Villa Environmental Consultants, Inc.

215 Colfax Avenue, Benton Harbor, MI 49022 ♦PH: (269) 927-2434 ♦ rvilla@villaenv.com

3 February 2023 - Table 2 Updated 17 April 2026

Doug Montey, Facility Consultant
Manistee Area Public Schools
550 Maple Street
Manistee, MI 49660

Re: NESHAP Asbestos-Containing Materials Survey
Jefferson Elementary, 515 Bryant Ave.
Villa Environmental Consultants, Inc. Project No. 22-244

Dear Mr. Montey:

Villa Environmental Consultants, Inc. (VEC) completed a NESHAP survey for Asbestos-Containing Materials (ACM) for Jefferson Elementary, which is planned for demolition. Our asbestos consulting services were completed according to the accepted scope of our asbestos inspection services.

Purpose of the Survey

The purpose of this survey was to identify, locate, classify, analyze, and estimate quantities of ACM that must be removed or managed according to federal, state, and local agency requirements prior to or during the scheduled demolition activities.

VEC performed this survey in accordance with the United States Environmental Protection Agency (US EPA) National Emissions Standards for Hazardous Air Pollutants (NESHAP), 40 CFR, Part 61, Subpart M guidelines. The NESHAP controls the release of air contaminants to the ambient air during renovation and demolition activities. The NESHAP requires the owner to submit a notification of intent to demolish to the appropriate regulatory authorities before the work begins. To provide the required information to the regulatory authorities, a comprehensive asbestos survey must be conducted on the property within the area(s) where renovation/demolition activities are scheduled. The survey must list all ACM that is present, the estimated quantities, and identify which materials must be removed prior to the planned demolition activities scheduled in the future at this site.

The interior locations were inspected physically by Homogeneous Areas (HA) to determine the presence of ACM. The inspection of the building included access to the requested survey areas and a listing of the determined Functional Spaces (FS). The visual inspection was conducted by Rick Villa (Accreditation No. A1157), a State of Michigan Asbestos Building Inspector.

Description of Building Surveyed

This building was constructed in 1953 with an addition in 1963. The building is estimated to be approximately 35,000 square feet, constructed of typical institutional materials such as ceramic tile, vinyl tile floors, carpet, acoustical ceilings, block interior walls, and drywall.

Limitations and Exceptions of Survey

Locating and identifying materials containing asbestos in buildings and structures is a difficult and time-consuming task. All buildings have hidden spaces that may not be obvious to a surveyor who is not intimately familiar with the building and who has only a limited time to inspect the facility.

Although VEC uses trained and licensed inspectors to locate and identify materials potentially containing asbestos, VEC cannot verify that all materials containing asbestos have been identified. It is possible that there are materials containing asbestos that were not found because they were not visible or accessible to the inspector.

The survey is designed to aid the building owner, Architects, Construction Managers, and asbestos abatement contractors in locating regulated building materials. All quantities reported are **estimates**. Any contractor using the information found in this report must quantify their own measurements. VEC is not responsible for any misrepresentation of quantities or any discrepancies with potential asbestos abatement budgeting. If potential variations are identified during demolition activities, it may be necessary to conduct additional sampling.

During the NESHAP site survey, the following limitations were encountered and described below:

1. We did not break into any walls, wall cavities, under casework, under the hallway ceramic tile and under white boards.
2. Only corners of carpet and/or carpet at thresholds were pulled back which revealed carpet installed directly on concrete and if any material was discovered, it was sampled.
3. The roofing materials were not sampled.

Asbestos-Containing Materials

VEC understands that information obtained from this survey will be used to assist in the proper removal and disposal of these materials before demolition activities. The following subsections describe the sampling plan and sample collection phases of the survey.

Building Walk Through and Inspection Activities

VEC performed a review of the interior of the building using guidelines established by the US EPA in the publication *Guidance for Controlling Asbestos-Containing Materials in Buildings*, Office of Pesticides and Toxic Substances, DOC No. 560/5-85-024 and 40 CFR Part 763, of the Asbestos Hazard and Emergency Response Act (AHERA). As required under AHERA, suspect

ACM is categorized as thermal system insulation (TSI)[1], surfacing materials (SM)[2], or miscellaneous materials (MM)[3].

AHERA sampling protocols states that the following number of samples must be collected for each material category:

- Three samples of TSI materials (i.e., pipe wrap insulation) must be collected and analyzed by PLM analysis.
- Surfacing materials (i.e., plaster, joint compound, textured ceiling materials, fire proofing, etc.) are sampled in accordance with the quantity of material present as measured by its square footage. If less than 1,000 square feet of material is present, a minimum of three bulk samples must be collected. If between 1,000 and 5,000 square feet of material is present, a minimum of five bulk samples must be collected. If greater than 5,000 square feet of material is present, a minimum of seven bulk samples must be collected. All bulk samples must be analyzed by PLM analysis.
- Miscellaneous materials (i.e., floor tile, mastics, roofing materials, gypsum drywall panels, ceiling tiles, etc.) need to be sampled "in a manner sufficient to determine" its asbestos content using professional judgement of the accredited asbestos building inspector. All bulk samples must be analyzed by PLM analysis.

