous; Inhomogenous	Trace <1% Trem/Actin*	25% Cellulose 75% Non-Fibrous
			Total Asbestos	: Trace <1%	
<1% *Tremolite/A	ctinolite Series As	bestos present	in beige powdery/gold platele	ts material.	
16-04-00833-040	135B		Beige Chalky; Gold Platelets; Brown Fibrous; Inhomogenous	Trace <1% Trem/Actin*	20% Cellulose 80% Non-Fibrous
			Total Asbestos	: Trace <1%	
				te material	
<1% *Tremolite/A	ctinolite Series As	sbestos present	in beige powdery/gold platele	is material.	
		sbestos present	White Granular; Homogeneous	NAD	100% Non-Fibrous
16-04-00833-041	135C	sbestos present	White Granular; Homogeneous Tan Granular; Vermiculite	NAD	100% Non-Fibrous
16-04-00833-041	135C	sbestos present	White Granular; Homogeneous Tan Granular; Vermiculite Inhomogeneous	NAD ; Trace <1% Trem/Actin*	
16-04-00833-041 16-04-00833-042	135C		White Granular; Homogeneous Tan Granular; Vermiculite Inhomogeneous Total Asbestos	NAD ; Trace <1% Trem/Actin*	
16-04-00833-041 16-04-00833-042	135C 135D Actinolite Series As		White Granular; Homogeneous Tan Granular; Vermiculite Inhomogeneous	NAD Trace <1% Trem/Actin* Trace <1%	
16-04-00833-041 16-04-00833-042 <1% *Tremolite/A	135C 135D Actinolite Series As		White Granular; Homogeneous Tan Granular; Vermiculite Inhomogeneous Total Asbestos in tan granular material. Tan Granular; Vermiculite	NAD Trace <1% Trem/Actin* Trace <1% Trace <1%	100% Non-Fibrous
16-04-00833-041 16-04-00833-042 <1% *Tremolite// 16-04-00833-043	135C 135D Actinolite Series As 135E	sbestos present	White Granular; Homogeneous Tan Granular; Vermiculite Inhomogeneous Total Asbestos in tan granular material. Tan Granular; Vermiculite Inhomogeneous	NAD Trace <1% Trem/Actin* Trace <1% Trace <1%	100% Non-Fibrous
16-04-00833-041 16-04-00833-042 <1% *Tremolite// 16-04-00833-043	135C 135D Actinolite Series As 135E Actinolite Series As	sbestos present	White Granular; Homogeneous Tan Granular; Vermiculite Inhomogeneous Total Asbestos in tan granular material. Tan Granular; Vermiculite Inhomogeneous Total Asbestos	NAD Trace <1% Trem/Actin* Trace <1% Trace <1%	100% Non-Fibrous

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Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description A	sbestos	Other Materials
16-04-00833-046	138		Brown Adhesive; Homogeneous	NAD	100% Non-Fibrous
6-04-00833-047	139		Yellow Adhesive; Homogeneous	NAD	100% Non-Fibrous
16-04-00833-048	140		Brown Fibrous; White Paint-Like; Inhomogeneous	NAD	60% Cellulose 10% Fibrous Glass 30% Non-Fibrous
16-04-00833-049 141		Tan Vinyl; Homogeneous	2% Chrysotile	98% Non-Fibrous	
			Total Asbestos:	2%	
16-04-00833-050	142		Black Adhesive; Homogeneous	4% Chrysotile	96% Non-Fibrous
			Total Asbestos:	4%	
16-04-00833-051	143		White Powder Fibrous ; Homogeneous	NAD	25% Cellulose 75% Non-Fibrous
16-04-00833-052	144		Off-White Granular; Gold Vermiculite; Inhomogeneous	NAD	100% Non-Fibrous
16-04-00833-053	145		Yellow Adhesive; Homogeneous	NAD	100% Non-Fibrous

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Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description	Asbestos	Other Materials
16-04-00833-054	146		White Brittle; Rubbery; Inhomogeneous	NAD	100% Non-Fibrous
				`	
16-04-00833-055	147A		Gray/White Brittle; Gold Vermiculite; Inhomogeneous	NAD	100% Non-Fibrous
16-04-00833-056	147B		Gray/White Brittle; Gold Vermiculite; Inhomogeneous	NAD	100% Non-Fibrous
16-04-00833-057	147C		Gray/White Brittle; Gold Vermiculite; Inhomogeneous	NAD	100% Non-Fibrous
16-04-00833-058	147D		Beige Granular; Gold Vermiculite; White Paint-Like; Inhomogeneous	NAD	100% Non-Fibrous
16-04-00833-059	147E		Tan Granular; Gold Vermiculite; Inhomogeneous	Trace <1% Trem/Actin*	100% Non-Fibrous
			Total Asbesto	os: Trace <1%	
<1% *Tremolite/A	ctinolite Series As	sbestos preser	nt in tan granular material.		
16-04-00833-060		· ·	Gray/White Brittle; Gold Vermiculite; Inhomogeneous	NAD	100% Non-Fibrous

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Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description A	Asbestos	Other Materials
16-04-00833-061	147G		Gray/White Brittle; Gold Vermiculite; Inhomogeneous	NAD	100% Non-Fibrous
16-04-00833-062	149		Beige Fibrous; White Paint-Like; Inhomogeneous	NAD	15% Cellulose 55% Fibrous Glass 30% Non-Fibrous
16-04-00833-063	150		Beige Pliable; Homogeneous	NAD	2% Cellulose 98% Non-Fibrous
16-04-00833-064	151		Gray Fibrous; White Paint-Like; Silver Metallic; Inhomogeneous	NAD	15% Cellulose 55% Fibrous Glass 30% Non-Fibrous
16-04-00833-065	152		Blue Foam; Homogeneous	s NAD	100% Non-Fibrous
16-04-00833-066	153		Black Tar-Like; Fibrous; Inhomogeneous	NAD	45% Cellulose 10% Fibrous Glass 45% Non-Fibrous
16-04-00833-067	154		Gray Fibrous; White Paint-Like; Inhomogeneous	NAD	15% Cellulose 55% Fibrous Glass 30% Non-Fibrous

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Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description	Asbestos	Other Materials
6-04-00833-068	A 155A	Linoleum	White/Blue Vinyl; Gray Fibrous; Inhomogeneous	NAD	35% Cellulose 5% Fibrous Glass 60% Non-Fibrous
16-04-00833-068	3B 155A	Mastic	Yellow Adhesive; Homogeneous	NAD	100% Non-Fibrous
16-04-00833-069) 156A		White Granular; Beige Paint-Like; Inhomogeneous	NAD	100% Non-Fibrous
16-04-00833-070) 156B		White Granular; Beige Paint-Like; Inhomogeneous	NAD	100% Non-Fibrous
16-04-00833-071	1 155C		White Granular; Beige Paint-Like; Inhomogeneous	NAD	100% Non-Fibrous
16-04-00833-072	2 157		Orange Vinyl; Homogeneous	NAD	100% Non-Fibrous
16-04-00833-073	3 158A		Pale Gray Cementitious; White/Off-White Brittle; Inhomogeneous	NAD	1% Cellulose 99% Non-Fibrous

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Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description	Asbestos	Other Materials
16-04-00833-074	158B		Pale Gray Cementitious; White/Off-White Brittle; Inhomogeneous	NAD	1% Cellulose 99% Non-Fibrous
16-04-00833-075	158C		Pale Gray Cementitious; White/Off-White Brittle; Inhomogeneous	NAD	1% Cellulose 1% Hair 98% Non-Fibrous
16-04-00833-076	159		Gray Pliable; Homogeneous	NAD	100% Non-Fibrous
16-04-00833-077	160		Off-White Brittle; Homogeneous	NAD	2% Cellulose 1% Fibrous Glass 1% Wollastonite 96% Non-Fibrous
16-04-00833-078	161		Pale Yellow Adhesive; Homogeneous	NAD	2% Cellulose 98% Non-Fibrous
16-04-00833-079	162		Off-White Pliable; Homogeneous	NAD	7% Cellulose 93% Non-Fibrous
16-04-00833-080	163		Off-White Brittle; Tan Fibrous; White Vinyl-Like Transluscent Adhesive; Inhomogeneous	NAD ;;	10% Cellulose 10% Fibrous Glass 80% Non-Fibrous

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Lab Sample Number	Client Sample Number	Layer Type Lab Gross [Description A	sbestos	Other Materials
6-04-00833-081	164	Pale Gray White Brit Inhomoge		NAD	45% Cellulose 35% Fibrous Glass 20% Non-Fibrous
16-04-00833-082	165	Pale Beig Homogen	e-Gray Granular; eous	2% Chrysotile	98% Non-Fibrous
			Total Asbestos:	2%	
16-04-00833-083	166	Black Adh Homogen		5% Chrysotile	2% Cellulose 1% Fibrous Glass 92% Non-Fibrous
			Total Asbestos:	: 5%	
16-04-00833-084	167	Pale Gray White Brit Inhomoge		NAD	45% Cellulose 30% Fibrous Glass 25% Non-Fibrous
16-04-00833-085	168	Pale Gray Homogen	/ Brittle; eous	NAD	50% Cellulose 5% Fibrous Glass 45% Non-Fibrous
16-04-00833-086	169	Off-White Homogen	Cementitious; leous	NAD	100% Non-Fibrous
16-04-00833-087	170	Pale Gray Homoger	/ Cementitious;	Trace <1% Chrysotile	1% Cellulose 99% Non-Fibrous
		J	Total Asbestos	: Trace <1%	
Chrysotile may b	e present as a cor	tact contaminant from residu	ual black mastic s	substrate beneath morta	r
16-04-00833-088	3 171	Off-White Homoger		NAD	100% Non-Fibrous

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Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description A	sbestos	Other Materials
16-04-00833-089	172		Off-White Adhesive; Homogeneous	NAD	2% Cellulose 98% Non-Fibrous
16-04-00833-090	173		Off-White Granular; Homogeneous	NAD	100% Non-Fibrous
16-04-00833-091	174		Yellow Adhesive; Homogeneous	NAD	4% Cellulose 1% Synthetic 95% Non-Fibrous
16-04-00833-092	175		Tan/Black Fibrous; Black Pliable to Brittle; Off-White Foam-Like; Inhomogeneous	NAD	45% Cellulose 15% Fibrous Glass 40% Non-Fibrous
16-04-00833-093	176		Black Pliable; Black Fibrous; Black Pliable to Brittle; Off-White Aggregate; Inhomogeneous	NAD .	2% Cellulose 20% Fibrous Glass 10% Synthetic 68% Non-Fibrous
16-04-00833-094	177		Off-White Pliable; Homogeneous	NAD	100% Non-Fibrous
16-04-00833-095	178		Gray Pliable; Homogeneous	NAD	1% Synthetic 99% Non-Fibrous

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Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description	Asbestos	Other Materials
16-04-00833-096	179		White Fibrous; Pale Gray Pliable; Inhomogeneous	NAD	75% Fibrous Glass 25% Non-Fibrous
16-04-00833-097	180		Dark Gray Pliable to Brittle; Black Brittle; Inhomogeneous	NAD	2% Cellulose 98% Non-Fibrous
16-04-00833-098	181	-	Black Pliable; Homogeneous	NAD	30% Cellulose 70% Non-Fibrous
16-04-00833-099	182		Light Gray Pliable; Homogeneous	NAD	100% Non-Fibrous
16-04-00833-100	183		White Rubbery; Homogeneous	NAD	100% Non-Fibrous
16-04-00833-101	184	· · · <u>· · · · · · · · · · · · · · · · </u>	Light Tan Rubbery; Homogeneous	NAD	100% Non-Fibrous
16-04-00833-102	185		Black Tar; Fibrous; Browi Fibrous; Pale Yellow Foam; Inhomogeneous	n NAD	20% Cellulose 10% Fibrous Glass 70% Non-Fibrous
16-04-00833-103	3 186		Black Tar; Fibrous; Yellov Fibrous; Inhomogeneous		30% Fibrous Glass 70% Non-Fibrous

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Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description A	sbestos	Other Materials
6-04-00833-104	187		Black Brittle Tar-Like; Homogeneous	NAD	100% Non-Fibrous
6-04-00833-105	188		White Rubbery; Homogeneous	NAD	100% Non-Fibrous
6-04-00833-106	189		Black Tar; Homogeneous	NAD	100% Non-Fibrous
6-04-00833-107	190		Light Tan Rubbery; Homogeneous	NAD	100% Non-Fibrous
6-04-00833-108	191		Pale Gray Pliable; Homogeneous	NAD	100% Non-Fibrous
 6-04-00833-109	192		Clear Yellow Rubbery; Homogeneous	NAD	100% Non-Fibrous
16-04-00833-110	193		Black Pliable Rubbery; Homogeneous	NAD	100% Non-Fibrous
16-04-00833-111	194		Black Pliable; White Fibrous; Homogeneous	NAD	50% Fibrous Glass 50% Non-Fibrous

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Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description A	sbestos	Other Materials
16-04-00833-112	195		White Rubbery; Homogeneous	NAD	100% Non-Fibrous
16-04-00833-113	196		Light Gray Rubbery; Homogeneous	NAD	100% Non-Fibrous
 16-04-00833-114	197		Gray Rubbery; Homogeneous	NAD	100% Non-Fibrous
16-04-00833-115	198		Black Tar; Fibrous; Homogeneous	NAD	8% Cellulose 2% Synthetic 90% Non-Fibrous
16-04-00833-116	199		Light Tan Rubbery; Homogeneous	NAD	100% Non-Fibrous
16-04-00833-117	200A		Gray/White Cementitious; Inhomogeneous	NAD	100% Non-Fibrous
16-04-00833-118	3 200B		Gray/White Cementitious; Inhomogeneous	NAD	100% Non-Fibrous
16-04-00833-119	200C		Gray/White Cementitious; Inhomogeneous	NAD	100% Non-Fibrous

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Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description	Asbestos	Other Materials
16-04-00833-120	200D		Gray/White Cementitious Inhomogeneous	; NAD	100% Non-Fibrous
16-04-00833-121	200E		Gray/White Cementitious Inhomogeneous	; NAD	100% Non-Fibrous
16-04-00833-122	200F		Gray/White Cementitious Inhomogeneous	; NAD	100% Non-Fibrous
 16-04-00833-123	200G		Gray/White Cementitious Inhomogeneous	; NAD	100% Non-Fibrous
16-04-00833-124	201		Begie Fibrous; White Paint; Inhomogeneous	NAD	65% Cellulose 20% Fibrous Glass 15% Non-Fibrous
16-04-00833-125	202	·	White Fibrous; Paint; Inhomogeneous	NAD	65% Cellulose 10% Fibrous Glass 25% Non-Fibrous
16-04-00833-126	204		Blue Rubbery Vinyl; Homogeneous	NAD	100% Non-Fibrous
16-04-00833-127	205		Pale Yellow Adhesive; Brown Brittle; Inhomogeneous	NAD	100% Non-Fibrous

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Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description	Asbestos	Other Materials
6-04-00833-128	206		White Powdery; Homogeneous	NAD	100% Non-Fibrous
16-04-00833-129	207		Beige Fibrous; White Paint; Inhomogeneous	NAD	65% Cellulose 20% Fibrous Glass 15% Non-Fibrous
16-04-00833-130	208		Beige Vinyl; Homogeneous	NAD	100% Non-Fibrous
16-04-00833-131	209		Yellow Adhesive; Homogeneous	NAD	100% Non-Fibrous
16-04-00833-132	210		Light Brown Vinyl; Homogeneous	NAD	100% Non-Fibrous
16-04-00833-133	211		Yellow Adhesive; Gray Chalky; Inhomogeneous	NAD	100% Non-Fibrous
Unable to separate	e materials.				
16-04-00833-134	212		Brown Hard; Homogeneous	NAD	100% Non-Fibrous
16-04-00833-135	213		Gray Cementitious; Homogeneous	NAD	100% Non-Fibrous

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Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description	Asbestos	Other Materials
16-04-00833-136	214		Gray Fibrous; Black Paint Inhomogeneous	; NAD	65% Cellulose 20% Fibrous Glass 15% Non-Fibrous
16-04-00833-137	215		Gray Cementitious; Homogeneous	NAD	100% Non-Fibrous
16-04-00833-138	216		Dark Gray Cementitious; Homogeneous	NAD	100% Non-Fibrous
16-04-00833-139	217	J	White Pliable; Homogeneous	NAD	100% Non-Fibrous
16-04-00833-140	218		White Granular; Homogeneous	NAD	100% Non-Fibrous
16-04-00833-141	219		White Powdery; Chalky; Brown/Cream Fibrous; Inhomogeneous	NAD	15% Cellulose 85% Non-Fibrous
16-04-00833-142	220		Tan Adhesive; Homogeneous	NAD	100% Non-Fibrous
16-04-00833-143	221		White Pliable; Homogeneous	NAD	100% Non-Fibrous

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Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description	Asbestos	Other Materials
6-04-00833-144	222		White Chalky; Homogeneous	NAD	100% Non-Fibrous
16-04-00833-145	223			Did Not Analyze ((Quantity Not Sufficient)
16-04-00833-146	224		Off-White Fibrous; Silver Foil; Inhomogeneous	NAD	10% Cellulose 65% Fibrous Glass 25% Non-Fibrous
16-04-00833-147	225		Gray Soft; Homogeneous	s NAD	2% Cellulose 98% Non-Fibrous
16-04-00833-148	3 226A		Light Gray Powdery; Fibrous; Homogeneous	NAD	30% Cellulose 70% Non-Fibrous
16-04-00833-149) 226B		Light Gray Powdery; Fibrous; Homogeneous	NAD	30% Cellulose 70% Non-Fibrous
16-04-00833-150) 226C		Light Gray Powdery; Fibrous; Homogeneous	NAD	30% Cellulose 70% Non-Fibrous
16-04-00833-151	226D		Light Gray Powdery; Fibrous; Homogeneous	NAD	30% Cellulose 70% Non-Fibrous

