January 25th, 2019
Project Number: MA-158-18

Mr. Marc Bennett
Grand Rapids Public Schools
900 Union, NE
Grand Rapids, MI 49503

Re: AHERA 3 Year Reinspection Report
Grand Rapids Public Schools – **Central Innovations**

MicroAir Consulting, LLC
119 West Cass Street
P.O. Box 908
Grand Rapids, MI 48838
Phone: 616-302-0819
Web: microairconsulting.com
Email: microairconsulting@gmail.com

Dear Mr. Bennett:

MicroAir Consulting, LLC (MicroAir) was retained by Grand Rapids Public Schools (GRPS), to conduct an AHERA 3-year reinspection of Central Innovations located at 421 Fountain NE in Grand Rapids, Michigan. The inspection was conducted according to the protocol described in the U.S. Environmental Protection Agency Asbestos Hazard Emergency Response Act of 1986 (40 CFR 763).

CERTIFICATION

The building inspection was conducted on January 2nd, 2019 by Mr. Grant Edgerly, a State of Michigan accredited Asbestos Building Inspector. Mr. Edgerly's, Accreditation Number is A41792.

REGULATORY BACKGROUND

As a public and commercial building, Central is governed by 29 CFR 1910.1001, Occupational Health Standards for Asbestos in Construction/General Industry and the EPA's NESHAP for the normal course of business activities by GRPS employees and occupants.

There are three state agencies in Michigan that regulate asbestos in Michigan: the Michigan Department of Environmental Quality (DEQ), the Michigan Department of Licensing and Regulatory Affairs (DLARA) and the Michigan Department of State Police (MSP). The DEQ is concerned about the release of asbestos fibers to the outer air and proper waste disposal, while DLARA focuses on worker protection during renovation and demolition activities, contractor licensing, and worker training.

During construction or renovation activities, the persons performing those activities would be governed by 29 CFR 1926.1101, Occupational Health Standards for Asbestos in Construction. The Asbestos Hazard Emergency Response Act (AHERA), 40 CFR 763, (partial) and/or its associated requirements. However, there are some portions of AHERA that are used as guidelines for compliance with 29 CFR 1910.1001. In particular, 29 CFR 1910.1001(j)(1) requires owners of buildings constructed prior to 1980 to presume that certain types of building materials are asbestos-containing materials (ACM), unless the owner demonstrates that those materials are not ACM.

40 CFR Part 61, Subpart M (NESHAP) requires that a thorough inspection be conducted prior to all renovations and all demolitions. A thorough inspection for asbestos is required no matter the age of the facility because all uses of asbestos are not banned. The inspection must be completed before the commencement of a subject renovation and/or demolition activity.

BUILDING DESCRIPTION

The Central Innovations building was constructed in 1910 with additions in 1927, 1931 and 1982. Some building renovations have occurred throughout over the years.

PREVIOUS INSPECTION

The most recent inspection was conducted by GRPS in 2018. MicroAir reviewed this report and incorporated the findings of the previous inspection and historical information into the current reinspection data.

In the previous inspection report suspect ACM materials were given a unique identification number (homogeneous material number), MicroAir has changed numbering from previous reports. The reinspection did

include the collection of bulk samples. Results of the sampling can be found in Appendix A along with locations of remaining ACM in the building.

REINSPECTION PROCEDURES

With the assistance of GRPS maintenance staff, MicroAir re-inspected known and previously identified areas of the building including above suspended ceilings, pipe chases, and inside the tunnels.

It was beyond the scope of this reinspection to locate, identify, or quantify ACM in areas that were concealed and/or inaccessible areas, such as within walls, hard ceilings, or equipment.

2019 REINSPECTION FINDINGS

The following suspect asbestos-containing materials were observed at Central Innovations during the asbestos inspection and the bulk sampling. Materials in **bold** were found to be greater than 1% ACM.