Accessible locations within the survey areas were physically inspected to determine the presence of ACM. Suspect materials in each area were categorized prior to the collection of bulk samples. During the inspection, the friable or non-friable nature of the suspect ACM was determined and cataloged.

Bulk Sample Collection

VEC conducted bulk sampling protocols of all accessible friable and non-friable suspected ACM in general accordance with the requirements of AHERA for bulk sampling (40 CFR 763.86) and with the scope of services outlined in VEC's proposal. During the inspection, bulk samples of suspect ACM containing, in some cases, multiple layers of discrete materials were collected for analysis. Samples were assigned an identification number and Chain of Custody (COC) forms accompanied the samples to the laboratory.

Asbestos Laboratory Analytical Procedures and Methodologies

Laboratory analytical services using Polarized Light Microscopy (PLM), were performed by Environmental Testing Laboratories, Inc. (ETL) located at 37575 West Huron River Dr., Romulus, Michigan. ETL is an accredited National Voluntary Laboratory Accreditation Program (NVLAP) for bulk asbestos fiber analysis. Bulk samples of suspect ACM were analyzed by PLM Method 198.1 for the criteria set by the NESHAP, 40 CFR Part 61.

[1] Thermal system insulation is defined as material(s) that is applied to pipes, fittings, boilers, breeching, tanks, ducts, or other structural components to prevent heat loss or gain.

[2] Surfacing material is defined as a material(s) that is sprayed troweled-on or otherwise applied to surfaces.

[3] Miscellaneous material is defined as a material(s) that is not classified as surfacing or thermal system insulation.

Findings

This section presents the findings based on the results of the material sampling, field inspection and laboratory analyses. The attached function space drawing also provides a graphical depiction of the known and assumed asbestos containing material.

Methodology and Limiting Conditions

A survey of the building was performed to identify ACM that will require proper management prior to demolition/renovation of the building. NESHAP defines "demolition" as *the means of wrecking or taking out of any load-supporting structural member of a facility together with any related handling operations, or the intentional burning of any facility*.

Conclusions and Recommendations

The following are the conclusions and recommendations:

- The known and assumed asbestos materials are listed in bold on the attached tables.
- All the materials currently and previously sampled are listed in the attached tables 2 and 3.
- There could be isolated areas that have asbestos floor tile under carpet and casework.
- Prior to demolition we recommend breaking into exterior walls to look for possible vermiculite, break into walls associated with plumbing to look for asbestos pipe insulation, look under exterior metal fascia in 1963 section to verify transite, demolish the roof skylights to look for possible transite, assure there is no insulation on pipes in the concrete floors (almost all) that have radiant heat in 1953 section, demolish the exterior upper renovated areas that are covering glass block and maybe transite, and look under the hallway ceramic floor tile.
- A non-asbestos related recommendation: verify that the 10,000 gallon underground heating oil tank installed by the 1953 boiler room has been removed.

Please feel free to contact me at (269) 927-2434 or via email to review or discuss any aspect of this report.

Yours truly,

Richard P. Villa

Richard Villa, President
rvilla@villaenv.com

Tables

Table 1: Description of Functional Spaces
Table 2: Summary of Homogeneous Areas
Table 3: Summary of ACM and Material Characteristics

Appendices

Appendix A: Asbestos Laboratory Analytical Reports
Appendix B: Photo plate

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Figure 1: Site Sketch/Functional Space Diagram

Table 1
Description of Functional Spaces

Table 1
Description of Functional Spaces
515 Bryant Ave, Manistee
VEC Project No. 22-244

Functional Space No.	Functional Space Description	Floor
1	Boiler Room	1
2	Gym	1
3	Stage	1
4	Stage AHU Room	1
5	Sensory (Old Locker)	1
6	Kitchen & Pantry	1
7	Lost & Found	1
8	Lounge	1
9	Offices #1	1
10	Custodial #1	1
11	Boys/Girls Restrooms	1
12	Room #1 & ISD	1
13	Room #11/ GSRP #2	1
14	Room #12/ GSRP #1	1
15	Room #12/ Grade 1	1
16	1953 Corridor & 1963 Corridor	1
17	Recovery Room	1
18	(1953 Section) Building Exterior	1
19	Room #14	1
20	Room #15	1
21	Room #16	1
22	Room #17	1
23	Custodial #2	1
24	Room 21	1
25	Room #22	1
26	Room #23	1
27	Room #24	1
28	Room #25	1

Table 1
Description of Functional Spaces
515 Bryant Ave, Manistee
VEC Project No. 22-244

Functional Space No.	Functional Space Description	Floor
29	(1963 Section) Room #18	1
30	(1963 Section) Room #19	1
31	(1963 Section) Room #20	1
32	(1963 Section) Copy Room	1
33	(1963 Section) Building Exterior	1

Table 2
Summary of Homogeneous Areas

Table 2
Summary of Homogenous Areas- APRIL 17, 2026
515 Bryant Ave, Manistee
VEC Project No. 22-244