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Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description As	sbestos	Other Materials
16-04-00833-152	226E		Light Gray Powdery; Fibrous; Homogeneous	NAD	35% Cellulose 65% Non-Fibrous
16-04-00833-153	227		Off-White/Tan Fibrous; Silver Foil; Inhomogeneous	NAD	10% Cellulose 65% Fibrous Glass 25% Non-Fibrous
16-04-00833-154	228		Gray Vinyl; Homogeneous	NAD	100% Non-Fibrous
16-04-00833-155	229		Black Adhesive; Homogeneous	NAD	3% Cellulose 97% Non-Fibrous
16-04-00833-156	230		White Powdery Fibrous; Homogeneous	NAD	8% Cellulose 92% Non-Fibrous
16-04-00833-157	231		Black Tar-Like; Homogeneous	NAD	2% Cellulose 98% Non-Fibrous
16-04-00833-158	232		Black Tar-Like Fibrous; Homogeneous	NAD	5% Cellulose 95% Non-Fibrous
16-04-00833-159	233		Gray Pliable; Homogeneous	NAD	5% Cellulose 95% Non-Fibrous

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Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description A	sbestos	Other Materials
6-04-00833-160	234		Tan Pliable; Homogeneous	NAD	5% Cellulose 95% Non-Fibrous
16-04-00833-161	235		Gray Pliable; Homogeneous	NAD	5% Cellulose 95% Non-Fibrous
16-04-00833-162	236		Black Tar-Like; Brown Aggregate; Inhomogeneous	NAD	10% Fibrous Glass 90% Non-Fibrous
16-04-00833-163	237		Black Tar-Like; Brown/Red Aggregate; Inhomogeneous	I NAD	10% Fibrous Glass 90% Non-Fibrous
16-04-00833-164	238		Black Tar-Like; Homogeneous	NAD	5% Cellulose 95% Non-Fibrous
16-04-00833-165	239		Black Pliable; Homogeneous	NAD	2% Cellulose 98% Non-Fibrous
16-04-00833-166	S 240		Brown Pliable; Homogeneous	NAD	100% Non-Fibrous
16-04-00833-167	241		Tan Pliable; Homogeneous	NAD	100% Non-Fibrous

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Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description	Asbestos	Other Materials
16-04-00833-168	242		White Pliable; Homogeneous	NAD	100% Non-Fibrous
16-04-00833-169	243		Tan Pliable; White Granular; Inhomogeneou	NAD IS	100% Non-Fibrous
16-04-00833-170	244		Tan Pliable; Homogeneous	NAD	100% Non-Fibrous
16-04-00833-171	245		Gray Pliable; Homogeneous	NAD	100% Non-Fibrous
16-04-00833-172	246		White Powdery Fibrous; Beige Paint-Like; Inhomogeneous	NAD	20% Cellulose 80% Non-Fibrous
16-04-00833-173	24		Yellow Adhesive; Homogeneous	NAD	2% Cellulose 98% Non-Fibrous
No black mastic p	present				

Client Number:

24-1221

Report Number:

16-04-00833

Project/Test Address: F16-136; MN Vet Home #17; Mpls, MN

Lab Sample Number

Client Sample Number

Layer Type

Lab Gross Description

Asbestos

Other Materials

QC Sample:

87-M12011-3, 83-M22010-3, 88-M22011-4, 90-M22014-4,

QC Blank:

85-M22013-2 SRM 1866 Fiberglass

Reporting Limit: 1% Asbestos

Method:

EPA Method 600/R-93/116, EPA Method 600/M4-82-020

Analyst:

Keleigh King, Araceli Enzler, Mark Case, Katherine Charles

Harris, Kathy Fletcher

Reviewed By Authorized Signatory:

Josho Eaddy

Tasha Eaddv QA/QC Clerk

The condition of the samples analyzed was acceptable upon receipt per laboratory protocol unless otherwise noted on this report. Each distinct component in an inhomogeneous sample was analyzed separately and reported as a composite. Results represent the analysis of samples submitted by the client. Sample location, description, area, volume, etc., was provided by the client. This report cannot be used by the client to claim product endorsement by NVLAP or any agency of the U.S. Government. This report shall not be reproduced except in full, without the written consent of the Environmental Hazards Service, L.L.C. California Certification #2319 NY ELAP #11714 NVLAP #101882-0 VELAP 460172. All information concerning sampling location, date, and time can be found on Chain-of-Custody. Environmental Hazards Services, L.L.C. does not perform any sample collection.

Environmental Hazards Services, L.L.C. recommends reanalysis by point count (for more accurate quantification) or Transmission Electron Microscopy (TEM), (for enhanced detection capabilities) for materials regulated by EPA NESHAP (National Emission Standards for Hazardous Air Pollutants) and found to contain less than ten percent (<10%) asbestos by polarized light microscopy (PLM). Both services are available for an additional fee.

400 Point Count Analysis, where noted, performed per EPA Method 600/R-93/116 with a Reporting Limit of 0.25%.

* All California samples analyzed by Polarized Light Microscopy, EPA Method 600/M4-82-020, Dec. 1982.

LEGEND:

NAD = no asbestos detected



173 PLM

J-Day par Mark Mover - Amylolly

16-04-00833

Due Date: 04/08/2016 (Fnday) ER M Inv

Asbestos Chain-of-Custody

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7462 Whitepine Rd Eleknond, VA

204)275-4907 (fax)

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Page Z of 18 Asbestos

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Asbestos Chain-of-Custody

(800)\$47- (804)\$75-	4010 Alcharo. 4907 (fax) 23237												
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Environmental Blazards Services, LFA?

Page 3 of 18
Asbestos

Chain-of-Custody

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#V/V/.146/851.cp;/ (686)547-4010 (884)275-4307 (16	Richmond, VA					
	Applied Environmenta		l Wayzata Blvd. Suite 103	City'St	տեւՀեր։ Minneapolis, MN 55428	/ :
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Page of of 18 Chain-of-Custody

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Environmental Hazarda Services, LLC

proportional service (860)247-481/ (804)275-4907 (19x) 7469 Whitepline Rrf Richmond, VA

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Asbestos

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Rustromoental Hazards Services, J.J.C.

www.leadlab.com (890)347-4010 1894)275-480

7459 MMRepine Rd

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7 (fax)	23237

Applied Environmental Sciences Address: 8441 Wayzate Blvd. Suite 103 Minneapolis, MN 55426 City/State/Yip. _{P-கட} m.meier@aesm...ரோ _{Franc (}763₎ 545-5510 Project Name / Testing Address: Eller / 3 6 Collected on Propose Order Spoulus Turn Around Times: If no TAT is specified, sample(s) will be processed and charged as 3-day TAT. Same Duy (West Call Alward). 3-Day 2 - Day J - Day _ Weekend (Must Cull Altead).

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Environmental Maganda Services, LAC

www.iaariiaD.com (806)347-4010 (804)275-4917 (164) 7409 Whitenine Rd (Schmond, VA

Company Name: Ebone: (763) <u>5</u> 4		nmontal Science		'ayzata Blvd. Suite 103 caysa _{B mail} m.meior@aesana.com	ntwZip: Minneapolis, MN 55426
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Page 9 dillo Asbestos Chain-of-Custody

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VIVAV.leadlab.com

7460 Worldpine Rd Richmond, VA

0)347-4010	Alehnio
41275-4007 (fav.)	フィフィア

Сс аряну Мате:	Applied Environmental Science	ะธ_ _{ผลกระ} _ <u>84</u> 41 Wayzal	la B'.vd. Suite 103,	ClayScawZip: Minneapolis, MN 55426
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Weekend (Visst fish Aliend)

www.leadlab.com 7469 Whitepina Rti (200)347-4010 Richmond, VA (204)275-4007 (fax) 23237		
Cuspeny Need: Applied Environmental Sciences Applied Environmental Sciences Fac (763) 545-5510		m.com Acet Number
Project Name / Testing Address: Flor 13 to Med Vet	Probase Digital Material	Crossian (Sequirum: N/p/s M)
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Page 10 of 18

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www.kearlints.com (200)347-4010 (204)275-4967 (194)	7469 Weitepine Rd Richmond, VA 23237	•	

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Asbestos Chain-of-Custody

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Fared composaled Hazards Services, I.I.C

lmww.leadlab.com (900)347-4619 (804)275-4607 / fax) 7489 VVii(epine Rd Richmond, VA

(fax) 23237

праду Моте: _{пр. 1} 783 _{) —} 54	Applied Environmental Scient 5-5510 Tex (783, §		n Blvd. Suite 103 City on.meier@acsmn.com	Minnewoolis, MN 55428 Acr Name:
jeet Magas / Tes	ling Address: F16-136 Mer		City/State ((to juined)); Purchase (Side: Nuclear)	Mpls Mr
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Emrironmenial Hazarda Services, VAC

Page 12 of 18

Chain-of-Custody

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Ray 13 of 18 Asbestos Chain-of-Custody

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Your frameworkal Hazardy Services, LLC.

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Received by:

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(Bit4),275-4907 (fest) 23227

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oplied Environmontal Suiences i	Addison	- 8441 Wayzata Biyd, Suito 103

Signature:

City/Stats/Zin: Minmeapolis, MN 55426

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mmn.leadlab.com (800)847-4010

Raylronnicata) Hazai de Services, LLC

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Page 14 18 Asbestos in-of-C: Chain-of-Custody

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(884)275-4807 (fax) 23237	. The state of th
	s Annual 3441 Wayzata Blvd, Suits 103 Giyystalg7ig: Mitrineapolis, MN 55426
-con (763) 545-55 <u>10</u> - Era (763) 5	5-7883m.melei@aesmn.com
Project Name / Testing Address: Elle 136 Mar	7 Horse # 17 City State (Regulard): 11/15 141
Colombia Mark Meter	Putchess, Ord Number
Turn Around Times ;	If no TAT is specified, sample(s) will be processed and charged as 3-day TAT.
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Rage 15 of 18
Asbestos

Chain-of-Custody

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Environmental Florands Services, LLC

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e national contracts		· CICAG
074)275-4907	(fax)	2929

Applied Environmental Sciences Addess 8441 Wayzata Blvd. Suite 103

__ _{ലംബു} _m.molei\@aesm.n.com

_{Հահումերը} Minneapolis, MN 55426

շիտու (762, 545-5510 Q/Lated by: Purfinal Color Morber

If no TAT is specified, sample(s) will be processed and charged as 3-day TAT, Turn Around Times:

_1 - Day ______2 - Day ___ Same Day (Whist Call Aliend) _____ Weekend (Must Call Aliest))

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Rage 16 of 18 Asbestos Chain-of-Custody

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Date-Time:

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Environmental Hazards Scattices, LLC

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Released by:

Recordant by:

WYTVAIGERIAD CONT. (R06) \$47-4010 (R04) \$15-4007 (February) 7469 Whitepine Rri Richmond, VA

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Signature:

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Asbestos Chain-of-Custody

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(1800),347–49717 (1004),275-4907 (1fext)

V1/ 1 11	Management Co.
4907 (16x)	23237

итрину Каче: _{Этпе: (} 763 ₎ <u>Б</u>	15-5510 esting Additives: Elli	логи петиаг с Бас (⁷ Z-72 / 2	E3, 54	<u></u> ∧an 5-788: 	500:	<u> </u>	R-	ູ ກະກ	reien@	ງລອຍທາ) restricts		ity/State/Zip: 1997 Abet Mumbi	Inneapolis, MN 55426
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Page 18 of 18 Asbestos Chain-of-Custody

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7469 Whitepine Rd Richmond, VA

	_{ims:} Applied En 3 ₇₋ 545-5510 in/Teating Address: <i>E</i>		нз, 545	-7863	11 Wayza ≗-∞		r@aesmr			Acct Number	
ijar Nau Perten na	10.17		<u> </u>	HANE WI	·/	Piradio	r Corke Nomb		(Required):	-Mpls z	<u> </u>
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Linvironmental Pagards Services, L.L.C. 7469 Whitepine Rd Richmond, VA 23237

Telephone: 800 347 4010

Asbestos Bulk Analysis Report

Report Number: 14-04-02695

Received Date: 04/23/2014

Analyzed Date: 04/28/2014 04/27/2014

Fax Number:

Reported Date: 04/28/2014

Client:

Client Number:

Applied Env. Sciences 6441 Wayzata Blvd.

Suite 103

St. Leuis Park, MN 55426

Project/Test Address: F14 172 VA Horse, Minneapoils, MN

24-1221	Ļ	.aborat	ory Results		723-545-7883
Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description	Asbestos	Other Materials
14-04-02695-001	4	,	Sray Viny.; Honeogeneous	NAD	100% Nan-Fibrous
r4-04-02995-002	2		Black Tar-Life. Homogeneous	NAD	4% Gellinase 98% Non-Fibraus
14-04-02695-003	3A	· · · · · · · · · · · · · · · · · · ·	White Granular; White/Tan Fibrous Innomogeneous	MAD	20% Calluiose 80% Non-Fierosa
 14 04-02695-004	<u> </u>		Of: White Fibrous, White Paint-like; Inhomogeneous	NAD	1% Cellulosa 70% Fibrous Glass 20% Non-Fibrous
14-04-02895-035	5	· ·	Brown Vinyl; Homogeneous	NAD	

Laboratory Results

Client Number:

241221

Report Number:

14 04 02595

Project/Test Address: F14-172 VA Home; Minneapolis, MN

Lab Sample Number	Client Sample Number	Layer 7ype	Lab Gross Description	Asticstos	Other Materials
14 04 02695-006	6		Brown Adhesive Homogeneous	hAD	1% Cefulose 99% Nan-Florous
 14-04-35695 CO7	7 A.	<u></u> . ,	Gray Powder; Fibrous; Inhomogencous	NAD	25% Ce lulose 75% Non-Fibrous
14 04 Ü2695-CC6	7B		Gray Powder, Fibrous, Innomogeneous	NAD	25% Calubae 75% Non-Fibrous
14-04-02695-009	/C		Grey Powder, Pibrous Inhomogeneous	NAD	25% Cellulosa 75% Non-Elbrous
 14-04-02695-010			Gray Powder, Fibrous. Intromogeneous	UAN	25% Ce/uloše 77% Non-Floreus
14-04-02595-011	₹Ľ		Gray Powder Trorous, Inhomogeneous	 NAD	25% Cellulose /5% Non-Fibroisa
 14-04-02095-012	8	 .	 Plack Pliable Homogeneous	NAC	15% Polyethylene 85% Non Fibrous
 14-04-02695-013	. <u> </u>		Gray Plable; Homogeneous	MAD	12% Cellulose 88% Non Fibreus
		· ——			

Client Number:

24-1221

Report Number: 14-04-02699

Project/Test Address: F14/172 VA Home; Minneapo's MN

Number	Number	Layer Type	Lab Gross Description	Asbestos	Other Materials
*4-02 695-014	10		Gray Vinys, Ногтоделесью	NAD .	190% Non-Fibrous
 14-04-02655-015	11		Lan Adhesive; Homogeneous	NAD	/
 14-0 4- 02998-018	12			 NAD	100% Nor-Fibrous
4 04 02E95-017	-3		I an Adhesive. Homogeneous	NAD	
 4-04-02095-018	4	 .	Light Grav Vinyl, Hemogeneous	KAD	 103% Non-Traisus
4-04-02695-019	15		Clear/Black Authenive, Inhomogeneous	NAD	 1% Cellulose 89% Non-Fibro⊍a
 4-04-02695-020	18		Off-White Fibrous, White Paint-Like. Inhomogeneous	NAD	1% Cellulose 70% Fibroua Giasa 29% Non-Fibroue
	17A		Gray Powden Fibrous Innomageneous	NAD	25% Celulose 75% Non-hibraus

Client Number:

24-1221

Report Number:

14-04 02595

Project/Test Address: F14-172 VA Home; Minnoapolis, MN

Lab Sample Number	Client Sample Number	Layet Туре	Lab Gross Description A	ks beatos	Other Materials
4 44 02695-022	17B		Gray Powder, Fibious Inhomogeneous	NAU	25% Gelulose 75% Nor-Fibrous
4-04-02695-023	170		Gray Flowder, Fibrous; Inhomogeneous	NAD	⊘5% Celluiose 75% Non-Florous
 4-04-02695-024	171)	.	Calay Powder IF brods, Inhomogeneous	NAL)	25% Cellulase 75% Nan-Florous
 4-04-02635-025	175		 Gray Powder, Hibrous; Inhomogeneous	NAD	25% Če lukse 75% Non-Aibrous
 4 04-02695-026	48		Brown Granular, Tan Brittle: Off White Pliable Inhomogeneous	NAD	1% Synthetir. 2% Halr 97% Non-Fibrous
4-04 02695-027	19		Brown Rubbery; Homogeneous	NAD	50% Fibrous Olass 90% Non-Fibrous
 '4-04-02696 C28	20		 Vvate Granulan Howder; Ten Fibropa, In סרים Innamogencous	NAD	20% Celuksas ୫୦% Non Fibrous
<u></u> 14-84-02695-029	21		Beiga Viny Homogeneous	 CIAN	 106% Non-Fibrous

Cilent Number:

24-1221

Project/Fest Address: If 14 172 VA Home; Minneapolis, MN

Report Number:

14-04-02695

Lab Sample Number	Client Sample Number	<u> Јаунт Тујас</u>	Lab Gross Description A	ksbestos	Other Materials
14-04-02695-030	22	-	Reige Adhee ve: Hamageneous	NAD	:% Cellulose 98% Non-Fibrous
 14 04 02685-031	23		Gray Vinyl, Humogeneous	NAD	 100% Nam-Pibrous
 14-04-02695-032	24			Hid Not Analyze (Quantity Not Sufficient)
14-04 Ç <u>258</u> 5 Ó33	 25		Beige Fibrous White Powder; Inhomogeneous	NAD	50% Get alose 10% Fibrous Cless 30% Nen-Fibross
 14-04-02595-034	26		 Gray Granular; Homogeneous	NAC	100% Nen Fibraus
14 04 02695 035	27	·	Acua Vinyl; Homogereous	; KAD	100% Non-Fibrous
 14-04-02605-036	- <u></u> 28		Tan Adhesive. Homogeneous	МО	1% Cedulose 99% Non Fibrous
<u></u> 14-64-02695-037	79		Gray Virryl Hornogeneous	VAD:	 100% Non-⊡braus
14-04-02 0 95 638	 30	•	Tan Adhesive Gray Grand ar, Inhomogeneous	 Dan	3% Cellulose 97% Non-Fibrous