- Drywall, tape and mud
- Plaster
- White sink undercoating
- 12”x12” White w/multi-color vinyl floor tile w/mastic
- **1910 - 1’x1’ Ceiling tile small holes and glue pods**
- 1’x1’ Ceiling tile large holes and glue pods
- 2’x2’ Ceiling tile
- **12”x12” White w/green marks vinyl floor tile w/mastic**
- Brown cove base
- Black counter tops
- **12”x12” White vinyl floor tile w/mastic**
- Wood floor
- Chalkboards
- Fire doors
- **Transite fume hood**
- Roofing
- Concrete
- Grouts
- Mortars
- Caulks and sealants
- **Pipe insulation**
- Wire insulation
- **White lab top**
- Troweled on plaster

Some of the materials listed above are assumed to contain asbestos until bulk samples can be collected and analyzed.

Appendix A of this report is a table that identifies the confirmed and suspect ACM homogeneous materials in Central, their corresponding identification number and locations, and the general condition of ACMs identified during the reinspection.

CONCLUSIONS AND RECOMMENDATIONS

MicroAir was retained by Grand Rapids Public Schools to conduct a 3-year asbestos-containing material (ACM) reinspection of Central Innovations located at 421 Fountain NE in Grand Rapids, Michigan. MicroAir completed the reinspection on January 2nd, 2019. The inspection was conducted by a State of Michigan accredited Asbestos Building Inspector.

During the reinspection, MicroAir identified and assessed 24 homogeneous materials remaining in Central Innovations.

Any personnel entering a tunnel or chase area must be notified of ACM locations and explained the requirement to wear personal protective equipment.

If GRPS plans to conduct any renovation or demolition, the identified ACMs should be removed by a licensed asbestos abatement contractor, as required by current federal, state, and local laws and regulations, should perform any necessary removal and disposal of the identified ACM. MicroAir notes that if suspect ACM other than those identified during this reinspection are encountered during any renovation or demolition, such materials should be sampled and analyzed using PLM to verify presence of asbestos.

We also recommend that visual observations, verification of removal and cleanup, and air monitoring or clearance air monitoring for asbestos fibers be performed by a third party retained by GRPS to demonstrate compliance with applicable regulations, and to confirm the suitability or the area for re-entry. MicroAir can perform these services.

Warning labels should be affixed in all non-public areas where ACM or assumed ACM is present. After completion of repairs or removal of the ACM, fill out an O&M Activities Form and file it in the management plan.

As required by AHERA, GRPS should continue to send the annual notifications including information on planned response actions and reinspections. Copies of the notifications should be kept in the Management Plan.

LIMITATIONS

The conclusions drawn from the observations and sample results are only valid for the time the observations occurred. In the process of gathering the field data included in this report, procedures were followed that represent reasonable and acceptable industrial hygiene practices and procedures in a manner consistent with the level of care and skill ordinarily exercised by other members of this profession currently practicing under similar conditions. However, the information and opinions provided in this report are not to be construed as a warranty of the conditions of this site in any way, implied or explicit. MicroAir accepts no responsibility for the use, interpretation, or reliance by other parties on the information contained herein, nor does this report represent an instrument of regulatory compliance or an asbestos abatement specification.

In conducting the reinspection there are a number of obstacles and limitations that can affect the final outcome of the report. These limitations include but are not limited to the following factors: access concerns, materials that cannot be intrusively sampled or damaged, materials that have been replaced by renovation activities, materials with conflicting laboratory results, and materials that are located in inaccessible and/or concealed areas which limits its quantification. Due to these limitations, the results of this investigation cannot be construed as a certification of the presence or absence of ACM, beyond the materials identified, but rather a diligent and prudent review of available data within an established work scope, and time and budgetary constraints.

If you have any questions or require additional information, please contact me at 616-302-0819 or microairconsulting@gmail.com. Thank you.

Sincerely,

MicroAir Consulting, LLC

Christian T. Decker

Christian T. Decker
Accredited Building Inspector and Management Planner

APPENDIX A

TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS

APPENDIX A- 3 YEAR REINSPECTION
TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS
CENTRAL INNOVATIONS
INSPECTION DATE: JANUARY 2nd, 2019