HA No.	Homogenous Area Description	Functional Space Locations (FS#)	Asbestos Content	Estimated Quantity
1	Pipe Insulation Fittings	FS1	ND	Removed
2	Unknown	FS1	ND	Removed
3	**Mag-Insulation**	**FS9, possibly in wall cavities supplying water to sinks or the former showers (requires further investigation or provide a bid allowance cost /LF)**	**40% AM**	**20 LF**
4	Pipe Insulation Fittings	FS1	ND	Removed
5	Mill-board Insulation	FS1	ND	Removed
6	Mill-board Insulation	FS1	ND	Removed
7	Mill-board Insulation	FS1	ND	Removed
8	Mag-Insulation	FS1	ND	Removed
9	Unknown	FS1	ND	Unknown
10	Unknown	FS1	ND	Unknown
11	Mag-Insulation	FS1	ND	Removed
12	**9"x9" Floor Tile with non asbestos mastic-1953 section**	**FS2, FS6, FS9,F12-FS15, FS19-FS22 FS24-FS31**	**3% CH (mastic ND)**	**14,600 SF**
13	**Exterior Transite Soffit-1963 section**	**FS33**	**25% CH**	**550 SF**
14	Mag-Insulation	FS1	ND	Removed
15	Mill-board Insulation	FS1	ND	Removed
16	Mag-Insulation	FS1	ND	Removed
17	Boiler Jacket Insulation	FS1	ND	Removed
18	Water Tank Insulation	FS1	ND	Removed
19	Duct Insulation	FS1	ND	Removed
20	Anti-Vibration Cloth	FS4,	ND	12 SF
21	12"x12" Floor Tile	FS3,	ND	36 SF
22	Boiler Room Ceiling	FS1	ND	875 SF
23	Boiler Flue Liner in Chimney	FS1	ND	250 SF
24	Green Ceramic Tile Grout	FS8	ND	675 SF
25	12"x12" Green Tile	FS9	ND	200 SF

Table 2
Summary of Homogenous Areas- APRIL 17, 2026
515 Bryant Ave, Manistee
VEC Project No. 22-244

HA No.	Homogenous Area Description	Functional Space Locations (FS#)	Asbestos Content	Estimated Quantity
26	Black Sink Undercoating-1953 section	FS8,FS13-FS15, FS19-FS22 FS24-FS31	ND	225 SF
27	Linoleum on Classroom Sink Counter	FS13-FS15, FS19-FS22 FS24-FS31	ND	540 SF
28	Louvre Caulk	FS1	ND	20 LF
29	**Exterior Door Caulk-1953 Section**	**FS18 (4 Exit doors of 1963 section)**	**5% CH**	**8 SF**
30	6"x6" Ceramic Tile Grout	FS7,FS11, FS16,	ND	6,870 SF
31	Cement plaster ceiling	FS18	ND	1,600 SF
32	Hard/Smooth Plaster Ceiling	FS5, FS8	ND	390 SF
33	(1953 Section) 2'x4' Acoustical Ceiling Tile	FS16, FS20	ND	6,100 SF
34	(1963 Section) 2'x4' Acoustical Ceiling Tile	FS29,FS31	ND	810 SF
35	**9"x9" Beige Floor Tile-1963 section**	**FS29-FS31**	**3% CH/ mastic ND**	**2,500 SF**
36	(1963 Section) Black Sink Undercoating	FS29-FS31	ND	4 SF
37	Removable Wall	FS30	ND	240 SF
38	4-Inch Cove Base	FS29-FS31	ND	145 SF
39	Potential vermiculite in the exterior walls	FS18, FS33	Owner cut openings and none found, ND	8,500 SF+
40	Glazing for entry to classrooms	entrys to 1953 rooms	ND	4 SF
41	Glazing for aluminum framed windows at corridor wall of classrooms	upper windows of 1953 clasrooms	ND	5.5 SF
42	Glue pods for tackboards and chalkboards -1953 section	classrooms	ND	1,100 SF
43	**Caulk for glass block windows**	**FS2**	**3% CH**	**3.5 SF**
44	Flashing	perimeter of roof	ND	6,900 SF
45	Top layer of roofing	roof	ND	28,000 SF
46	Exterior window caulk and glazing-1953 section	Reviewd by owner, no suspect material	ND	3500 SF
47	Exterior window caulk and glazing-1963 section	Reviewd by owner, no suspect material	ND	600 SF
48	Chalkboards-1953 section	requires further destructive investigation		
49	Chalkboards- 1963 section	requires further destructive investigation		
50	Glue pods for tackboards and chalkboards -1956 section	requires further destructive investigation		
51	Material under hallway ceramic floor-1963 section	requires further destructive investigation		

Table 3
Summary of ACM and Material Characteristics

Table 3
Summary of ACM and Material Characteristics
515 Bryant Ave, Manistee
VEC Project No. 22-244

HA No.	Homogenous Area Description	Condition	Friable (Yes/No)	EPA Category	Estimated Quantity
3	Mag-Insulation	G	Y	II	20 LF
12	9"x9" Floor Tile	G	N	I	16,840 SF
13	Exterior Transite Soffit-1963 section	G	N	II	550 SF
23	Boiler Flue Liner in Chimney-Assumed ACM	G	N	II	250 SF
29	Exterlior Door Caulk-1953 Section	G	N	I	8 SF
37	Removable Wall-Assumed ACM	G	N	II	240 SF
39	Vermiculite in the exterior walls- Assumed	G	N	II	8500 SF

Table 3 Notes and Acronyms:

1. Homogeneous Area (HA) is defined as an area of surfacing materials, thermal surface insulation, or miscellaneous material that is uniform in color and texture.