Client Number:

24-1221

221 Raport Number:

14-04-02695

Project/Test Address: F14-172 VA Home; Minneapolia, MN

Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description A	sbestos	Other Waterials
4 (4-52685-038	2.		Due Viny; .nhcmogeneous	NA(1	100% Nor Fibrous
 -4-04-02695 (MO			Brown Adhesive; omogeneous	NAD	1CO% Non-Fibrous
 14- 0 4-02695 -04 1	33	-	Beige Fibrous; White Powder, Inhomogeneous	NAU	55% Cellulose 15% Fibrous Glass 90% Non-Fibrous
14-C4 J2695-C42	34		Red Cementificus Of-White Fibrous Inhomogeneous	NAD	9% Celulose 82% Non-Fibraus
'4- 0 4 U2695-043	354		Gray Granular; White Fibrous, Foam, Beige Paint-Like; Inquipogeneous	NAD	1% Cellulose ଶିଖ F brous Glass ୧୯% Non-Fibrous
 14-04-02895-044	 35B		Gray Granular; White Fibrous: Foam; Beige Paint4 ike; nhomogeneous	NAC	8% Florous Glass 92% Non-Florous
. <u></u>	35C	ì	——————————————————————————————————	KAD	1% Collubse 99% Non-Fibruus

Client Number:

24-1221

Report Number:

14-04-02595

Project/Test Address: F14-172 VA Home; Minneapolis, MN

Lab Sample Number	Cilent Sample Number	Layer Type	Lab Grose Description A	Asbestos	Other Materials
14-04-02 6 95-046	3517		Gray Granular, White Fibrous: Foam; Geige Paint-Lika; Inhomogeneous	\AD	6% Fibrola Clasa 54% kon Fibrols
<u></u> 14-04-02695-047	350		Gray Granular; White Fighous Fosm Reige Paint-Like; Inhomogeneous	NAD	
- 4-04-02995-048	35F	·	Gray Grand or; White Florous; Foam; Bespe Paint Like; Innomogénéous	NAD	
14-04-02695-049	38 G		Gray Granular While Fibrous; Foam Berge Paint-Like; Inhomogeneous	NAD	8% F broux Glass 92% Non-Fibraus
14-04-02895-050		- · · · · · - · · · ·	White Granular Powder, Tan Fibrous White Pain (Like), Inframogeneous	СТАИ	21% Cetulosa 78% Non-Arbroxia
1444.02698 C51	363	··	White Granular Powder; Tan Fibrous: Beige Paint-Like; Inhomogeneous	NAD	20% Celulose 50% Non-Hibrous

Client Number:

24-1221

Project/Test Address: F14-1/2 VA Home: Minheapolis, MN

Report Number:

14-04-02695

Leo Sample Number	Client Sample Number	Layer Type	Lab Gross Description A	Asbesios	Other Materials
14-04-02895-052	2 3/		Bege fibrinus White Pawderj inhomageneous	NAC	46% Collulose 20% Fibrous Glass 36% Non-Fibrous
-4-04-02895-053	 3 39A			 *page < P% Trem/Actin*	28% Celulose 72% Non-Hibrous
			Total Asbestos	:: Trace <1%	
*Tremolite/Asting	dine Series Asbusto	s presentithro	ughqu: sample.		
	1 38B	_	Tan Granular; Liprous; Inhonyogeneous	Trace <1% TrenvActin*	26% Celulose 72% Non Fibros
			Total Asbestos	c Trace <1%	
Niremolite/Acting	<mark>lite Serker Asbesto</mark>	s present <u>atro</u>	ughout sample.		
14-04-02895-055	380		Tan Granular, Fibro.æ; Inho-nogeneaus	Trace <1% Trem/Actin*	28% Celluiose 72% Non-Pibrous
			Total Asbestos	s: Trace <1%	
*Tromel 4el/Activic	vite Series Asbosio	is present toro	ughout sample.		
14-04 02695 059	980		Tan Grantilar, Fibr <i>ായ</i> Inhomogeneous	race <1% Trem/Actin*	25% Callulose 72% Non-Eftrous
			Total Asbestos	s: Trace <1%	
" remoirte/Act <u>ina</u>	olite Series Astreato	is presentithro	ughout sample		
14-04-02695-067	7 38E		Tan Granular Fibrous; Inhomogeneous	Trace <1% Trem#Ad##*	28% Callulasa 72% Non-Fibrous
			Total Asbesics	s: Trace <1%	
^{ett} remo ile/ <u>Actino</u>	olite Serien Asbesto	is present thro	ughout sample		
14-04-02695-050	3 38r		Tan Granular Hibrous; Inhomogeneous	Trace <1% TranvAction	28% Callulasa 72% Non-Fibrous
			Total Asbestes	s: Trace <1%	
*Tramolite/Actine	ille Şenes Aspesto	e pr <u>esent th</u> ro	ghaut sample.		
14-04-02695-059	9 38G		Tan Grand ar; Florous; Inhomogeneous	Trace <1% TremvActin*	28% Çeliyləsə 72% Non-Fibraus
			Total Asbestos	s: Trace <1%	
*Tremalite/Acting	elite Senee Aspesto	s encaent thro	ughout sample.		

Client Number:

24-1321

Project/Test Address: 1 14-1/2 VA Home; Minneapolis MN

Report Number:

14-04-02695

Lab Sampl e Number	Client Sample Number	Layer Type	Lab Gross Description	Asbestos	Other Waterials
40402595-060	39		Cream Vinyi; !lomogeneous	NAD	* C0% Non-Fibrate
14-04-02025-001	10		Tan Adhesive; Homogeneous	NAC	100% Non-Fibrous
.4-04-02695-062	: 41		 Gray Viny!; Homogeneous	R NAD	100% Non-Fibrous
14-04-02895-063	42		Brown Acheeve; White Granular, Inhomogeneo.«	 NAD S	133% No=-Fibrous
'4 0 4 02 695 064	43		Tan Mhyl, Homogeneous	NAD	100% Non-Fibrous
2-04-02695-065	<u>.</u> . <u>4</u> 2		Tar Adhesive, Homogeneous	NAD	1% Cellulose 99% Nor-Fibrous
14 04 02595 098	: 45		 Oray F.brous White Paint-Hke; Inhomogeneous	NAD	45% Ce vilose 25% Fibrous Gless 30% Non-Fibrous
14-04-02695-067	48		Gray Viny', Lamageneour	 a NAD	100% Non-Fibrous
4-04-02095-068	. 4/		Tan Adhesiya Homogeneous	NAD	100% Non-FibroLe
					*

Client Number:

241221

Report Number:

14-04-02695

Project/Test Address: 1 14-172 VA Home; Minneapolis, MN

Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description	Asbestos	Other Materials
4-04-02695-069	48		Tan Vinyl, Hornogeneous	NAD	100% Non-Horous
14-04-02685-670	48		Beige Adheaive, Homogeneous	HAC	
14-04-02035-071	A 50	Tilo	Off-White Vinyl; :lon:ogeneous	 NAD	* 00% Non-Fibrous
M 04 U2695 U7 1	R 9 0	Mast ¢	Lan Aghesive Homogeneous	NAD	3% Cellulose 1% Symheto 37% Non-Fibrous
 4-04-02595-072	5		Deige Fib: ous White Powder: Innomogeneous	YAC	35% Filipus Glass 36% knn-² bro√s
1 4- 04- 026 95-073	52		Black Rubbery Beige Paint-Liket Innomogeneous	NAU	100% Nor-Fibraus
14 04 82695 874	SSA		White Granular, Hamageneaus	NAD	 100% Nor+F6ro⊿e
14-04-02695-075	598			NAD	100% Non Fibres

Client Number:

24-1221

Report Number: 14-04-09895

Project/Test Address: F14-172 VA Home, Minneapolis, MN

Lab Sample Number	Chent Sample Number	Layer 7ype	Lab Gross Description	Asbestos	Other Materials
14-04-02695-076	590		White Granular I-omogeneous	NAD	100% Non Fibrous
14-04-02695-077	930	_	White Granular, Homogeneous	CAA	100% Non-Floreus
1404-02695-078	63E		White Granular; Homogeneous	 SA2	100% York Fibrose
 14-04-02695.079	53F		White Granular, Homogeneous	NAU	 100% Nan-Fiorbus
14-04-02695-080	 530		White Grandlar; Hemogeneous	 NAD	100% Non-H brove
 :4-04-0 <u>2</u> 395 061	 54A	. —	White Qranular Ноглоделерця	 NAD	 :Cのは Nen-Fibrous
4-04 (/ 2 695 C82	54B		White Grenular. Homogeneous	NAD	 100% Non-Fibraus
	54C		White Granu sr, Homogeneous	NAC	

Client Number:

24/1221

Report Number:

14 04 025\$6

Project/Test Address: F14-172 VA Home, Minneapolis, MN

Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description A	sbestos	Other Materials
14-04-02695- 084	540		Tan Granular, Homogeneous	NAD	100% Non-Fibrous
14-04-02695-085	541		— White Granular; Homogeneous	NAC	103% Чоก-รักเบษ
14-04-02595-089	56		Beige Fibraus; White Powder; Inhomogeneous	NAD	60% Cellulose 10% Fibrous Gisse 30% Non Fibrous
14-04-02695-087	57		Brown/Tan Viny); Inhomogeneous	NAD	15% Callulose B5% Nor-Fibrous
1 4- 04-02695-098	68		Cray Fibrous; White Paint-Like, Inhomogeneous	NAD	56% Callingse 15% Fibrois Glass 30% Non-Hørota
		··	 Tan Vinyl: Homogeneous	NAG	100% Non-Floraue
14-04-02595-090	80		Beige Adhesive; White Granular, Inhomogeneous	NAD	100% Non-Hibraux
14-04-02595-091	51		White Rubbery Homogeneous	NAD	≂CO'% Non-Fibeous

Client Number:

24-1221

Project/Test Address: F14-172 VA Home; Minneapolis, MN

Report Number:

14-04-02695

Lab Sample Number	Client Sample Number	Сары Турк	Lab Gross Description A	Isbestos	Other Materials
14 04 U2695 C92	624		White Granulan Powder; Cream/Tan Fibrous; Inhomogeneous	NAD	24% Cellukee 76% Non-Florous
14-04-02695-090	63		Light Gray Fibrous; White Paint-Like: Innomogeneous	NAD	70% Fibrous Glass 30% Non-Pibrous
14-04-02695-094	64		 Cream Viryl; Homogeneous	NAD .	100% Non-Fiercus
14-04-02695-096	65		 Black Tar-Like; Hor∹ogeneous	5% Chrysotile	96% Non Fibraus
			Total Asbesios	: 5%	
14-04-02695-096	66		Brown Vinyl Hoimogenaous	VAD.	100% Non-E brous
14-04-02695 097	67		Stown Adhesive, Tan Endougling Innomogeneous	NAD	15% Callubae 85% Non-Fibralis
14 84 02695 098	63		WhiteTen Vinyl. Homogeneous	NAD	100% Non-Fibrous
14-04-02695-099	69		 White(Lan Virly): Homogeneous	KAD	100% Non-F-brous

Client Number:

24-1221

Report Numbor: 14-04-02895

Project/Test Address: 1.14-172 VA Home; Minneapolis, MN

Lab Saniple Number	Ollent Sample Number	Layer Type	Lab Gross Description	Asbestos	Other Materials
14-04-02695-100	70		WhiteTan Viry Gray Librous Innomogeneous	NAD	26% Celluinse 72% Non-Fioralia
 14-04-32695-101	7-		Se ge Fibrous; White Powder, Inhomogeneous	NAD	35% Celluluse 35% Fibrona Casse 20% Non Fibrona
14-04-02695-102	· · · · · · · · · · · · · · · · · ·		Gray/Lan Vinyl: Homogeneous	DAN	FCO% Non-Fibious
**-04-02%25-103	73		Clear Adhesive; Hc.:rogeneous	NAD	2% Colluloso 38% Non-Fibraus
14-04-02585-104	74		Brown/Gray Vinyl; (lege Fibrous: nhomogeneous		
14-01-02695-105	 79		Tan Vinyl) Homogeneous	; NAD	° 5% Celulose 85% Noc∔ibrous
14-04-02695-106	76		Gray Viryl, Homogeneou	is NAC	100% Non Flareus
 14-04-02595-107	77		Gray Ruthbery, Homogeneous	 NAD	100% Non-Haraus

Client Number:

24-1221

Project/Test Address: F14-172 VA Home; Minneapolis, MN

Report Number:

14-04-02695

Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description /	Asbestos	Other Materials
14-C4-02695-108	/â		Tan Viryi, Homogereous	SAD	100% Non-Fibrous
 14-04-02695-109	79	- -	White Powder, Tar Fibrous Tahamageneous	NAD	20% Gellulese ୧୦% Non-Fibrota
<u></u>			Off-White/Tan Vinyl; i-lomogeneous	2% Chrysotile	98% Non-Florous
			Total Asbestos	: 2%	
14-04-02695 111	91		Black Tar Like; Homogeneo.a	4% Crnysolile	1% Cellulose 96% Nor-Fibrotia
			Total Asbestos	: 4%	

14-04-02695-110	80	Off-White/Tan Vinyl; i-lomogeneous	2% Chrysotile	9B% Non-Florous
		Total Asbestos:	2%	
14-04-0 <u>2998</u> 5 111	91 91	Black Tar Like; Homogeneous	4% Cinysolile	1% Cellulose 9% Non-Fibrous
		Total Asbestos:	4%	
 !4-04-02 6 95-112	92	Gray Viny , Homogeniosus	NAD	100% Nen-Fibrous
14-04-02595 113	 83	Tan Achesive; Homogeneous	NAD	
	 54	Oray Viny'; Homogeneous	NAI1	100% Non-Fibrous
14-04-02655-115	—— H≿	White Adhesive, Blue Paint-Liks Inhomogeneous	NAD	5% Synthetic \$5% San bms.s
14-04-02595-116	 80	Gray Vinyl; Homogeneous	NAD	100% Nor-Fibrous

Page 15 of 1/

Client Number:

24 (221

Report Number:

14-84 02695

Project/Test Address: F14-172 VA Home; Minneapolis, MN

Lab Sample Number	Client Sample Number	Leyer Type Lab Gross Description	on Asbestos	Other Materials
14-C4-02695-117	87	B/own/Tan Adhesis shomogeneous	ve: NAD	100% Non Fibreus
14-04-02695-118	 58A	Tan Powder, Hibro. Inhomogenéous	 JS NAD	30% Celuinea 12% Hibroue Glass 52% Non-Fibroue
 14 04: 02555-115	0.58	White Rupbery, Gr Powder; Fibrous; Inhomogeneous	ELY NAC	20% Cellulose 25% Fibrous Misss 55% Nors-Fibrous
14 94 (2695 129	89C	Gray Powder, Fibro Inhomogeneous	OKS NAD	
14-04-02895-121	360	White Granular, Po Tan Florous Boiga Paintilike, Inhomogeneous		20% Cellulose 82% Non-Cibrous
14-04-02695 122		Write Granular, Fo Ten Fibrous, Beige Paint Like; nhomogeneous		20% Gel ulcae 80% Non Fibrous

Client Number:

24 1221

Report Number:

14-04-02695

Project/Test Address: F14 172 VA Home: Minneapolis, MN

Lab Sample Number

Chent Sample Numbor

Layer Type Lab Gross Description Asbestos

Other Meterials

Pacha Eaddy

QC Sample:

57-M22004-3, 58-M22004-4

QC Blank:

SRM 1866 Fiberglass

Reporting Limit: 1% Asbestos

Method:

EPA Method 600/R-93/16, EPA Method 600/Vi4 82 020

Analyst:

Vickie Holmes

Reviewed By Authorized Signatury:

Taska EadiA QA/QC Clerk

The condition of the samples enalyzed was acceptable upon receipt per laboratory protocol unless Afrenessa (Mari of this report. Each cist not component in an inhamogeneous weight was analyzed separately and recorded as a comprehen. Results represent the analysis of somples submitted by the prient. Sample (kear, 91), description, area, volume, etc., was provided by the client. This report commit be used by the client to cleim product. endoperation by NV, AP or dry agency of the J.S. Government. This report which we improduced except in full, without the written consort of the Emitronmentati azznos Service, L. J. C. Celifornia Carification #2319 NY ELAP#11714 NVLAP#101882-0, A Limboration concentration costion, date, and time can be found on Chehi-of-Custody. Environmental Hazarics Services, L.L.C. dates not perform any seriopa Collection.

Emargament at Hazares Sandres, L.L.C. recommends regnally sis by pojut open (for non-securals quantification) or Transmission Electron Microscopy (TEM): (for eighyresk) detaction capabilities) for matorials regulated by FPA NESHAP (Nedanal Emission Standards for Mazzirous Aer Politianis) eigli friting to contain less than fer, percent (< 0%) asbettes by your land light microscopy (PLM). Both services are available for an additional fee

430 Feinr Count Analysis, where noted il performed per EPA Nychyd 600/R-03/116 with a Reporting Limit of 0.25%.

7./# Cwillorgiy xarqqles sinefyzed by Polentzed Elgré Microscopy, EPA Method 600/M4-92-020, Dec. 1997

LEGEND.

NAD = no asbestos cerrated.