2. EPA Category I non-friable ACM consist of asbestos containing packings, gaskets, resilient floor coverings, and asphalt roofing materials. These materials can be left in-place during demolition if materials remain intact and non-friable. If concrete is planned to be recycled as part of demolition activities, all Category I non-friable flooring materials must be removed.

3. SF = Square Feet; LF = Linear Feet; CF = Cubic Feet; EA = Each

4. Asbestos is a group of fibrous minerals that include: actinolite, amostie, anthophllite, chrysotile, crocidolite, and tremolite

Appendix A
Asbestos Laboratory Analytical Report

Environmental Testing Laboratories, Inc.

37575 W Huron River Drive
Romulus, Michigan 48174
(734) 955-6600
Fax: (734) 955-6604

To: Villa Environmental Consultants, Inc.
215 Colfax Ave.
Benton Harbor, Michigan 49022

ETL Job: 254380
Client Project: 22-244
Report Date: 1/26/2023

Attention: Rick Villa
Project Location: 515 Bryant Ave, Manistee, MI
Jefferson Elem.

Lab Sample Number	Client Sample Number	Sample Type	Completed
1448142	12-02	Asbestos	01/25/2023
1448143	12-03	Asbestos	01/25/2023
1448144	12-04	Asbestos	01/26/2023
1448145	12-05	Asbestos	01/26/2023
1448146	12-06	Asbestos	01/26/2023
1448147	12-07	Asbestos	01/26/2023
1448148	20-01	Asbestos	01/26/2023
1448149	21-01	Asbestos	01/26/2023
1448150	22-01	Asbestos	01/26/2023
1448151	24-01	Asbestos	01/26/2023
1448152	24-02	Asbestos	01/26/2023
1448153	25-01	Asbestos	01/26/2023
1448154	26-01	Asbestos	01/26/2023
1448155	26-02	Asbestos	01/26/2023
1448156	27-01	Asbestos	01/26/2023
1448157	28-01	Asbestos	01/26/2023

Lab Sample Number	Client Sample Number	Sample Type	Completed
1448158	29-01	Asbestos	01/26/2023
1448159	30-01	Asbestos	01/26/2023
1448160	30-02	Asbestos	01/26/2023
1448161	30-03	Asbestos	01/26/2023
1448162	31-01	Asbestos	01/26/2023
1448163	32-01	Asbestos	01/26/2023
1448164	32-02	Asbestos	01/26/2023
1448165	33-01	Asbestos	01/26/2023
1448166	33-02	Asbestos	01/26/2023
1448167	34-01	Asbestos	01/26/2023
1448168	34-02	Asbestos	01/26/2023
1448169	01-01	Asbestos	01/26/2023
1448170	02-01	Asbestos	01/26/2023

Reviewed by: Emily Nowacki

Emily Nowacki

NVLAP LAB CODE 201028-0

Certificate of Analysis

Environmental Testing Laboratories, Inc.
37575 W Huron River Drive
Romulus, Michigan 48174
(734) 955-6600, Fax: (734) 955-6604

Polarized Light Microscopy Asbestos Analysis Report

To : Villa Environmental Consultants, Inc.
215 Colfax Ave.
Benton Harbor,Michigan 49022

Location : Jefferson Elem.
515 Bryant Ave, Manistee, MI

ETL Job : 254380
Client Project : 22-244
Date Collected : 01/22/2023
Date Received : 01/24/2023

Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Asbestos
1448142 12-02 FS12-15D Area Layer-1 Analyst: Emmett Zainea Date Analyzed : 01/25/2023	9x9 Floor Tile & Mastic - Floor Tile	Gray Non-Fibrous Homogenous		PLM 98% Other	PLM 2% Chrysotile
1448142 12-02 FS12-15D Area Layer-2 Analyst: Emmett Zainea Date Analyzed : 01/25/2023	Mastic	Brown Non-Fibrous Homogenous		PLM 100% Other	PLM None Detected
1448143 12-03 FS15-Room 13 Layer-1 Analyst: Emmett Zainea Date Analyzed : 01/25/2023	9x9 Floor Tile & Mastic - Floor Tile	Tan Non-Fibrous Homogenous		PLM 97% Other	PLM 3% Chrysotile
1448143 12-03 FS15-Room 13 Layer-2 Analyst: Emmett Zainea Date Analyzed : 01/25/2023	Mastic	Black Non-Fibrous Homogenous		PLM 100% Other	PLM None Detected
1448144 12-04 FS24-Room 24 Analyst: Emmett Zainea Date Analyzed : 01/26/2023	9x9 Mastic	Black Non-Fibrous Homogenous	PLM 2% Cellulose	PLM 98% Other	PLM None Detected
1448145 12-05 FS28-Media Center Analyst: Emmett Zainea Date Analyzed : 01/26/2023	9x9 Mastic	Black Non-Fibrous Homogenous	PLM 2% Cellulose	PLM 98% Other	PLM None Detected

NVLAP LAB CODE 201028-0

Environmental Testing Laboratories, Inc.
37575 W Huron River Drive
Romulus, Michigan 48174
(734) 955-6600, Fax: (734) 955-6604

Certificate of Analysis

Polarized Light Microscopy Asbestos Analysis Report

To : Villa Environmental Consultants, Inc.
215 Colfax Ave.
Benton Harbor,Michigan 49022

Location : Jefferson Elem.
515 Bryant Ave, Manistee, MI

ETL Job : 254380
Client Project : 22-244
Date Collected : 01/22/2023
Date Received : 01/24/2023

Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Asbestos
1448146 12-06 FS6-Kitchen Layer-1 Analyst: Emmett Zainea Date Analyzed : 01/26/2023	9x9 Tile & Mastic - Floor Tile	Brown Non-Fibrous Homogenous		PLM 98% Other	PLM 2% Chrysotile
1448146 12-06 FS6-Kitchen Layer-2 Analyst: Emmett Zainea Date Analyzed : 01/26/2023	Mastic	Brown Non-Fibrous Homogenous	PLM 2% Cellulose	PLM 98% Other	PLM None Detected
1448147 12-07 FS-27 Layer-1 Analyst: Emmett Zainea Date Analyzed : 01/26/2023	9x9 Tile & Mastic - Floor Tile	Gray Non-Fibrous Homogenous		PLM 98% Other	PLM 2% Chrysotile
1448147 12-07 FS-27 Layer-2 Analyst: Emmett Zainea Date Analyzed : 01/26/2023	Mastic	Black Non-Fibrous Homogenous	PLM 2% Cellulose	PLM 98% Other	PLM None Detected
1448148 20-01 FS4 Analyst: Emmett Zainea Date Analyzed : 01/26/2023	Anti Vibration Cloth	Black Fibrous Homogenous	PLM 80% Cellulose	PLM 20% Other	PLM None Detected

NVLAP LAB CODE 201028-0

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Romulus, Michigan 48174
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Polarized Light Microscopy Asbestos Analysis Report

To : Villa Environmental Consultants, Inc.
215 Colfax Ave.
Benton Harbor,Michigan 49022

Location : Jefferson Elem.
515 Bryant Ave, Manistee, MI

ETL Job : 254380
Client Project : 22-244
Date Collected : 01/22/2023
Date Received : 01/24/2023

Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Asbestos
1448149 21-01 FS2-Gym Stage Landing Layer-1 Analyst: Emmett Zainea Date Analyzed : 01/26/2023	12x12 Floor Tile	Tan Non-Fibrous Homogenous	PLM 2% Cellulose	PLM 98% Other	PLM None Detected
1448149 21-01 FS2-Gym Stage Landing Layer-2 Analyst: Emmett Zainea Date Analyzed : 01/26/2023	Adhesive	Yellow Non-Fibrous Homogenous		PLM 100% Other	PLM None Detected
1448150 22-01 FS1 Analyst: Emmett Zainea Date Analyzed : 01/26/2023	Ceiling	White Non-Fibrous Homogenous	PLM 2% Cellulose	PLM 98% Other	PLM None Detected
1448151 24-01 FS8 Layer-1 Analyst: Emmett Zainea Date Analyzed : 01/26/2023	Ceramic Tile & Grout - Ceramic Tile	Green Non-Fibrous Homogenous		PLM 100% Other	PLM None Detected
1448151 24-01 FS8 Layer-2 Analyst: Emmett Zainea Date Analyzed : 01/26/2023	Grout	Gray Non-Fibrous Homogenous	PLM 2% Cellulose	PLM 98% Other	PLM None Detected

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Polarized Light Microscopy Asbestos Analysis Report

To : Villa Environmental Consultants, Inc.
215 Colfax Ave.
Benton Harbor,Michigan 49022

Location : Jefferson Elem.
515 Bryant Ave, Manistee, MI

ETL Job : 254380
Client Project : 22-244
Date Collected : 01/22/2023
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Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Asbestos
1448152 24-02 FS8 Layer-1 Analyst: Emmett Zainea Date Analyzed : 01/26/2023	Ceramic Tile & Grout - Ceramic Tile	Green Non-Fibrous Homogenous		PLM 100% Other	PLM None Detected
1448152 24-02 FS8 Layer-2 Analyst: Emmett Zainea Date Analyzed : 01/26/2023	Grout	Gray Non-Fibrous Homogenous	PLM 2% Cellulose	PLM 98% Other	PLM None Detected
1448153 25-01 FS9-W. Office Layer-1 Analyst: Emmett Zainea Date Analyzed : 01/26/2023	12x12 Tile	Green Non-Fibrous Homogenous	PLM 2% Cellulose	PLM 98% Other	PLM Trace Chrysotile
1448153 25-01 FS9-W. Office Layer-2 Analyst: Emmett Zainea Date Analyzed : 01/26/2023	Mastic	Black Non-Fibrous Homogenous	PLM 2% Cellulose	PLM 98% Other	PLM None Detected
1448153 25-01 FS9-W. Office Layer-3 Analyst: Emmett Zainea Date Analyzed : 01/26/2023	Mastic	Yellow Non-Fibrous Homogenous		PLM 100% Other	PLM None Detected
1448154 26-01 FS13 Analyst: Emmett Zainea Date Analyzed : 01/26/2023	Sink Undercoating	Black Non-Fibrous Homogenous		PLM 100% Other	PLM None Detected