Asbestos

14-04-02695

Citie Date:

04/28/2014 (Macoby)

ER MITY

Chain-of-Custody Karimomental Bozards Berrices, LJ.C. www./eadlab.c.(up) 7409 Ићарја Rd (800)847-4010 (004)273-4807 (Yax) Richmond, VA 23237

Сопраду Мар	_{ne:} Applied En	vironmenta: S	ciences	الألام أ	_{લા} <u>B</u>	441 V	Vayze	ıta Bl∨d. \$	Suite 103		:	Jayastats-Zipa <u>N</u>	лилеароль, MN 55426
Иваас: (⁷ 63)	545-5510	Fext ()	'83 ₎ <u>545</u>	- 7883	۶. <u> </u>		_ F-In	_{iii:} m.mel	er@acsn;	n:COhi		Appl Novi	
Ртојец Кассе	: Testing Address:	<u> 614-172</u>	Ŋş	<u> برحوایا ا</u>	م وح			·		Ci 5/iStute	(Regaines);	_Made	14/20/13 Mrs
Official b		March							Ka ∩ado Nard				
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With State of the	1-1-1	<u> </u>			41,315- 41,315-		70)	Barrer Comment					1/20/14 3 PM



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Bordronmental Hazarda Sorvices, L.L.C.

7489 Whitepine Rd

Asbestos Chain-of-Custody

~ For Lab Use Only ~

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www.feadlab.com 746w Wiltenfile Rd (800)247-9010 Richmend, VA (804)375-4907 (*las) 21437 (mpany Name: Applied Environments

_____ City/Rhito/Zip Minnoepolis, MiN 55428 Company Name: Applied Environmental Sciences Address: 8441 Wayzata Blvd, Suito 103 Phote: 1763, 545-5510 Fact; 763, 545-7883 Remail: httmelier@seshin.com Project Name / Teating Address: 114-172 VA VOING City Blate (Required): __ Collected by Parchage Outer Number If no TAT is specified, sumple(s) will be processed and charged as 3-day TAT, Turn Around Times: _1 - Day ______ 1 - Day _ _____ 3 - Day Same Day (Mast Coll Abast) Workend (MING Call Ahead) ASBR9T(Ib ADL Date Citient 360. COMMENTS. Volume Telleple III Collected Time Three. (Total Off Liters) 2 3 ű 7 40 Referentings. Date Time: Signature. DanoTimba: Readured by: Sienstre.



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Environmental Hazarda Services, I.J.C.

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APPENDIX III

EXPLANATION OF ACM ASSESSMENT DATA TABLE

This Appendix contains a summary of all ACM assessment information for materials that tested positive in each functional space in the building. The information is grouped in columns as follows:

FUNCTIONAL SPACE

This is a number assigned to spaces within the building. Generally, each distinct room or area in the building was assigned a number.

LOCATION

This is the room number or description of the area if it had no room number.

DESCRIPTION

The description of the material sampled.

OUANTITY

This is either the estimated length of the material in feet or its area in square feet. For fittings/elbows, the number represents the estimated number of fittings, hangers and elbows in the system.

REMOVAL COST ESTIMATE

This is the estimated cost for a reputable licensed asbestos contractor to properly remove the asbestos-containing materials from the building according to applicable Local, State and Federal regulations.

ASBESTOS MATERIAL ASSESSMENT

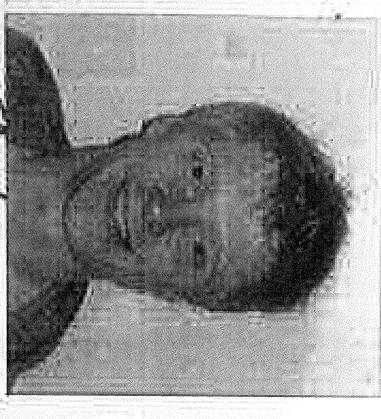
MINNEAPOLIS VA HOME (BUILDING 17 - SOUTH)

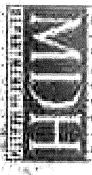
LOCATION	MATERIAL DESCRIPTION	QUANTITY (estimated)
Corridor E & Room 140	<u>u</u> /	
1 st Floor Kitchen	Electric panels & transformers	7 panels
Kitchen Offices & Hallway	12" x 12" floor tile, gray with tan (1 of 2 types of floor tile in area)	540 square feet
Kitchen Offices & Hallway	12" x 12" floor tile mastic, black (more possible under ceramic floor tile)	1,400 square feet
Kitchen Dock Area	Electric panels	2 panels
Laundry, Room 132	12" x 12" floor tile, gray with tan (1 of 2 types of floor tile in area)	200 square feet
Laundry, Room 132	12" x 12" floor tile mastic, black (more possible under ceramic floor tile)	200 square feet
Elevator Equipment Room 136 & 140	Electric panels	9 panels
Room 138	Electric panels	12 panels
Back Dock Area	Electric panels & transformer	24 panels
Mechanical Room in South Stairwell	Electric panels	4 panels
2 nd Floor Server Room in Elevator Lobby	12" x 12" floor tile cream mottled mastic (mastic only)	100 square feet
Room 256	Electric panels	2 panels
Staff Area	12" x 12" floor tile, white with olive & mastic	80 square feet
Staff Area	White sink undercoating	1 sink
Room 291	Metal wall panel adhesive	60 square feet
2 nd Floor Hall	Electric panels	2 panels
3 rd Floor Server Room in Elevator Lobby	12" x 12" floor tile cream mottled mastic (mastic only)	100 square feet
Room 349	12" x 12" floor tile cream mottled mastic (mastic only)	400 square feet
3 rd Floor Hall	Electric panels	2 panels
Room 376	White sink undercoating	1 sink

Room 380 & 382	Pink sink undercoating	1 sink
383	White sink undercoating	1 sink
383	Electric panel	1 panel
391	Metal wall panel adhesive	60 square feet
4 th Mechanical Room	Electric panels	50 panels
4 th Floor Elevator Lobby Side Room	No Access	_
Roof	Electric manele	9 man ala
K001	Electric panels	8 panels
Roof	Cooling Tower (Could not be inspected. Possible interior components.)	1 tower

Italicized materials were assumed to contain asbestos.

APPENDIX IV





ASBESTOS

Certified by

State of Minnesota Department of Health

Expires: 04/09/2016

18816 Chennault Way Eden Prairie, MN 55344 Aaron D. Kuck

Director, Env. Health Div.

No. 4112661 - Its sured: 04/20/2015



Director, Env. Health Div.

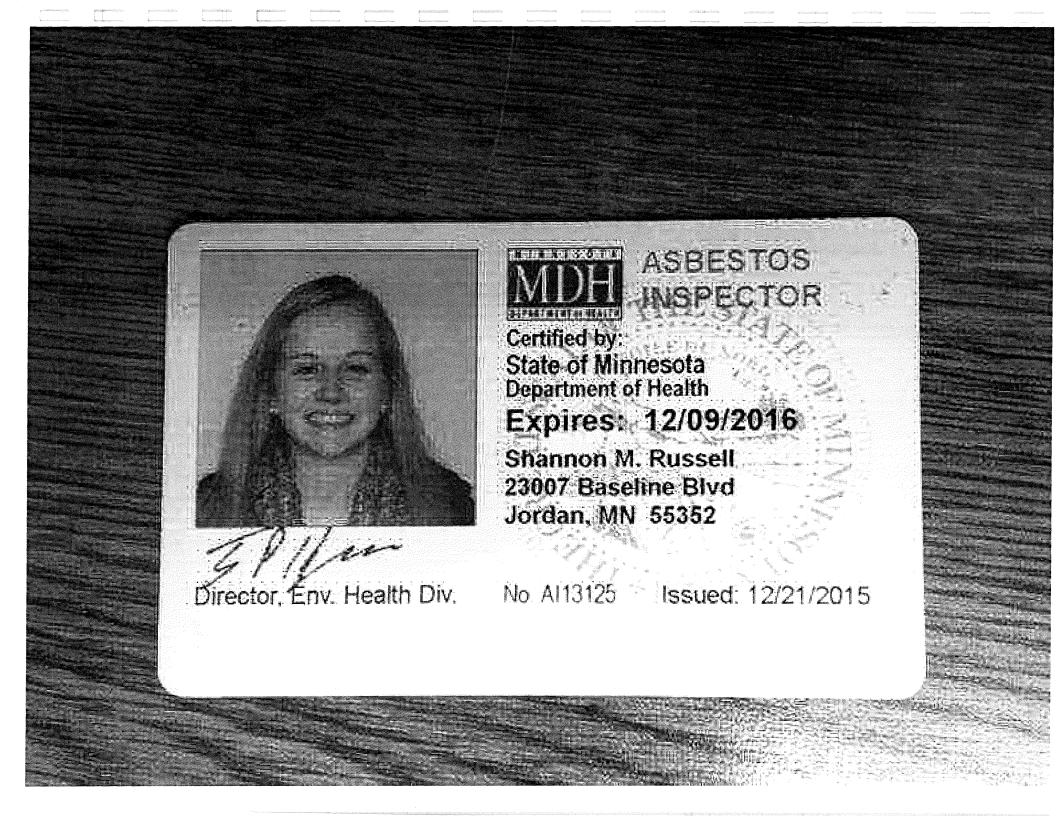
Certified by: State of Minnesota Department of Health

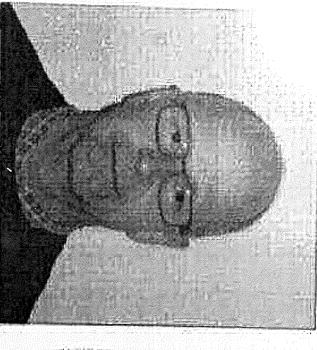
Expires: 06/16/2016

Mark W Meier 7570 Dallas Ln N Maple Grove, MN 55311

No AI3693

Issued: 07/01/2015





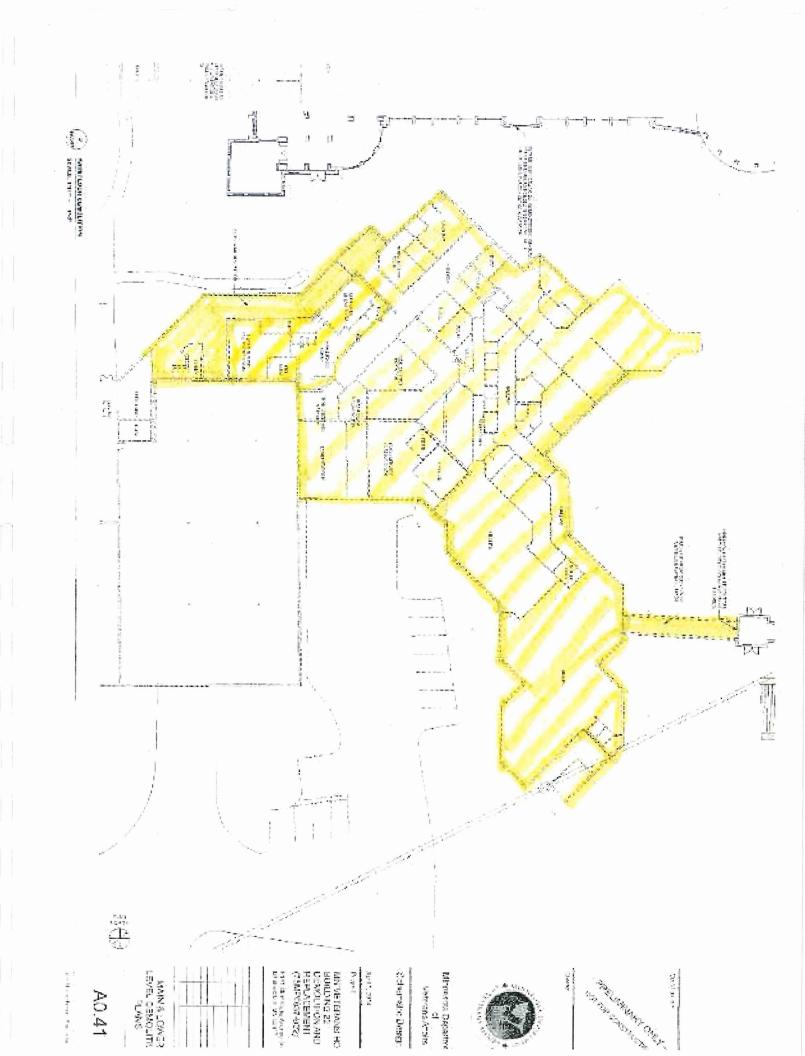
irector, Env. Health Div

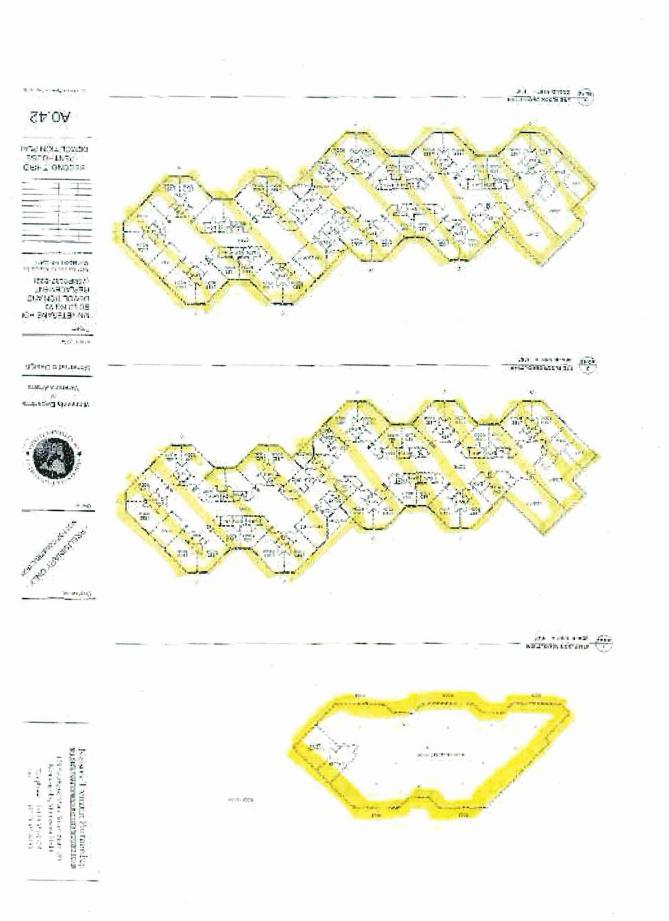
JANSPECTOR ASBESTOS

Certified by State of Minnesota Department of Health Expires: 04/09/2016

James Eric Gabrielson 6002 Timberglade Cir Bloomington My

APPENDIX V





APPENDIX VI

HAZARDOUS OR SPECIAL WASTE OBSERVED

MINNEAPOLIS VA HOME (BUILDING 17 - SOUTH)

CFC's	Estimated Quantity	
Air Conditioner (central)	6	į
Air Conditioner (roof top air handler)	2	
Drinking Fountain	2	
Fire Extinguisher	30	
Refrigerator	1	1

Mercury	Estimated Quantity	
Compact Fluorescent Light Bulb (CFL)	5	
HID Lamp	10	
Thermostat (possible)	100	į
Thermometer	1	

Miscellaneous	Estimated Quantity	
Aerosol Spray Can	11	
AED Device	1	
AHU & Controls	6	
Air Compressor	4	
Battery Charger	4	
Battery Recycling Container	1 gallon container	
Carbon Dioxide Tank	1	
Caulk Tubes	18	
Copy Machine	2	
Door Closure	57	
Dryer	5	
Electric Wheelchairs	2	
Electronics	36	
Elevators (motors and oil)	5	
Emergency Light	40	
Exit Sign	34	
Fan (air intake & air handler)	6	
Fire Suppression System	1	
Floor Cleaners (Batteries)	6	
Garage Door Opener	6	
Gasoline Can	5	
General Trash	Not Quantified	
Glycol	10 gal.	
Household Cleaner	83	
Intercom System	2	
Leaded Windows	2	
Magnehelic Gauge	4	

MAPP Gas	2	
Motors	8	
Oxidizer Material	6 gal.	
Paint	9-5 gal. Container	·
Paint	1-1 gal. Container	
Pay Phone	1	
Smoke Alarms	100	
Space Heater	8	
Stove/oven	2	
Unknown 30 gal. Containers	4	
Walk in Bath Tub	1	
Washing Machine	7	
Waste Compactor	1	
Water Heater	2	

VbbENDIX AII

164 NORTH LAKE STREET MEENAH, WI 54958 Phone: (920):722-6144 Fex. (920):722-0357

Eggers Industries



To:	At-S		Front	Dan Hibbs	Email:	
Attn:	Mark Mey	renta Penta	1 	Date:	January 30, 2004	
P.O. #	and the same of th			Pages	[Click here and type runtbe	v of pages)
Res	Asbestos		······································	Fax	763-545-7883	19999999
∏urg	ent	☐ For Review	OF	lease Comment	☐ Please Reply	☑ For Your Records

•Comments:

This fax confirms our phone conversation earlier today. Eggers' 20-minute rated doors, listed by Warnock Hersey or UL, contain no asbestos in present or past constructions,



May 14, 2012

Subject: Asbestos Content in Steeleraft Doors and Frames.

To whom it may concern:

This is to verify that Steeleraft 'L' series doors and all standard three sided door frames do not contain asbestos.

For your future reference the following products did contain asbestos at one time;

- 1). Steelcraft 'S-16' stile and rail door with flush panel and UL fire door label (pre 1975).
- 2). Steelcraft 3/8" or 1/2" thick fire rated transom and/or sidelight panels (pre 1983).

We hope that this information will be helpful to you and if you have any questions please don't hesitate to call.

Sincerely,

Rick Hulsmann Product Support

SN:tn

Attachment B

Preliminary Asbestos Survey May 2014

ENVIRONMENTAL HEALTH SURVEY REPORT PARTIAL PRE-DEMOLITION HAZARDOUS MATERIALS SURVEY

OF

MINNEAPOLIS VETERANS HOME MINNEAPOLIS, MINNESOTA

PREPARED FOR

LANDMARK ENVIRONMENTAL, L.L.C. 2042 WEST 98TH STREET BLOOMINGTON, MINNESOTA 55431

May 1, 2014

Applied Environmental Sciences, Inc.