NVLAP LAB CODE 201028-0

Environmental Testing Laboratories, Inc.
37575 W Huron River Drive
Romulus, Michigan 48174
(734) 955-6600, Fax: (734) 955-6604

Certificate of Analysis

Polarized Light Microscopy Asbestos Analysis Report

To : Villa Environmental Consultants, Inc.
215 Colfax Ave.
Benton Harbor,Michigan 49022

Location : Jefferson Elem.
515 Bryant Ave, Manistee, MI

ETL Job : 254380
Client Project : 22-244
Date Collected : 01/22/2023
Date Received : 01/24/2023

Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Asbestos
1448155 26-02 FS24 Analyst: Emmett Zainea Date Analyzed : 01/26/2023	Sink Undercoating	Black Non-Fibrous Homogenous		PLM 100% Other	PLM None Detected
1448156 27-01 FS13 Analyst: Emmett Zainea Date Analyzed : 01/26/2023	Sink Linoleum	Brown Non-Fibrous Homogenous	PLM 80% Cellulose	PLM 20% Other	PLM None Detected
1448157 28-01 FS1 Analyst: Emmett Zainea Date Analyzed : 01/26/2023	Caulk	Brown Non-Fibrous Homogenous	PLM 3% Cellulose	PLM 97% Other	PLM None Detected
1448158 29-01 FS16-Entry 3 Analyst: Emmett Zainea Date Analyzed : 01/26/2023	Door Caulk	Gray Non-Fibrous Non-Homogenous		PLM 95% Other	PLM 5% Chrysotile
1448159 30-01 FS16-by lost and found Analyst: Emmett Zainea Date Analyzed : 01/26/2023	Grout	Gray Non-Fibrous Homogenous	PLM 2% Cellulose	PLM 98% Other	PLM None Detected
1448160 30-02 FS16-by Entry 3 Analyst: Emmett Zainea Date Analyzed : 01/26/2023	Grout	Gray/Brown Non-Fibrous Non-Homogenous		PLM 100% Other	PLM None Detected

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Polarized Light Microscopy Asbestos Analysis Report

To : Villa Environmental Consultants, Inc.
215 Colfax Ave.
Benton Harbor,Michigan 49022

Location : Jefferson Elem.
515 Bryant Ave, Manistee, MI

ETL Job : 254380
Client Project : 22-244
Date Collected : 01/22/2023
Date Received : 01/24/2023

Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Asbestos
1448161 30-03 FS16-by Entry 4 Analyst: Emmett Zainea Date Analyzed : 01/26/2023	Grout	Brown/White Non-Fibrous Non-Homogenous	PLM 5% Cellulose	PLM 95% Other	PLM None Detected
1448162 31-01 FS18-by Entry 4 Analyst: Emmett Zainea Date Analyzed : 01/26/2023	Cement Plaster Ceiling	Gray Non-Fibrous Homogenous		PLM 100% Other	PLM None Detected
1448163 32-01 FS5-E. Storage Analyst: Emmett Zainea Date Analyzed : 01/26/2023	Plaster Ceiling	Gray Non-Fibrous Homogenous		PLM 100% Other	PLM None Detected
1448164 32-02 FS8-Paper Storage Analyst: Emmett Zainea Date Analyzed : 01/26/2023	Plaster Ceiling	Gray Non-Fibrous Homogenous		PLM 100% Other	PLM None Detected
1448165 33-01 FS16 Analyst: Emmett Zainea Date Analyzed : 01/26/2023	2x4 ACT	Gray Fibrous Homogenous	PLM 50% Cellulose	PLM 50% Other	PLM None Detected
1448166 33-02 FS20 Analyst: Emmett Zainea Date Analyzed : 01/26/2023	2x4 ACT	Gray Fibrous Homogenous	PLM 50% Cellulose	PLM 50% Other	PLM None Detected

NVLAP LAB CODE 201028-0

Environmental Testing Laboratories, Inc.
37575 W Huron River Drive
Romulus, Michigan 48174
(734) 955-6600, Fax: (734) 955-6604

Certificate of Analysis

Polarized Light Microscopy Asbestos Analysis Report

To : Villa Environmental Consultants, Inc.
215 Colfax Ave.
Benton Harbor,Michigan 49022

Location : Jefferson Elem.
515 Bryant Ave, Manistee, MI

ETL Job : 254380
Client Project : 22-244
Date Collected : 01/22/2023
Date Received : 01/24/2023

Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Asbestos
1448167 34-01 FS29 Analyst: Emmett Zainea Date Analyzed : 01/26/2023	2x4 ACT	Gray Fibrous Homogenous	PLM 50% Cellulose	PLM 50% Other	PLM None Detected
1448168 34-02 FS31 Analyst: Emmett Zainea Date Analyzed : 01/26/2023	2x4 ACT	Gray Fibrous Homogenous	PLM 50% Cellulose	PLM 50% Other	PLM None Detected
1448169 01-01 A Bldg E Portable Layer-1 Analyst: Emmett Zainea Date Analyzed : 01/26/2023	12x12 Floor Tile	Brown Non-Fibrous Homogenous	PLM 2% Cellulose	PLM 98% Other	PLM None Detected
1448169 01-01 A Bldg E Portable Layer-2 Analyst: Emmett Zainea Date Analyzed : 01/26/2023	Mastic	Brown Non-Fibrous Homogenous		PLM 100% Other	PLM None Detected
1448170 02-01 A Bldg E Portable Analyst: Emmett Zainea Date Analyzed : 01/26/2023	2'x4' ACT	Brown Fibrous Homogenous	PLM 50% Cellulose PLM 2% Fiberglass	PLM 48% Other	PLM None Detected

Lab Supervisor/Other Signatory

Analyst:

Emmett Zainea

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Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Asbestos

400 Point Count Results by EPA 600/R-93/116 PLM (denoted by "PC")
Item 198.1: PLM Methods for Identifying and Quantitating Asbestos in Bulk Samples
Item 198.6: PLM Methods for Identifying and Quantitating Asbestos in Non-Friable Organically Bound Bulk Samples
EPA 600/R-93/116: Method for Determination of Asbestos in Bulk Building Materials
EPA 600/M4-82-020: Interim Method for Determination of Asbestos in Bulk Insulation Samples
A % Asbestos result of "Trace" indicates that the analyzed material was found to contain less than 1% asbestos and would not be considered an Asbestos Containing Material (ACM).

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To: Villa Environmental Consultants, Inc.
215 Colfax Ave.
Benton Harbor, Michigan 49022

ETL Job: 254565
Client Project: 22-244
Report Date: 2/1/2023

Attention: Rick Villa
Project Location: 515 Bryant St., Manistee, MI

Lab Sample Number	Client Sample Number	Sample Type	Completed
1451404	35-01	Asbestos	02/01/2023
1451405	36-01	Asbestos	02/01/2023
1451406	38-01	Asbestos	02/01/2023

Reviewed by: Emily Nowacki

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Certificate of Analysis

Polarized Light Microscopy Asbestos Analysis Report

To : Villa Environmental Consultants, Inc.
215 Colfax Ave.
Benton Harbor,Michigan 49022

Location :
515 Bryant St., Manistee, MI

ETL Job : 254565
Client Project : 22-244
Date Collected : 01/16/2023
Date Received : 01/31/2023

Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Asbestos
1451404 35-01 FS31 Layer-1 Analyst: Alex Noble Date Analyzed : 02/01/2023	9"x9" Floor Tile	Beige Non-Fibrous Homogenous	PLM 3% Cellulose	PLM 97% Other	PLM None Detected
1451404 35-01 FS31 Layer-2 Analyst: Alex Noble Date Analyzed : 02/01/2023	Mastic	Tan Non-Fibrous Homogenous	PLM 3% Cellulose	PLM 97% Other	PLM None Detected
1451405 36-01 FS29 Analyst: Alex Noble Date Analyzed : 02/01/2023	Sink Undercoating	Black Non-Fibrous Homogenous	PLM 2% Cellulose	PLM 98% Other	PLM Trace Chrysotile
1451406 38-01 FS32 Layer-1 Analyst: Alex Noble Date Analyzed : 02/01/2023	4" Cove Base	Beige Non-Fibrous Homogenous	PLM 2% Cellulose	PLM 98% Other	PLM None Detected
1451406 38-01 FS32 Layer-2 Analyst: Alex Noble Date Analyzed : 02/01/2023	Adhesive	Brown Non-Fibrous Homogenous	PLM 3% Cellulose	PLM 97% Other	PLM None Detected
1451406 38-01 FS32 Layer-3 Analyst: Alex Noble Date Analyzed : 02/01/2023	Brittle Material	White Non-Fibrous Homogenous	PLM 2% Cellulose	PLM 98% Other	PLM Trace Chrysotile

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Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Asbestos