APPLIED ENVIRONMENTAL SCIENCES, INC.

・ 2000年 - 特性研究では、 「自由表生は、「」 「「「「中国の国際の関係」である。 「「「「中国の国際の関係」「「自由の国際の関係」「「自由の国際の関係」 8441 Wayzata Blvd.

Suite 103

Minneapolis, MN 55426

ENVIRONMENTAL HEALTH SURVEY REPORT PARTIAL PRE-DEMOLITION HAZARDOUS MATERIALS SURVEY

AT

MINNEAPOLIS VETERANS HOME MINNEAPOLIS, MINNESOTA

Date of Survey:

April 21-22, 2014

Conducted by:

Mark Meier,

Asbestos Building Inspector MN #AI-3893

Applied Environmental Sciences, Inc.

8441 Wayzata Blvd., Suite #103

Minneapolis, MN 55426

(763) 545-5510

Eric Gabrielson Asbestos Building Inspector MN #AI-10463

Landmark Environmental, LLC

2042 W. 98th Street

Bloomington, MN 55431

(952) 887 9605

I hereby certify that the survey and inspection referenced by this report, and the report itself, were conducted in accordance with intent of the AHERA regulations to the best of my ability and knowledge.

Mark Meier, Asbestos Building Inspector

I have reviewed this report and hereby certify that the information contained within satisfies the intent of the AHERA regulations to the best of my ability and knowledge.

Patrick DiBartolomeo, CIH, CSP

Certification # 2204

F14-172 Landmark Minneapolis Veterans Home.mmpc

Phone 763-545-5510 □ Fax 763-545-7883 □ www.aesmn.com

1.0 EXECUTIVE SUMMARY

Applied Environmental Sciences, Inc. (AES) was retained by Landmark Environmental, LLC to perform a preliminary pre-demolition hazardous materials survey of Building 17 South and a portion of Buildings 18, 15 & 6 (walkway to 17) at the Minneapolis Veterans Home located in Minneapolis, Minnesota. A complete survey could not be performed at this time since the buildings were occupied.

Survey procedures conducted by AES complied with the applicable Occupational Safety and Health Administration (OSHA), Minnesota Pollution Control Agency (MPCA), and Minnesota Department of Health (MDH) standards for surveys of buildings to be demolished. AES performed an asbestos survey of the building, but <u>did not</u> compile a list of other hazardous materials (e.g., those assumed to contain PCBs, mercury, CFCs) present on the property. Caulk was also not sampled to determine PCB content.

The exterior of the building was not included in the inspection except for the stucco on the exterior of the building.

The survey was conducted on April 21-2, 2014.

The results of the survey are as follows:

- 1. AES took 122 bulk asbestos samples as part of this project. The contracted laboratory separated these 122 samples into 123 individual layer samples and analyzed 122 layer samples. One sample (Sample 24) was not analyzed due to an insufficient amount of material present for the laboratory to analyze.
- 2. Suspect building materials found to contain asbestos include -12" x 12" floor tile and floor tile mastic. Asbestos-containing material should not be cut, drilled, sanded or disturbed.
- 3. Building materials assumed to contain asbestos during the survey include electric panels, fire doors, ceramic wall tile mortar and grout, ceramic floor tile mortar and grout, cooler insulation, brown baseboard and adhesive, floor sheeting, wainscoting adhesive, sink undercoating, bulletin board adhesive, 12" x 12" floor tile and associated mastic and wall panel adhesive. Exterior materials (including roofing materials) were not included in this inspection. Asbestos-containing material should not be cut, drilled, sanded or disturbed.
- 4. No lead paint was sampled as part of this project. If building materials that are painted are to be reused or recycled as part of the project, they must be sampled to determine lead content.
- 5. Prior to demolition, all hazardous and special waste must be recycled or removed from the building according to Local, State, and Federal regulations. No PCB caulk samples were taken during the preliminary pre-demolition inspection.
- 6. A full pre-demo survey must be completed prior to demolition of the building.
- 7. Relevant State of Minnesota, EPA and OSHA regulations are included in Appendix I.
- 8. The asbestos bulk sampling sheets are included in Appendix II.

- 9. The estimated quantity and location of identified positive materials along with individual cost estimates for removal of each, arranged by functional space, have been included in Appendix III. Total cost for removal of all asbestos-containing materials in the building is estimated at \$67,450 (not including exterior materials). Assumed asbestos-containing materials accounts for \$64,750 of the total costs. This number should drop substantially with additional sampling as part of the pre-demolition survey.
- 10. Minnesota Department of Health certifications are included in Appendix IV.
- 11. A diagram, with the portions of the buildings included in the survey highlighted, has been included in Appendix V.

This survey identifies materials as they existed on the day of the survey. Conditions may change over time.

This survey should <u>not be used</u> as a bidding document. The ACM quantities provided area estimates and must be verified prior to abatement firm bidding. AES recommends using a licensed asbestos project designer to design and bid projects.

1.1 SUMMARY OF ACM BY TYPE, QUANTITY AND SAMPLE NUMBER

The approximate quantity of ACM found in each building is listed below:

BUILDING 6 (Walkway)

Thermal System Insulation - None found

Surfacing Material - None found

Miscellaneous Materials - None found

Assumed Materials

Fire door Roofing materials

6 doors not quantified

BUILDING 15 (Elevator Lobby and Hallway)

Thermal System Insulation - None found

Surfacing Material - None found

Miscellaneous Materials - None found

Assumed Materials

Ceramic wall tile mortar and grout Roofing materials

150 square feet not quantified

BUILDING 17 (South)

Thermal System Insulation - None found

Surfacing Material - None found

Miscellaneous Materials

Previously Sampled	500	square feet
Sample 65	50	square feet
Sample 80	50	square feet
Sample 81	50	square feet
	Sample 65 Sample 80	Sample 80 50

Assumed Materials

Fire door	20	doors
Cooler insulation		quantified
Ceramic floor tile mortar and grout	4,000	square feet
Ceramic wall tile mortar and grout	9,500	square feet
Wall panel adhesive	2,000	square feet
Floor sheeting	200	square feet
Wood wainscoting	800	square feet
Sink sound deadener	1	sinks
Bulletin board adhesive	400	square feet
Electric panels	7	panels
12" x 12" floor tile, tan mottled	150	square feet
Roofing materials	not	quantified

BUILDING 18 (Stairway, Hall, Elevator Room and Lunch Room)

Thermal System Insulation - None found

Surfacing Material - None found

Miscellaneous Materials - None found

Assumed Materials

Fire door	6	doors
Electric panels	2	panels
Ceramic floor tile mortar and grout	200	square feet
Ceramic wall tile mortar and grout	200	square feet
Brown baseboard and adhesive	90	linear feet
Floor tile mastic (insufficient amount of sample)	420	square feet*
Roofing materials	not	quantified

^{* -} an insufficient amount of mastic was present for the laboratory to analyze. This material is assumed to be asbestos-containing and should be resampled during the pre-demolition survey.

For a full description of sample results and sample locations, see Appendix II.

1.2 SUMMARY OF DETERIORATED LEAD-BASED PAINT

No lead paint was sampled as part of this project. If building materials that are painted are to be reused or recycled as part of the project, they must be sampled to determine lead content.

1.3 SUMMARY OF HAZARDOUS MATERIALS

Prior to demolition, all hazardous and special waste must be recycled or removed from the building according to Local, State, and Federal regulations. AES recommends sampling caulk in the building for PCB content as part of the pre-demolition inspection.

2.0 METHODS

2.1 ASBESTOS SURVEY APPROACH

The procedures used for this survey meet the inspection standards of EPA's Asbestos Hazard Emergency Response Act (AHERA) and the OSHA asbestos standard. This survey is not adequate for the survey requirements prior to a building demolition. Extensive destructive entry is required for a pre-demolition survey to meet MPCA requirements.

AES's approach to this survey was to identify, assess, sample and quantify suspect asbestos-containing materials within the building. The suspect material in each functional space was assessed using an EPA-AHERA approved method that assesses damage and potential for disturbance. The quantity of each assessed material was estimated.

A complete survey could not be performed at this time since the building was occupied.

AES conducted the partial pre-demolition inspection in Building 6 (walkway to Building 17), Building 15 (Elevator Lobby and Hallway), Building 17 (South) and Building 18 (Stairwell, Hallway, Elevator Room and Lunch Room). A diagram with the portions of the building included in the survey highlighted has been included in Appendix V.

The quantity of each assessed material was estimated, and may be unreliable.

2.1.1 ASBESTOS SURVEY LIMITATIONS

Only the interior of the building was included in the inspection since sampling the exterior surfaces could cause damage to the integrity of the building and cause water leaks.

AES did not inspect every unit and the restrooms in each unit. An assumption was made that ceramic tile existed in every unit since that was what was seen in the units inspected.

The kitchen and 4th floor mechanical room were previously surveyed as part of the 2011 inspection. They were not inspected during this survey, but the asbestos-containing materials found during the previous inspection were included in the asbestos-containing materials database in this report.

Tunnels were not included in this survey.

No access to the attic of the building was gained as part of the inspection. This area should be inspected as part of the pre-demolition inspection.

AES was not able to fully check under carpet in the building. The possibility exists that flooring materials may exist under it.

Additional sheetrock and joint compound samples need to be taken in all buildings to verify that these materials are non asbestos-containing.

Only accessible materials were sampled. Materials inside walls, doors, ducts, roofs or other areas that would require destructive entry were not sampled. AES was unable to inspect behind walls and ceilings in the building. AES was also unable to fully inspect under the top layer of flooring materials. Quantities of these materials were estimated. This data may be unreliable.

The possibility exists that as other walls, doors, ducts, etc. are opened during the demolition of the building, suspect materials may be found. If suspect materials are encountered during demolition, the demolition should stop until these materials can be tested and, if necessary, removed by a licensed asbestos contractor.

Quantities of all materials are estimates and should be verified by bidding demolition contractors.

This survey identifies materials as they existed on the day of the survey. Conditions and quantities may change over time.

2.1.2 BULK ASBESTOS SAMPLING

Samples were collected utilizing random sampling procedures. Similar systems and materials were grouped into "homogeneous areas of building materials." Multiple random samples were taken of materials in accordance with the EPA-AHERA guidelines. Sample locations were determined using a random sampling process for each homogeneous material.

AMOUNT OF MATERIAL	MINIMUM # OF SAMPLES
Less than 1,000 square feet	3
Between 1,000 and 5,000 square feet	5
Greater than 5,000 square feet	7

Samples were collected by carefully removing a small representative sample of the suspect material and sealing it in a plastic bag. Water was used to control dust during sampling. The sample was identified with a sample number. Where possible, sample locations were tagged with the sample number and designated "A, B, C," etc. The "wounds" where suspect materials were sampled were sealed. Sample locations are noted on the diagram in Appendix II.

2.1.3 BULK ASBESTOS ANALYSIS

The bulk samples were analyzed by polarized light microscopy (PLM) with dispersion staining, EPA method 600/R-93/116. Bulk samples were viewed under a stereoscope. Samples were prepared in various Cargille refractive index oils and examined under the polarizing microscope. The samples were evaluated under crossed polars for extinction angle, sign of elongation and morphology. Quantity determinations are made by visual estimation.

EPA NESHAP-Asbestos Rule 40 CFR Part 61 states that samples found to contain less than 10% asbestos by visual estimation may be further quantified by point count analysis.

The Asbestos Rule also states that all multi-layer systems, except for wall systems where joint compound was used only at the joints and nail holes, must be analyzed as separate materials. If any layer contains greater than one-percent asbestos, that layer must be treated as asbestoscontaining. This requires all layers in a multi-layered system to be treated as asbestoscontaining if the layers cannot be separated without disturbing the asbestos-containing layer.

In each homogeneous sampling area, once a positive sample was identified, the remaining samples were not analyzed. Asbestos samples will be held for thirty (30) days after the date of this report.

2.2 HAZARDOUS MATERIALS SURVEY APPROACH

AES's approach to this survey was to visually inspect each room for building components assumed to contain hazardous and special wastes that must be removed from the building or recycled

.

properly prior to demolition. Quantities of these materials are estimates and should be verified by bidding demolition contractors. This inspection was not completed at this time since the building was occupied at the time and the extent of the hazardous and special wastes that will be left in the building when it is vacated is unknown.

2.3 LEAD SURVEY APPROACH

No lead paint was sampled as part of this project. If building materials that are painted are to be reused or recycled as part of the project, they must be sampled to determine lead content.

2.4 CHAIN OF CUSTODY PROCEDURES

To ensure that samples collected in the field are neither lost nor their identity confused, all samples, from the point of collection to receipt in the laboratory, follow these procedures. Each sample is first assigned a unique and distinct sampling number. After a sample is placed into a plastic bag, that unique number is assigned to that bag. This same number is assigned to the chain of custody. The inspector signs the chain of custody sheet before it, along with the samples, is delivered to the lab. Upon receipt of the samples, the lab analyst verifies that each sample matches the corresponding chain of custody sample number and signs and dates the chain of custody.

2.5 QUALIFICATIONS

Asbestos sample analysis for the pre-demolition survey was conducted by EHS Laboratory in Richmond, Virginia. EHS is accredited by the National Voluntary Accreditation Program (NVLAP lab code 101882-0).

The survey was conducted by accredited asbestos building inspectors and supervised by Board Certified Industrial Hygienists.

3.0 DISCUSSION

3.1 SUMMARY OF NON-ASBESTOS-CONTAINING MATERIAL

Suspect ACM is considered negative for asbestos when all samples of the material are found to contain one percent or less asbestos.

Suspect material found to be negative includes:

BUILDING 6

- 1. Floor sheeting (Sample 57).
- Ceiling tile, 2' x 2' (Sample 58).
 Baseboard (Sample 59).
- 4. Baseboard adhesive (Sample 60).
- 5. Window caulk (Sample 61).
- 6. Sheetrock and joint compound (Sample 62).

BUILDING 15

- 1. Floor tile, 12" x 12" (Sample 1).
- 2. Floor tile mastic (Sample 2).
- 3. Sheetrock and joint compound (Sample 3).

Mpls Veterans Home (Bldgs 6, 15, 17, 18) - Partial Pre-Demo Hazardous Materials Survey Page 6

- 4. Ceiling tile, 2' x 4' (Sample 4).
- 5. Baseboard (Sample 5).
- 6. Baseboard adhesive (Sample 6).
- 7. White fireproofing (Sample 7).
- 8. Door caulk (Sample 8).
- 9. Window glazing (Sample 9).

BUILDING 17

- 1. Floor tile, 12" x 12" (Samples 29, 39, 41, 46, 64, 72).
- 2. Floor tile mastic (Samples 30, 40, 42, 47, 73).
- 3. Baseboard (Samples 31, 43, 48, 66, 86).
- 4. Baseboard adhesive (Samples 32, 44, 49, 67, 87).
- 5. Ceiling tile, 2' x 2' (Samples 33, 37, 45, 51, 55, 63, 71, 79).
- 6. Sheetrock and joint compound (Sample 36).
- 7. Fire stop putty (Sample 34).
- 8. Stucco like material on exterior walls and in loading dock (Sample 35).
- 9. Fireproofing (Sample 38).
- 10. Linoleum (Samples 50, 68, 69, 70, 74, 75, 76, 78).
- 11. Window caulk (Sample 52).
- 12. Textured ceiling (Samples 53, 54).
- 13. Gray duct sealant (Sample 77).
- 14. Floor tile, 2' x 2' gray with circles (Sample 82). 15. Floor tile mastic (Sample 83).
- 16. Stair tread (Sample 84).
- 17. Stair tread adhesive (Sample 85).
- 18. Hard fittings on fiberglass (Sample 88).

BUILDING 18

- 1. Floor tile, 12" x 12" (Samples 14, 12, 21, 23, 27).
- 2. Floor tile mastic (Samples 15, 13, 22, 28).
- 3. Ceiling tile, 2' x 2' (Samples 16, 25).
- 4. Fireproofing (Sample 17).5. Stair tread (Sample 10).
- 6. Stair tread adhesive (Sample 11).
- 7. Sheetrock and joint compound (Sample 20).
- 8. Mesh on interior walls above ceiling (Sample 18).
- 9. Brown fire stop putty (Sample 19).
- 10. Sink undercoating (Sample 26).

3.2 RECOMMENDATIONS

3.2.1 ASBESTOS

This survey was conducted to locate asbestos-containing materials that must legally be removed prior to demolition of the building. The EPA/MPCA NESHAP regulations require that asbestoscontaining materials which are friable, or will become friable during demolition, must be removed from the building prior to demolition by a licensed asbestos abatement contractor. Destructive investigation and sampling must be conducted as part of the pre-demolition inspection prior to demolition.

Suspect building materials found to contain asbestos include -12" x 12" floor tile and floor tile mastic. Asbestos-containing material should not be cut, drilled, sanded or disturbed.

Building materials assumed to contain asbestos include – electric panels, fire doors, ceramic wall tile mortar and grout, ceramic floor tile mortar and grout, cooler insulation, brown baseboard and adhesive, floor sheeting, wainscoting adhesive, sink undercoating, bulletin board adhesive, 12" x 12" floor tile and associated mastic and wall panel adhesive. Asbestoscontaining material should not be cut, drilled, sanded or disturbed.

Floor tile is suspected to be located under carpeting throughout the building. This floor tile may contain asbestos. Removal of this carpeting could cause damage to the underlying floor tile and possibly cause an asbestos fiber release.

3.2.2 HAZARDOUS MATERIALS

Prior to demolition, all hazardous and special waste must be recycled or removed from the building according to Local, State, and Federal regulations. A complete list of building hazardous and special wastes generally observed in similar buildings is included in Appendix V.

3.2.3 LEAD

No lead paint was sampled as part of this project. If building materials that are painted are to be reused or recycled as part of the project, they must be sampled to determine lead content.

3.3 COST ESTIMATES

3.3.1 ASBESTOS REMOVAL COSTS

Asbestos abatement estimates are based on present day abatement costs. These estimates can vary greatly based on factors such as time of the year, state of the economy, and size of the project. To keep the estimates more realistic, contractor mobilization costs were not included. This will have little effect on large abatement projects, but could cause small projects to cost substantially more than our estimates. The estimates should be reviewed when abatement is planned.

Total cost for removal of all asbestos-containing materials in the building is estimated at \$67,450 (not including exterior materials, i.e. roofing materials). Assumed asbestos-containing materials accounts for \$64,750 of the total costs. This number should drop substantially with additional sampling as part of the pre-demolition survey. Individual cost estimates for removal, arranged by functional space, have been included in Appendix III.

This survey should <u>not be used</u> as a bidding document. The ACM quantities provided area estimates and must be verified prior to abatement firm bidding. AES recommends using a licensed asbestos project designer to design and bid projects.

APPENDIX I

1.0 STANDARDS REGULATING ASBESTOS

1.1 MINNESOTA

The State of Minnesota enforces two asbestos-related rules that affect building owners. One rule states that friable asbestos-containing materials must be maintained in a good state of repair. The second rule states that an inspection survey for asbestos must be performed prior to the undertaking of either a renovation or demolition project where there is reason to suspect asbestos might be present. These rules are enforced by Minnesota OSHA.

Minnesota Department of Health regulations require building owners to keep records of all asbestos abatement or asbestos maintenance work performed at their facility for the current calendar year. These records must be retained for three years.

1.2 EPA

The EPA has specific rules governing the disposal of asbestos-containing materials (ACM), removal of ACM before building demolition and notification before removal of ACM. The Minnesota Pollution Control Agency enforces these rules.

EPA's Asbestos Hazard Emergency Response Act (AHERA), which regulates asbestos in schools, states that any building material containing greater than one percent asbestos must be inspected and managed.

1.3 EPA/ASHARA

The Asbestos School Hazard Abatement Reauthorization Act (ASHARA) requires that any asbestos inspection, whether done visually or by taking samples, must be done by accredited asbestos building inspectors. The regulation also stipulates that asbestos abatement projects must be designed and performed by accredited individuals.

1.4 OSHA

OSHA standards 1910.1001 (general industry), 1926.1101 (construction), and 1915.1001 (shipbuilding) regulate occupational exposures to asbestos. These standards regulate asbestos abatement, building inspections, maintenance work and custodial activities. The permissible exposure limit (PEL) for asbestos is 0.1 fibers per cubic centimeter as an eight-hour, time-weighted average (8-hour TWA).

1.5 EPA/NESHAP

The Asbestos National Emission Standard for Hazardous Air Pollutants (NESHAP) (40 CFR 61, Subpart M) addresses milling, manufacturing and fabrication operations, demolition and renovation activities, waste disposal issues, active and inactive waste disposal sites and asbestos conversion processes.

The terms friable and nonfriable are used to make the distinction between building materials that would readily release asbestos fibers when damaged or disturbed and those materials unlikely to result in significant fiber release when disturbed.

Friable asbestos-containing material (ACM) is defined by the EPA as any material containing more than one percent asbestos that, when dry, can be crumbled, pulverized or reduced to powder by hand pressure.

Nonfriable ACM is any material containing more than one percent asbestos that, when dry, cannot be crumbled, pulverized or reduced to powder by hand pressure.

The EPA defines two categories of nonfriable ACM, Category I and Category II nonfriable ACM. Category I nonfriable ACM is any asbestos-containing packing, gasket, resilient floor covering or asphalt roofing product which contains more than one percent asbestos. Category II nonfriable ACM is any material, excluding Category I nonfriable ACM, containing more than one percent asbestos, that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

"Regulated Asbestos-Containing Material" (RACM) is (a) friable asbestos material, (b) Category I nonfriable ACM that has become friable, (c) Category I nonfriable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading, or (d) Category II nonfriable 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 demolition or renovation activities.

2.0 STANDARDS REGULATING LEAD

2.1 OSHA

OSHA standards apply to any employee disturbing (creating dust or fumes) materials covered with lead-based paint. OSHA regulates lead as an airborne contaminant. Airborne concentrations during disturbance will vary with both the concentration of lead paint and with the operation (manual demolition, sanding, etc.). OSHA requires the contractor to show proof that the operations disturbing lead based paint in any concentration will not exceed the action level of $30 \,\mu\text{g/m}^3$ or the Permissible Exposure Limit (PEL) of $50 \,\mu\text{g/m}^3$.

2.2 MPCA

The MPCA requires that all peeling, flaking or otherwise deteriorated lead-based paint must be removed or stabilized prior to building demolition.

3.0 HAZARDOUS AND SPECIAL WASTE

3.1 MPCA

The MPCA requires that all solid, hazardous, or other special waste be recycled or removed and properly disposed of prior to demolition.

APPENDIX II



Environmental Hazards Services, L.L.C. 7469 Whitepine Rd Richmond, VA 23237

Telephone: 800.347.4010

Asbestos Bulk **Analysis Report**

Report Number: 14-04-02695

Received Date: 04/23/2014

Analyzed Date: 04/26/2014, 04/27/2014

Reported Date: 04/28/2014

Client:

Applied Env. Sciences 8441 Wayzata Blvd.

Suite 103

St. Louis Park, MN 55426

Project/Test Address: F14-172 VA Home; Minneapolis, MN

Client Number:

Laboratory Results 24-1221

Fax Number: 763-545-7883

Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description	Asbestos	Other Materials
14-04-02695-001	. 1		Gray Vinyl; Homogeneous	NAD	100% Non-Fibrous
14-04-02695-002	2		Black Tar-Like; Homogeneous	NAD	1% Cellulose 99% Non-Fibrous
14-04-02695-003	3A		White Granular; White/Tan Fibrous; Inhomogeneous	NAD	20% Cellulose 80% Non-Fibrous
14-04-02695-004	4		Off-White Fibrous; White Paint-Like; Inhomogeneous	NAD	1% Cellulose 70% Fibrous Glass 29% Non-Fibrous
14-04-02695-005	5		Brown Vinyl; Homogeneous	NAD	100% Non-Fibrous

Client Number:

24-1221

Report Number:

14-04-02695

Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description	Asbestos	Other Materials
14-04-02695-006	6		Brown Adhesive; Homogeneous	NAD	1% Cellulose 99% Non-Fibrous
14-04-02695-007	7A		Gray Powder; Fibrous; Inhomogeneous	NAD	. 25% Cellulose 75% Non-Fibrous
14-04-02695-008	7B		Gray Powder; Fibrous; Inhomogeneous	NAD	25% Cellulose 75% Non-Fibrous
14-04-02695-009	7C		Gray Powder, Fibrous, Inhomogeneous	NAD	25% Cellulose 75% Non-Fibrous
14-04-02695-010	7D		Gray Powder; Fibrous; Inhomogeneous	NAD	25% Cellulose 75% Non-Fibrous
14-04-02695-011	7E		Gray Powder; Fibrous; Inhomogeneous	NAD	25% Cellulose 75% Non-Fibrous
14-04-02695-012	8		Black Pliable; Homogeneous	NAD	15% Polyethylene 85% Non-Fibrous
14-04-02695-013	9		Gray Pliable; Homogeneous	NAD	12% Cellulose 88% Non-Fibrous

Client Number:

24-1221

Report Number:

14-04-02695

Client Sample Number	Layer Type	Lab Gross Description	Asbestos	Other Materials
10		Gray Vinyl; Homogeneous	s NAD	100% Non-Fibrous
11		Tan Adhesive; Homogeneous	NAD	1% Cellulose 99% Non-Fibrous
12		Gray Vinyl; Homogeneous	s NAD	100% Non-Fibrous
13		Tan Adhesive; Homogeneous	NAD	1% Cellulose 99% Non-Fibrous
14		Light Gray Vinyl; Homogeneous	NAD	100% Non-Fibrous
15		Clear/Black Adhesive; Inhomogeneous	NAD	1% Cellulose 99% Non-Fibrous
16		Off-White Fibrous; White Paint-Like; Inhomogeneous	NAD	1% Cellulose 70% Fibrous Glass 29% Non-Fibrous
17A		Gray Powder; Fibrous; Inhomogeneous	NAD	25% Cellulose 75% Non-Fibrous
	10 11 12 13 14 16	Number 10 11 12 13 14 16	Number 10 Gray Vinyl; Homogeneous 11 Tan Adhesive; Homogeneous 12 Gray Vinyl; Homogeneous 13 Tan Adhesive; Homogeneous 14 Light Gray Vinyl; Homogeneous 15 Clear/Black Adhesive; Inhomogeneous 16 Off-White Fibrous; White Paint-Like; Inhomogeneous	Number 10 Gray Vinyl; Homogeneous NAD 11 Tan Adhesive; NAD Homogeneous NAD 12 Gray Vinyl; Homogeneous NAD 13 Tan Adhesive; NAD Homogeneous NAD 14 Light Gray Vinyl; NAD Homogeneous 15 Clear/Black Adhesive; NAD Inhomogeneous NAD 16 Off-White Fibrous; White Paint-Like; Inhomogeneous NAD

Client Number:

24-1221

Report Number:

14-04-02695

Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description	Asbestos	Other Materials
14-04-02695-022	17B		Gray Powder, Fibrous; Inhomogeneous	NAD	25% Cellulose 75% Non-Fibrous
14-04-02695-023	17C		Gray Powder; Fibrous; Inhomogeneous	NAD	25% Cellulose 75% Non-Fibrous
14-04-02695-024	17D		Gray Powder; Fibrous; Inhomogeneous	NAD	25% Cellulose 75% Non-Fibrous
14-04-02695-025	17E		Gray Powder; Fibrous; Inhomogeneous	NAD	25% Cellulose 75% Non-Fibrous
14-04-02695-026	18		Brown Granular; Tan Brittle; Off-White Pliable; Inhomogeneous	NAD	1% Synthetic 2% Hair 97% Non-Fibrous
14-04-02695-027	19		Brown Rubbery; Homogeneous	NAD	10% Fibrous Glass 90% Non-Fibrous
14-04-02695-028	20		White Granular, Powder, Tan Fibrous, Inhomogeneous	NAD	20% Cellulose 80% Non-Fibrous
14-04-02695-029	21		Beige Vinyl; Homogeneous	NAD	100% Non-Fibrous

Client Number:

24-1221

Report Number:

14-04-02695

Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description A	sbestos	Other Materials
14-04-02695-030	22		Beige Adhesive; Homogeneous	NAD	1% Cellulose 99% Non-Fibrous
14-04-02695-031	23		Gray Vinyl; Homogeneous	NAD	100% Non-Fibrous
14-04-02695-032	24			Did Not Analyze (Quantity Not Sufficient)
14-04-02695-033	25		Beige Fibrous; White Powder; Inhomogeneous	NAD	60% Cellulose 10% Fibrous Glass 30% Non-Fibrous
14-04-02695-034	26		Gray Granular; Homogeneous	NAD	100% Non-Fibrous
14-04-02695-035	27		Aqua Vinyl; Homogeneous	NAD	100% Non-Fibrous
14-04-02695-036	28		Tan Adhesive; Homogeneous	NAD	1% Cellulose 99% Non-Fibrous
14-04-02695-037	29		Gray Vinyl; Homogeneous	NAD	100% Non-Fibrous
14-04-02695-038	30		Tan Adhesive; Gray Granular; Inhomogeneous	NAD	3% Cellulose 97% Non-Fibrous

Client Number:

24-1221

Report Number:

14-04-02695

Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description	Asbestos	Other Materials
14-04-02695-039	31		Blue Vinyl; Inhomogeneous	NAD	100% Non-Fibrous
4-04-02695-040	32		Brown Adhesive; Homogeneous	NAD	100% Non-Fibrous
14-04-02695-041	33		Beige Fibrous; White Powder; Inhomogeneous	NAD	55% Cellulose 15% Fibrous Glass 30% Non-Fibrous
14-04-02695-042	34		Red Cementitious; Off-White Fibrous; Inhomogeneous	NAD	8% Cellulose 92% Non-Fibrous
14-04-02695-043	35A		Gray Granular; White Fibrous; Foam; Beige Paint-Like; Inhomogeneous	NAD	1% Cellulose 6% Fibrous Glass 93% Non-Fibrous
14-04-02695-044	35B		Gray Granular; White Fibrous; Foam; Beige Paint-Like; Inhomogeneous	NAD	8% Fibrous Glass 92% Non-Fibrous
14-04-02695-045	35C		White Granular; Beige Paint-Like; Inhomogeneous	NAD	1% Cellulose 99% Non-Fibrous

Client Number:

24-1221

Report Number:

14-04-02695

Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description	Asbestos	Other Materials
14-04-02695-046	35D		Gray Granular; White Fibrous; Foam; Beige Paint-Like; Inhomogeneous	NAD	6% Fibrous Glass 94% Non-Fibrous
14-04-02695-047	35E		Gray Granular; White Fibrous; Foam; Beige Paint-Like; Inhomogeneous	NAD	1% Cellulose 8% Fibrous Glass 91% Non-Fibrous
14-04-02695-048	35F		Gray Granular; White Fibrous; Foam; Beige Paint-Like; Inhomogeneous	NAD	6% Fibrous Glass 94% Non-Fibrous
14-04-02695-049	35G		Gray Granular; White Fibrous; Foam; Beige Paint-Like; Inhomogeneous	NAD	8% Fibrous Glass 92% Non-Fibrous
14-04-02695-050	36A		White Granular; Powder; Tan Fibrous; White Paint-Like; Inhomogeneous	NAD	21% Cellulose 79% Non-Fibrous
14-04-02695-051	36B		White Granular; Powder; Tan Fibrous; Beige Paint-Like; Inhomogeneous	NAD	20% Cellulose 80% Non-Fibrous

Client Number:

24-1221

Report Number:

14-04-02695

Number	Client Sample Number	Layer Type Lab Gross Description	Asbestos	Other Materials
14-04-02695-052	37	Beige Fibrous; White Powder; Inhomogene	NAD ous	45% Cellulose 20% Fibrous Glass 35% Non-Fibrous
14-04-02695-053	38A	Tan Granular; Fibrou Inhomogeneous	; Trace <1% Trem/Actin*	28% Cellulose 72% Non-Fibrous
		Total Asbe	stos: Trace <1%	
*Tremolite/Actino	lite Series Asbesto	s present throughout sample.		
14-04-02695-054	38B	Tan Granular; Fibrou Inhomogeneous	s; Trace <1% Trem/Actin*	28% Cellulose 72% Non-Fibrous
		Total Asbe	stos: Trace <1%	
*Tremolite/Actino	lite Series Asbesto	s present throughout sample.		
14-04-02695-055	38C	Tan Granular; Fibrou Inhomogeneous	s; Trace <1% Trem/Actin*	28% Cellulose 72% Non-Fibrous
		Total Asbe	stos: Trace <1%	
*Tremolite/Actino	lite Series Asbesto	s present throughout sample.		
14-04-02695-056	38D	Tan Granular; Fibrou Inhomogeneous	s; Trace <1% Trem/Actin*	28% Cellulose 72% Non-Fibrous
14-04-02695-056	38D	Inhomogeneous	s; Trace <1% Trem/Actin* estos: Trace <1%	
		Inhomogeneous	•	
	lite Series Asbesto	Inhomogeneous Total Asbe	stos: Trace <1%	72% Non-Fibrous
*Tremolite/Actino	lite Series Asbesto	Inhomogeneous Total Asbers os present throughout sample. Tan Granular; Fibrou Inhomogeneous	stos: Trace <1%	72% Non-Fibrous 28% Cellulose
Tremolite/Actino 14-04-02695-057	lite Series Asbesto 38E	Inhomogeneous Total Asbers os present throughout sample. Tan Granular; Fibrou Inhomogeneous	estos: Trace <1% S; Trace <1% Trem/Actin	72% Non-Fibrous 28% Cellulose
Tremolite/Actino 14-04-02695-057	lite Series Asbesto 38E lite Series Asbesto	Inhomogeneous Total Asbers os present throughout sample. Tan Granular; Fibrou Inhomogeneous Total Asbe	estos: Trace <1% Trace <1% Trem/Actin estos: Trace <1%	72% Non-Fibrous 28% Cellulose 72% Non-Fibrous
*Tremolite/Actino 14-04-02695-057 *Tremolite/Actino	lite Series Asbesto 38E lite Series Asbesto	Inhomogeneous Total Asbers os present throughout sample. Tan Granular; Fibrou Inhomogeneous Total Asbers os present throughout sample. Tan Granular; Fibrou Inhomogeneous	estos: Trace <1% Trace <1% Trem/Actin* estos: Trace <1%	72% Non-Fibrous 28% Cellulose 72% Non-Fibrous 28% Cellulose
*Tremolite/Actino 14-04-02695-057 *Tremolite/Actino 14-04-02695-058	lite Series Asbesto 38E lite Series Asbesto 38F	Inhomogeneous Total Asbers os present throughout sample. Tan Granular; Fibrou Inhomogeneous Total Asbers os present throughout sample. Tan Granular; Fibrou Inhomogeneous	estos: Trace <1% Trace <1% Trem/Actin* estos: Trace <1% Trace <1% Trem/Actin*	72% Non-Fibrous 28% Cellulose 72% Non-Fibrous 28% Cellulose
*Tremolite/Actino 14-04-02695-057 *Tremolite/Actino 14-04-02695-058	lite Series Asbesto 38E lite Series Asbesto 38F	Inhomogeneous Total Asberos present throughout sample. Tan Granular; Fibrou Inhomogeneous Total Asberos present throughout sample. Tan Granular; Fibrou Inhomogeneous Total Asberos Total Asberos	estos: Trace <1% Trace <1% Trem/Actin* estos: Trace <1% Trace <1% Trem/Actin* estos: Trace <1%	72% Non-Fibrous 28% Cellulose 72% Non-Fibrous 28% Cellulose 72% Non-Fibrous
*Tremolite/Actino 14-04-02695-057 *Tremolite/Actino 14-04-02695-058 *Tremolite/Actino	lite Series Asbesto 38E lite Series Asbesto 38F	Inhomogeneous Total Asbers Total Asbers Tan Granular; Fibrou Inhomogeneous Total Asbers Total Asbers Tan Granular; Fibrou Inhomogeneous Total Asbers Total Asbers Total Asbers Total Asbers Total Asbers Total Asbers Tan Granular; Fibrou Inhomogeneous Total Asbers Tan Granular; Fibrou Inhomogeneous	estos: Trace <1% Trace <1% Trem/Actin* estos: Trace <1% Trace <1% Trem/Actin* estos: Trace <1%	72% Non-Fibrous 28% Cellulose 72% Non-Fibrous 28% Cellulose 72% Non-Fibrous