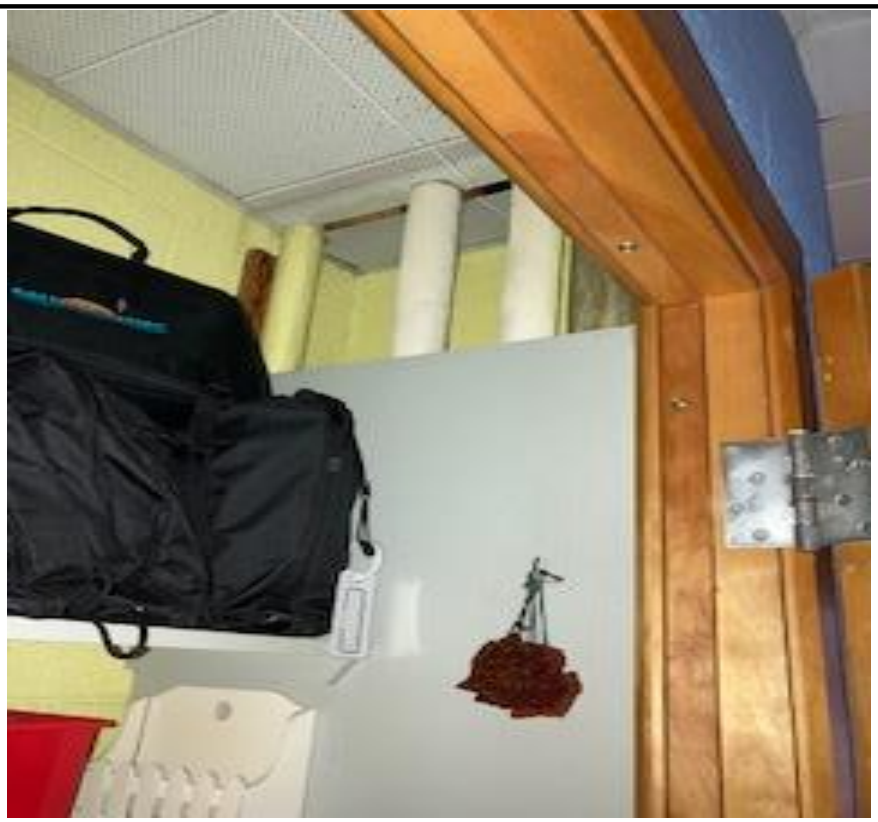
Lab Supervisor/Other Signatory

Analyst:

Alex Noble

400 Point Count Results by EPA 600/R-93/116 PLM (denoted by "PC")
Item 198.1: PLM Methods for Identifying and Quantitating Asbestos in Bulk Samples
Item 198.6: PLM Methods for Identifying and Quantitating Asbestos in Non-Friable Organically Bound Bulk Samples
EPA 600/R-93/116: Method for Determination of Asbestos in Bulk Building Materials
EPA 600/M4-82-020: Interim Method for Determination of Asbestos in Bulk Insulation Samples
A % Asbestos result of "Trace" indicates that the analyzed material was found to contain less than 1% asbestos and would not be considered an Asbestos Containing Material (ACM).

Appendix B
Photographic Record of ACM



HA#3 Mag insulation riser in office closet

HA#12- Typical 9”x9” floor tile

Villa Environmental Consultants, Inc.

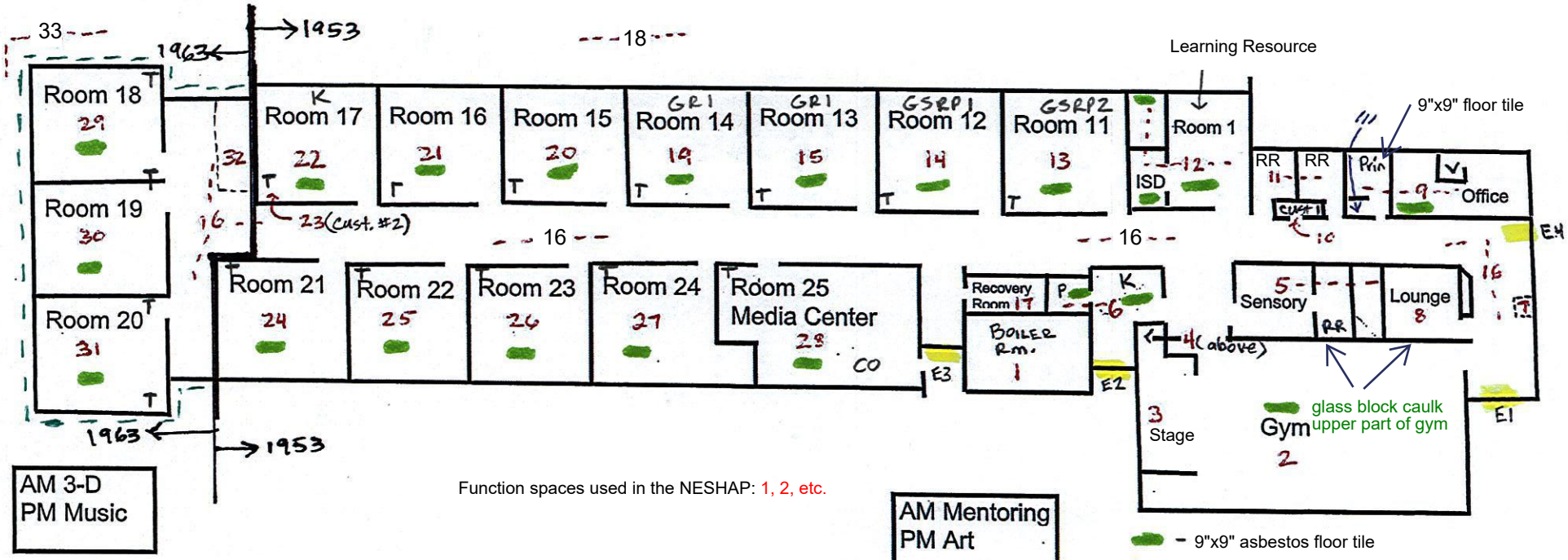
Jefferson Elementary School ACM Sampling

Project:	515 Bryant Ave. Manistee, MI	Date: 3 February 2023	Scale: NA
		Project No: 22-244	Figure No: 1

Figure 1
Functional Space Diagram

Jefferson Elementary

15 Bryant, Manistee



Function spaces used in the NESHAP: 1, 2, etc.

- 9"x9" asbestos floor tile
- asbestos door caulk
- Mag (asbestos) pipe insulation riser that may also be in wall cavities and in isolated areas
- Transite soffit

Assumed asbestos vermiculite insulation in exterior wall cavities.

Not all ACM noted on this sketch, refer to the most current NESHAP tables.

April 17,2026