Client Number:

24-1221

Report Number:

14-04-02695

Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description	Asbestos	Other Materials
14-04-02695-060	39		Cream Vinyl; Homogeneous	NAD	100% Non-Fibrous
14-04-02695-061	40		Tan Adhesive; Homogeneous	NAD	100% Non-Fibrous
14-04-02695-062	41		Gray Vinyl; Homogeneous	s NAD	100% Non-Fibrous
14-04-02695-063	42		Brown Adhesive; White Granular; Inhomogeneous	NAD S	100% Non-Fibrous
14-04-02695-064	43		Tan Vinyl; Homogeneous	NAD	100% Non-Fibrous
14-04-02695-065	44		Tan Adhesive; Homogeneous	NAD	1% Cellulose 99% Non-Fibrous
14-04-02695-066	45		Gray Fibrous; White Paint-Like; Inhomogeneous	NAD	45% Cellulose 25% Fibrous Glass 30% Non-Fibrous
14-04-02695-067	46		Gray Vinyl; Homogeneous	s NAD	100% Non-Fibrous
14-04-02695-068	47		Tan Adhesive; Homogeneous	NAD	100% Non-Fibrous

Client Number:

24-1221

Report Number:

14-04-02695

Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description	Asbestos	Other Materials
14-04-02695-069	48		Tan Vinyl; Homogeneous	NAD	100% Non-Fibrous
14-04-02695-070	49		Beige Adhesive; Homogeneous	NAD	100% Non-Fibrous
14-04-02695-071	A 50	Tíle	Off-White Vinyl; Homogeneous	NAD	100% Non-Fibrous
14-04-02695-071	B 50	Mastic	Tan Adhesive; Homogeneous	NAD	2% Cellulose 1% Synthetic 97% Non-Fibrous
14-04-02695-072	51		Beige Fibrous; White Powder; Inhomogeneous	NAD .	35% Cellulose 35% Fibrous Glass 30% Non-Fibrous
14-04-02695- 073	52		Black Rubbery; Beige Paint-Like; Inhomogeneous	NAD	100% Non-Fibrous
14-04-02695-074	53A		White Granular; Homogeneous	NAD	100% Non-Fibrous
14-04-02695-075	5 53B		White Granular; Homogeneous	NAD	100% Non-Fibrous

Client Number:

24-1221

Report Number:

14-04-02695

Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description	Asbestos	Other Materials
14-04-02695-076	53C		White Granular; Homogeneous	NAD	100% Non-Fibrous
14-04-02695-077	53D		White Granular; Homogeneous	NAD	100% Non-Fibrous
14-04-02695-078	53E		White Granular; Homogeneous	NAD	100% Non-Fibrous
14-04-02695-079	53F		White Granular; Homogeneous	NAD	100% Non-Fibrous
14-04-02695-080	53G		White Granular; Homogeneous	NAD	100% Non-Fibrous
14-04-02695-081	54A		White Granular; Homogeneous	NAD	100% Non-Fibrous
14-04-02695-082	54B		White Granular; Homogeneous	NAD	100% Non-Fibrous
,					
14-04-02695-083	54C		White Granular; Homogeneous	NAD	100% Non-Fibrous

Client Number:

24-1221

Report Number:

14-04-02695

Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description A	sbestos	Other Materials
14-04-02695-084	54D		Tan Granular; Homogeneous	NAD	100% Non-Fibrous
14-04-02695-085	54E		White Granular; Homogeneous	NAD	100% Non-Fibrous
14-04-02695-086	55		Beige Fibrous; White Powder; Inhomogeneous	NAD	60% Cellulose 10% Fibrous Glass 30% Non-Fibrous
14-04-02695-087	57		Brown/Tan VinyI; Inhomogeneous	NAD	15% Cellulose 85% Non-Fibrous
14-04-02695-088	58		Gray Fibrous; White Paint-Like; Inhomogeneous	NAD	55% Cellulose 15% Fibrous Glass 30% Non-Fibrous
14-04-02695-089	59		Tan Vinyl; Homogeneous	NAD	100% Non-Fibrous
14-04-02695-090	60		Beige Adhesive; White Granular; Inhomogeneous	NAD	100% Non-Fibrous
14-04-02695-091	61		White Rubbery; Homogeneous	NAD	100% Non-Fibrous

Client Number:

24-1221

Report Number:

14-04-02695

Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description	Asbestos	Other Materials
14-04-02695-092	62A		White Granular; Powder; Cream/Tan Fibrous; Inhomogeneous	NAD	24% Cellulose 76% Non-Fibrous
14-04-02695-093	63		Light Gray Fibrous; White Paint-Like; Inhomogeneous	e NAD	70% Fibrous Glass 30% Non-Fibrous
14-04-02695-094	64		Cream Vinyl; Homogeneous	NAD	100% Non-Fibrous
14-04-02695-095	65		Black Tar-Like; Homogeneous	5% Chrysotile	95% Non-Fibrous
			Total Asbesto	s: 5%	
14-04-02695-096	66		Brown Vinyl; Homogeneous	NAD	100% Non-Fibrous
14-04-02695-097	67		Brown Adhesive; Tan Fibrous; Inhomogeneous	NAD	15% Cellulose 85% Non-Fibrous
14-04-02695-098	68		White/Tan Vinyl; Homogeneous	NAD	100% Non-Fibrous
14-04-02695-099	69		White/Tan Vinyl; Homogeneous	NAD	100% Non-Fibrous

Client Number:

24-1221

Report Number:

14-04-02695

Lab Sample Number	Client Sample Number	Layer Type Lab Gross Description	Asbestos	Other Materials
14-04-02695-100	70	White/Tan Vinyl; Gray Fibrous; Inhomogeneous	NAD	28% Cellulose 72% Non-Fibrous
14-04-02695-101	71	Beige Fibrous; White Powder; Inhomogeneous	NAD	35% Cellulose 35% Fibrous Glass 30% Non-Fibrous
14-04-02695-102	72	Gray/Tan Vinyl; Homogeneous	NAD	100% Non-Fibrous
14-04-02695-103	73	Clear Adhesive; Homogeneous	NAD	2% Cellulose 98% Non-Fibrous
14-04-02695-104	74	Brown/Gray Vinyl; Beige Fibrous; Inhomogeneous	NAD	20% Cellulose 80% Non-Fibrous
14-04-02695-105	75	Tan Vinyl; Homogeneous	NAD	15% Cellulose 85% Non-Fibrous
14-04-02695-106	76	Gray Vinyl; Homogeneou	s NAD	100% Non-Fibrous
14-04-02695-107	77	Gray Rubbery; Homogeneous	NAD	100% Non-Fibrous

Client Number:

24-1221

Report Number:

14-04-02695

Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description	Asbestos	Other Materials
14-04-02695-108	78		Tan Vinyl; Homogeneous	NAD	100% Non-Fibrous
14-04-02695-109	79		White Powder; Tan Fibrous; Inhomogeneous	NAD	20% Cellulose 80% Non-Fibrous
14-04-02695-110	80		Off-White/Tan Vinyl; Homogeneous	2% Chrysotile	98% Non-Fibrous
			Total Asbestos	s: 2%	
14-04-02695-111	81		Black Tar-Like; Homogeneous	4% Chrysotile	1% Cellulose 95% Non-Fibrous
			Total Asbestos	s: 4 %	
14-04-02695-112	82		Gray Vinyl; Homogeneous	s NAD	100% Non-Fibrous
14-04-02695-113	83		Tan Adhesive; Homogeneous	NAD	1% Cellulose 99% Non-Fibrous
14-04-02695-114	84		Gray Vinyl; Homogeneous	s NAD	100% Non-Fibrous
14-04-02695-115	85		White Adhesive; Blue Paint-Like; Inhomogeneous	NAD	5% Synthetic 95% Non-Fibrous
14-04-02695-116	86		Gray Vinyl; Homogeneous	s NAD	100% Non-Fibrous

Environmental Hazards Services, L.L.C

Client Number:

24-1221

Report Number:

14-04-02695

Project/Test Address: F14-172 VA Home; Minneapolis, MN

Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description	Asbestos	Other Materials
14-04-02695-117	87		Brown/Tan Adhesive; Inhomogeneous	NAD	100% Non-Fibrous
14-04-02695-118	88A		Tan Powder, Fibrous; Inhomogeneous	NAD	30% Cellulose 12% Fibrous Glass 58% Non-Fibrous
14-04-02695-119	88B		White Rubbery; Gray Powder; Fibrous; Inhomogeneous	NAD	20% Cellulose 25% Fibrous Glass 55% Non-Fibrous
14-04-02695-120	88C		Gray Powder; Fibrous; Inhomogeneous	NAD	1% Cellulose 35% Fibrous Glass 64% Non-Fibrous
14-04-02695-121	36C		White Granular; Powder; Tan Fibrous; Beige Paint-Like; Inhomogeneous	NAD	20% Cellulose 80% Non-Fibrous
14-04-02695-122	36D		White Granular; Powder; Tan Fibrous; Beige Paint-Like; Inhomogeneous	NAD	20% Cellulose 80% Non-Fibrous

Environmental Hazards Services, L.L.C

Client Number:

24-1221

Report Number:

14-04-02695

Jacha Eaddy

Project/Test Address: F14-172 VA Home; Minneapolis, MN

Lab Sample	Client Sample	Layer Type	Lab Gross Description	Asbestos	Other
Number	Number				Materials

QC Sample:

57-M22004-3, 58-M22004-4

QC Blank:

SRM 1866 Fiberglass

Reporting Limit: 1% Asbestos

Method:

EPA Method 600/R-93/116, EPA Method 600/M4-82-020

Analyst:

Vickie Holmes

Reviewed By Authorized Signatory:

Tasha Eaddy QA/QC Clerk

The condition of the samples analyzed was acceptable upon receipt per laboratory protocol unless otherwise noted on this report. Each distinct component in an inhomogeneous sample was analyzed separately and reported as a composite. Results represent the analysis of samples submitted by the client. Sample location, description, area, volume, etc., was provided by the client. This report cannot be used by the client to claim product endorsement by NVLAP or any agency of the U.S. Government. This report shall not be reproduced except in full, without the written consent of the Environmental Hazards Service, L.L.C. California Certification #2319 NY ELAP #11714 NVLAP #101882-0. All information concerning sampling location, date, and time can be found on Chain-of-Custody. Environmental Hazards Services, L.L.C. does not perform any sample collection.

Environmental Hazards Services, L.L.C. recommends reanalysis by point count (for more accurate quantification) or Transmission Electron Microscopy (TEM), (for enhanced detection capabilities) for materials regulated by EPA NESHAP (National Emission Standards for Hazardous Air Pollutants) and found to contain less than ten percent (<10%) asbestos by polarized light microscopy (PLM). Both services are available for an additional fee.

400 Point Count Analysis, where noted, performed per EPA Method 600/R-93/116 with a Reporting Limit of 0.25%.

* All California samples analyzed by Polarized Light Microscopy, EPA Method 600/M4-82-020, Dec. 1982.

LEGEND:

NAD = no asbestos detected



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Asbestos Chain-of-Custody Rage (of 14-04-02695



Due Date: 04/28/2014

(Monday) ER M Inv

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www.leadisb.com (800)347-4010 7469 Whitepine Rd Richmond, VA

(804)275-4907 (fax) 23237 ·	***			lend	/ /	(ER M Inv	V
Company Name:		/ironmental S	Audicos.	8441 Wayza	ta Blvd. Suite 103		City/State/Zip; M	inneapolis, MN	V 55426
Phone: (763) 54	5-5510	Fax: (⁷⁶	63, 545-7883	E-ma	_{ii:} m.meier@aesmn.	.com	Acct. Number	er;	
Project Name / Tes	ting Address:	F14-172	VA Home		c	ity/State (Requir	ed): Minne	10/13 /1	%/
Collected by:	Mark	Neier			Purchase Order Number				
	Turn A	Around Times	: If n	o TAT is specif	ied, sample(s) will be	processed	and charged as	3-day TAT.	
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	Client	Date	8 8	(Boult)		rrain) inutes)			

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No.	Client Sample ID	Date Collected	PLM	PLM Point Court 400	PLMPsint Count 1000	PLM NY Promest	PCM	TEM Charfield (Bulk)	IEMABERA (4ir)	Time On	Time Off	Flow Rate (L/min)	Total Time (nimues)	Volume (Total Liters)	COMMENTS
1	/	4/21+22/14	X							4.					17x12 Gray of These white
2	Z										·				Et Martin
3	30														Sheet rader Tantlaga
4	4														ZXZCT plak of psaves
5	3														Dark Beam BB
6	6														BB ASh
7	TA														White Financosting
8	78		П												
9	ZC		П												
10	ZP														
Release	ed by: Mark 1	Veier			Signa	ature:	_		100	13		-		D	ate/Time: 4/20/14 3FM
Receive		255100			Signs	ature:			me	R				D	ate/Time: U/23/14



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Company N	Applied En	vironmental S	cience	es Addr	css:	3441	Way	yzat	a Blvd. S	uite 103			City/State/Zip: N	/linneapolis, MN 55426
Phone: (/b	53, 545+5510	Fax: (⁷	63, 54	5-788	<u> </u>			E-mai	ı: m.mei	er@aesm	n.com		Acct. Numb	per:
Project Na	me / Testing Address:	F14-172	V	A Hon	^ <i>∈</i>						City/State	(Required)	Minn	capolis MN
Callected h	Mark	Neier								se Order Numi				
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No.	Çlient Sample ID	Date Collected	HM	PLM Point Count 400 PLM Point Count 1000	PLM NY Protected	PCM	TEM Chatfield (Bulk)	TEMAHERA (air)	Time On	Time Off	Howkste (L/nin)	Total Line (mines)	Volume (Total Liters)	COMMENTS
1	76	4/21+22/14	X											What Fire Acoting
2	8	1			T									Day Cart
3	9													Window Glazing white
4	10													Stairtread bron y Millele
5	[]													Adhesive !
6	12				<u> </u>									1217 FT Correy of Multicolo
7	13		111											Mestic /
8	15		\coprod		1_						ļ			12x 17 Staten of Ton white
9	15										<u> </u>			81 MARIE

Signature:



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Company Na	me: Applied En	vironmental S	cier	nces	_ Addre	:ss: _8	3441	Wa	yzat	a Blvd. S	suite 103			City/State/Zip:	Minneapolis, MN 55426
Phone: (763	3, 545-5510	Fax: (⁷	63	545-	7883				E-mai	n.mei	er@aesm	n.com		Acct Ni	Minneapolis, MN 55426
Project Nam	ne / Testing Address:	F14-172		VA	How	16						City/State	(Required)	. Mn.	neupolis MN
Collected by	Mark	Meier									se Order Num				
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	1 - Day	2 - Day	, <u></u>	X	_ 3 - D	ay			_	Sa	ame Day (M	ust Call A	head)		_ Weekend (Must Call Ahead)
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No.	Client Sample ID	Date Collected	нм	F.M.Point Court 400	FLMPoint Count 1000	PLM NY Protocol	RCM	TEMOrafield (Balk)	TEMAFIERA (Air)	Time On	Time Off	How Rate (L/min)	Total Time (minutes)	Volume (Total Liters)	COMMENTS
1	174	4/21+22/14	X												What Fire proofing
2	178		IT												
3	17c														
4	170						·								
5	17/2														
6	18			<u> </u>	<u> </u>										Brown Trans Migh Brown F.S. potty
7	19		Ш												Brown F.S. postry
8	20		Ш		L						<u></u>				Shedrodette
9	21														12NDFT Gaine
10	n										<u> </u>			<u> </u>	19 Mostic
Released	iby: Mark	Miles			Sign	ature:	-			1	Mes.	~	:		Date/Time: 4/22/14 SFM
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Phone: (763	3, 545-5510	Fax: (⁷	763, 5	45-7	7883				E-mai	ii: m.meie	er@aesm	ın.com		Acct Numb	er:
Project Nam	ne / Testing Address:	F14-172		VA	How	E						City/State	(Required)	Minn	alolis MN
Collected by	Mark	Neier									se Order Num				
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No.	Client Sample ID	Date Collected	HM	PLM Point Count 400	PLM Print Court 1000	PLM NY Protocol	PCM	TEMChatfield (Bulk)	TEMAHERA (Air)	Time On	Time Off	Flow Rate (L/min)	Total Time (missies)	Volume (Total Liters)	COMMENTS
1	23	4/21+22/14	X												12x 12 Gray Mossilad
2	24														MARIC
3	29	<u> </u>	Ш												The af Landon lest
4	20														Grandynk Sip.
5	27,							<u> </u>	_				.		DAIZFI Agen
6	28									;					MAGIC
7	29		111												12x126ry MoHled
8	30		111												Magn
9	3/		111												I blue BB
10	32		1'		<u> </u>	<u> </u>		<u> </u>							AB ABL
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Signature:



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Phone: (763)	545-5510	Fax: (63, 54	5-7883	}			E-mai	i: m.mei	er@aesm	n.com		Acct. Nun	aber:
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No.	Client Sample ID	Date Collected	ĦM	PLMPoint Chart 400	FLM NY Protocol	PCM	TEM Chatfield (Bulk)	TEMAHERA (air)	Time On	Time Off	Flow Rate (L/min)	Total Time (minutes)	Volume (Total Liters)	COMMENTS
1	35	4/21+22/14	X	 									i	2x7cT West JAH
2	34	7-1/1												1.5. Ortho lod
3	35 A													Suco like
4	358													1
5	35c							·						
6	25D													
7	35€										-			
8	35F													
9	359													
10	26A													Sheetrack + Burleon
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City/State/Zip: Minneapolis, MN 55426
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Phone: (76	3 _, 545-5510	Fax: (763,	545-	7883				E-ma	_{il:} m.mei	er@aesn	n.com	•	Acct N	fumber;
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No.	Client Sample ID	Date Collected	ĦM	H.M.Poins Count 400	PLM Paint Count 1000	PLM NY Protocol	PCM	TEM Chaffield (Bulk)	TEM AHERA (Air)	Time On	Time Off	Blow Rate (L./ min)	Total Time (minutes)	Volume (Total Liters)	
1	29	4/21+22/14	X												12x1289 Cram No H/a
2	40		TT												For Magic
3	41		Π											· · · · · ·	1741751 Tan Mother
4	42		TT				}							1	A Maste
5	43		Π												Gray BB
6	94		\prod												BB/Adh.
7	75		11				Ī .			,					320T WINGWI FAH
8	46														PX12F1 Cagas
9	47														Machie
10	48		T										:		Tan BB
Release	dby: Mark,	Mile			Sign	ature:				12				·	Date/Time: 4/22/14 3FM
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Company Nam	Applied En	vironmental S	cience	S Addm	ess: _E	3441	Wa	yzata	Blvd. S	uite 103		(City/State/Zip:	Minneapolis, MN 55426
Phone: (763)	545-5510	Fax: (7	63, 54	5-7883	}			E-mail	m.meie	er@aesm	n.com		Acct. Ni	neapolis MN
Project Name	/ Testing Address:	F14-172	V	A HON	NE						City/State	(Required)	: 11m.	neapolis MN
Collected hv	Mark	Neier								se Order Num				
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	1	2 - Day												_ Weekend (Must Call Ahead)
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No.	Client Sample ID	Date Collected	HM	PLM Point Court 1000	KIM NY Present	PCM	TEM Chatfield (Bulk)	TEMAHERA (air)	Time On	Time Off	Flow Rate (L/min)	Total Time (nautes)	Volume (Total Liters)	COMMENTS
1	49	4/21+22/14	X		1									By those
2	50	7 7												
3	51													Zx ZT white of Shotlory to
4	52.													Window Calle Best
5	53A													Whate flat Certin
6	798													
7	53c													
8	93A													
9	94E													
10	\$3P													
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mpany N	lame:	Applied Env	vironmental S	cier	nces	Addre	:ss: _E	3441	Wa	yza	ta Bivd. S	Suite 103		(City/State/Zip:	linneapolis, MN 55426
one: (76	53 ₎ <u>54</u>	5-5510	F14-172	763 ₎ _	545-	7883				B-ma	il: m.mei	er@aesn	nn.com		Acct Numi	ner:
oject Na	me / Tes	ting Address:	F14-172		VA	How	E						City/State	(Required)	MINA	capolis MN
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					·	ASE	EST	os					AIR		·	<u>.</u>
No.	s	Clicut Sample ID	Date Collected	PLM	PLM Point Court 400	PLM Point Count 1000	PLM NY Protocol	PCM	TEM Chaffield (Bulk)	TEMAHERA (Air)	Time On	Time Off	Now Rate (L./ min)	Total Time (minute)	Volume (Total Liters)	COMMENTS
1		93g	4/21+22/14	X							,					Wettert Carline
2		54A														white Brigg Celling
3		543			_											4
4		54C			_											
5	_	542	<u> </u>	\coprod	<u> </u>								<u> </u>			
6		548	 	1	<u> </u>			<u> </u>		_			ļ			1
7		55		╁	 -		-					<u> </u>	-			22 Of whitery Smil
8		56	+	14	1								<u> </u>			Voia.

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Date/Time:

Signature:



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Company Na	me: Applied En	vironmental S	cien	ces	Addre	ss: _8	3441	Wa	yzat	a Blvd. S	uite 103			City/State/Zip:	Minneapolis, MN 55426
hone: (763	3 _, <u>545</u> -5510	Fax: (7	63, 5	545-	7883				E-mai	ı. m.mele	er@aesm	n.com		Acct. Numi	ber:
roject Nam	te / Testing Address:	F14-172		545-7883 m.meier@aesmn.com Acct. Num VA Howe City/State (Required): Minds										eapolis MN	
ollected hy	Mark	Neier			Purchase Order Number										<u></u>
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No.	Client Sample ID	Date Collected	HM	PLMFrim Churt 400	PLMPoint Count 1000	PLM NY Fromod	POM	TEM Chatfield (Bulk)	TEMAHERA (Air)	Time On	Time Off	How Rate (L./ min)	Total Time (trimites)	Volume (Total Liters)	COMMENTS
1	59	4/21+22/14	X							,					Gold BB BB ABLA Myndow Cantkerlite
2	60	1 7 1								٦.					BB ABL
3	61														hunden Cank white
4	6ZA														Sheetrock+ Jont Ce
5	625														YOU
6	botte														VOID
7	63														ZxZ CT white Rogh Kars
8	64														12x1281 Cram Most
9	105														Mostic
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Phone: 763, 545-5510 Fax: (763, 545-7883 B-mail: M.meler@aesmn.com Acet.Number: Project Name / Testing Address: PH - 172 VA MONE Collected inv Turn Around Times: If no TAT is specified, sample(s) will be processed and charged as 3-day TAT. 1-Day 2-Day 3-Day Same Day (Must Call Ahead) Weekend (Must Call Ahead) No. Sample ID On Off 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Company:	Name: App	lied Envir	onmental S	ciend	es	Addre	ss: _8	3441	Wa	yzat	a Blvd. S	uite 103			City/State/Zip: N	/linneapolis, MN 55426
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2 68 3 69 4 70 5 7/ 6 72 7 73 8 74 9 75	No.				ЕМ	PLMPoint Count 400	PLM Print Court 1000	PLM NY Protocol	PCM	TEM Cutted (Bulk)	TEMAHERA (Air)				Trone	(Total	COMMENTS
2 68 3 19 3 19 4 70 5 71 6 71 7 73 8 74 9 75	1	6	7.	4/21+22/14	X												BE All
4 70 First Sheet Gray Ber 5 7/ 5 7/ 6 72 7 73 8 74 9 75	2	6	8	1							·						Linokan whiten Bes She
5 7/ 2x Interfaint For Self State Admin Self State Admin Self State Admin Self State Short	3	6	9		Ш												It whoten Ban Streaks Floors
6 72. 7 73 Self Gick Ach 8 74 9 75 Many Mytilolois Phon	4															<u> </u>	For Sheet Gay Kell
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8 74 Wood floor Scoting 9 75	6	72				_											1212 Whiteh Captar
9 75 Tan of Matilolois Phon	7	 															Self Grok toh
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	9	75													 	ļ	Tan of Multilolo15 Plans



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Signature:

APPENDIX III

EXPLANATION OF ACM ASSESSMENT DATA TABLE

This Appendix contains a summary of all ACM assessment information for materials that tested positive in each functional space in the building. The information is grouped in columns as follows:

FUNCTIONAL SPACE

This is a number assigned to spaces within the building. Generally, each distinct room in the building was assigned a number. The locations of these functional space numbers are charted on diagrams in Appendix III.

LOCATION

This is the room number or description of the area if it had no room number.

DESCRIPTION

The description of the material.

OUANTITY

This is either the estimated length of the material in feet or its area in square feet. For fittings/elbows, the number represents the estimated number of fittings and elbows in the system.

REMOVAL COST ESTIMATE

This is the estimated cost to properly remove the asbestos containing material from the building according to applicable Local, State and Federal regulations.

ASBESTOS MATERIAL ASSESSMENT

Building 6 - Walkway

LOCATION	MATERIAL DESCRIPTION	QUANTITY (estimated)	REMOVAL COST ESTIMATE
Interior (1)	Fire doors	6 doors	\$1,200
Exterior (2)		Not Included in Inspection	-
Total Costs			\$1,200

Italicized materials were assumed to contain asbestos.

ASBESTOS MATERIAL ASSESSMENT

Building 15

LOCATION	MATERIAL DESCRIPTION	QUANTITY (estimated)	REMOVAL COST ESTIMATE
1 st Floor Elevator Lobby, Doorway	I" ceramic wall tile mosaic on ceiling and wall	150 square feet	\$450
Exterior (2)		Not Included in Inspection	-
Total Costs			\$450

Italicized materials were assumed to contain asbestos.

ASBESTOS MATERIAL ASSESSMENT

Building 17

LOCATION	MATERIAL DESCRIPTION	QUANTITY (estimated)	REMOVAL COST ESTIMATE
Corridor E & Room 140	12" x 12" floor tile white with brown smears (floor tile mastic only)	500 square feet	\$2,250
1 st Floor	Fire Doors	6 doors	\$1,200
1 st Floor Kitchen	Electric panels	7 panels	\$1,400
1 st Floor Kitchen	Cooler insulation	Not quantified	-
1 st Floor Kitchen	4" white ceramic wall tile mortar and grout	4,000 square feet	\$12,000
1 st Floor Men's Locker Room	2" brown ceramic floor tile mortar and grout	260 square feet	\$780
1 st Floor Men's Locker Room	4" white ceramic wall tile mortar and grout	300 square feet	\$900
1 st Floor Women's Locker Room	2" brown ceramic floor tile mortar and grout	260 square feet	\$780
1 st Floor Women's Locker Room	4" white ceramic wall tile mortar and grout	300 square feet	\$900
1 st Floor Hallway	Fire Doors	8 doors	\$1,600
l st Floor Cafeteria Bathrooms	2" brown ceramic floor tile mortar and grout	100 square feet	\$300
3 rd Floor Small Room in Elevator Lobby	12" x 12" floor tile cream mottled mastic (mastic only)	50 square feet	\$225
3 rd Floor Restrooms in all Units	2" brown ceramic floor tile mortar and grout	1,000 square feet	\$3,000
3 rd Floor Restrooms in Units	4" white ceramic wall tile mortar and grout	1,600 square feet	\$4,800
3 ^{ra} Floor Hallway	White fiberglass splashguard adhesive	1,000 square feet	\$3,000
3 rd Floor Hallway	Bulletin board adhesive	200 square feet	\$1,600
3 rd Floor Kitchenette	Floor sheeting	100 square feet	\$600
Room 378	12" x 12" floor tile tan mottled & mastic	150 square feet	\$675
3 rd Floor Lunch Room	Wainscoting adhesive	400 square feet	\$1,200
3 rd Floor Bathroom Behind Nurse's Station	4" white/orange/green ceramic wall tile mortar and grout	50 square feet	\$150

3 rd Floor Bathroom Behind Nurse's Station	12" white ceramic floor tile mortar and grout	120 square feet	\$360
3 rd Floor Medication Room (Behind Nurse's Station)	Sink undercoating	I sink	\$200
3 rd Floor Tub Room	2" tan ceramic floor tile mortar and grout	300 square feet	\$900
3 rd Floor Tub Room	6" brown ceramic wall tile mortar and grout	500 square feet	\$1,500
2 nd Floor Restrooms in all Units	2" brown ceramic floor tile mortar and grout	1,000 square feet	\$3,000
2 nd Floor Restrooms in all Units	4" white ceramic wall tile mortar and grout	1,600 square feet	\$4,800
2 nd Floor Hallway	White fiberglass splashguard adhesive	1,000 square feet	\$3,000
2 nd Floor Hallway	Bulletin board adhesive	200 square feet	\$1,600
2 nd Floor Kitchenette	Floor sheeting	100 square feet	\$600
2 nd Floor Lunch Room	Wainscoting adhesive	400 square feet	\$1,200
2 nd Floor Bathroom Behind Nurse's Office	Ceramic wall tile mortar and grout	50 square feet	\$150
2 nd Floor Bathroom Behind Nurse's Office	Ceramic floor tile mortar and grout	100 square feet	\$300
2 nd Floor Storage Room behind Nurse's Station	12" x 12" floor tile white with tan & mastic	50 square feet	\$225
2 nd Floor Tub Room	2" tan ceramic floor tile mortar and grout	300 square feet	\$900
2 nd Floor Tub Room	6" brown ceramic wall tile mortar and grout	500 square feet	\$1,500
Central Stairway	Fire Doors	3 doors	\$600
South Stairway	Fire Doors	3 doors	\$600
South Stairway	6" tan ceramic floor tile mortar and grout	450 square feet	\$1,350
Exterior (2)		Not Included in Inspection	_
Total Costs			\$60,200

Italicized materials were assumed to contain asbestos.

ASBESTOS MATERIAL ASSESSMENT

Building 18

LOCATION (FUNCTIONAL SPACE)	MATERIAL DESCRIPTION	QUANTITY (estimated)	REMOVAL COST ESTIMATE
Elevator Room	Fire doors	2 doors	\$400
Elevator Room	Electric panels	2 panels	\$400
Hallway	Fire doors	4 doors	\$800
			01000
Lunch Room	12" x 12" floor tile gray mottled mastic (mastic only)	420 square feet	\$1900
Lunch Room	Brown baseboard and adhesive	90 linear feet	\$400
Lunch Room, Restrooms	2" tan ceramic floor tile mortar and grout	200 square feet	\$600
Lunch Room, Restrooms	6" tan ceramic wall tile mortar and grout	500 square feet	\$1500
Exterior (2)		Not Included in Inspection	-
Total Costs			\$5,600

Italicized materials were assumed to contain asbestos.

APPENDIX IV



Director, Env. Health Div.

Certified by:
State of Minnesota
Department of Health
Expires 06/20/20141

Mark W Meier 7570 Dallas En N Maple Grove, MN 55311

No. Al3893 Issued: 06/24/2013

ASBESTOS



ASBESTOS INSPECTOR

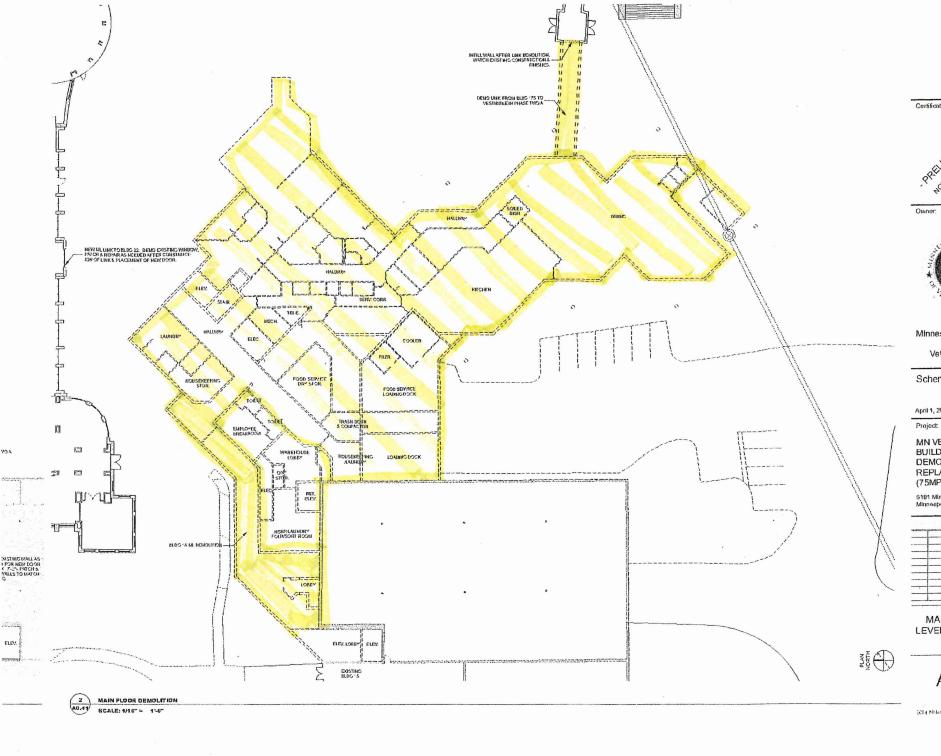
Certified by: State of Minnesota Department of Health

Expires: 04/10/2015 James Eric Gabrielson 6002 Timberglade Cir Bloomington, MN 55438

No AI10463

Issued: 04/14/2014

APPENDIX V



Certification:

PRECIMITARY OUT TO



Minnesota Departmer Veterans Affairs

Schematic Design

April 1, 2014

MN VETERANS HON BUILDING 22 DEMOLITION AND REPLACEMENT (75MP0037-B22)

6101 Minnehaha Avenus Sou Minneapolis, MN 55417



MAIN & LOWER LEVEL DEMOLITK PLANS

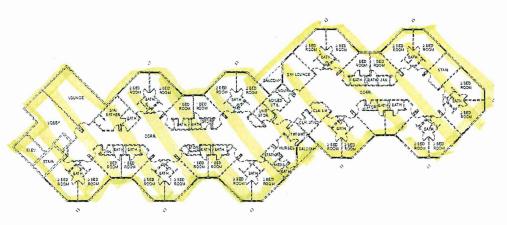
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Nelson-Tremain Partnership externrestorationscondum 12 Seuthors Main Story, Same 245 Minocashi, Minnesta 55414 Therbore (612) 33-778 Far (612) 33-878

ROOF BELOW

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Cerofication:

Minnesota Department of Veterans Affairs

Schematic Design

April 1, 2014

Project

MN VETERANS HOP BUILDING 22 DEMOLITION AND REPLACEMENT (75MP0037-B22)

5101 Minnehaha Avenue Sot Minneapolis, MN 55417



SECOND, THIRD PENTHOUSE DEMOLITION PLAI

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