HSA NO.	HSA MATERIAL DESCRIPTION	ASBESTOS?	MATERIAL TYPE	F/NF	FUNCTIONAL AREA	CONDITION
CHS-1	Drywall, tape and mud	No	SM	--	132(500 SF)	--
CHS-2	All Plasters (1910 and 1930)	No	SM	--	1910's and 1930's plaster	--
CHS-3	White sink undercoating	No	MM	--	24(6 SF), 318(6 SF)	--
CHS-4	12"x12" White w/multi-color vinyl floor tile w/mastic	Tile-No Mastic-No	MM	--	24(2700 SF)	--
CHS-5	1910 - 1'x1' Ceiling tile small holes and glue pods	Tile-**Yes** Pod-No	MM	NF-II	Rooms 10, 17, 19, 29,138, 311, 312. Corridors 66, 67, 68, 70, 153, 161, 158, 157, 230, 231, 232, 234, 336, 337, 338 (35,000 SF total)	Good
CHS-6	1'x1' Ceiling tile large holes and glue pods	Tile-No Pod-No	MM	--	17(2500 SF),	--
CHS-7	2'x2' Ceiling tile	No	MM	--	17(2500 SF)	--
CHS-8	12"x12" White w/green marks vinyl floor tile w/mastic	Tile-**Yes** Mastic-No	MM	NF-I	132(1250 SF)	Good
CHS-9	Brown cove base	No	MM	--	132(150 LF)	--
CHS-10	Black counter tops	**Yes**	MM	NF-II	Science area	Good
CHS-11	12"x12" White vinyl floor tile w/mastic	Tile-**Yes** Mastic-**Yes**	MM	NF-I	400(1600 SF)	Good
CHS-12	Wood floor	No	MM	-	210, 211, 217, 219	--
CHS-13	Chalkboards	No	MM	--	Classrooms	--

FRIABILITY:
F: Friable
NF-I: Non-friable Category I
NF-II: Non-friable Category II

MATERIAL TYPE:
TSI: Thermal System Insulation
SM: Surfacing Material
MM: Miscellaneous Material

CONDITION:
Good: Little or no damage
Damaged: Less than 10% damage of total surface area, or less than 25% damage in a localized area
Significantly Damaged: Greater than 10% damage of total surface area, or greater than 25% damage in a localized area

SF: Square feet LF: Linear feet FT: Fittings NQ: Not Quantified

APPENDIX A- 3 YEAR REINSPECTION
TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS
CENTRAL INNOVATIONS
INSPECTION DATE: JANUARY 2nd, 2019

HSA NO.	HSA MATERIAL DESCRIPTION	ASBESTOS?	MATERIAL TYPE	F/NF	FUNCTIONAL AREA	CONDITION
CHS-14	Fire doors	Assumed	MM	MM	All tagged doors and frames	Good
CHS-15	Transite fume hood	**Yes**	MM	NF-II	Rom 132(70 SF)	Good
CHS-16	Roofing	Assumed	MM	NF-I	Exterior roof (roof caulk 15%)	Good
CHS-17	Concrete	Assumed	MM	NF-II	All concrete	Good
CHS-18	Grouts	Assumed	MM	NF-I	All ceramic tile areas	Good
CHS-19	Mortars	No	MM	NF-II	All block and brick walls	Good
CHS-20	Caulks and sealants	Assumed	MM	NF-II	All original caulks and sealants	Good
CHS-21	Pipe insulation	**Yes**	TSI	F	Rooms 221, 136, 128C, 5S, 9, 41, 42, 21, east of 21, Gym 101, Gym 001 and hidden in walls	Good
CHS-22	Wire insulation	Assumed	MM	NF-II	Original wirings	Good
CHS-23	White lab top	**Yes**	MM	NF-II	Room 225 (30 SF)	Good
CHS-24	Troweled on plaster	No	SM	--	Elevator shaft	--

FRIABILITY:
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MATERIAL TYPE:
TSI: Thermal System Insulation
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SF: Square feet LF: Linear feet FT: Fittings NQ: Not Quantified

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January 25th, 2019
Project Number: MA-158-18

Mr. Marc Bennett
Grand Rapids Public Schools
900 Union, NE
Grand Rapids, MI 49503

Re: AHERA 3 Year Reinspection Report
Grand Rapids Public Schools – **Ridgemoor Park Montessori**

119 West Cass Street
P.O. Box 908
Grand Rapids, MI 48838
Phone: 616-302-0819
Web: microairconsulting.com
Email: microairconsulting@gmail.com

Dear Mr. Bennett:

MicroAir Consulting, LLC (MicroAir) was retained by Grand Rapids Public Schools (GRPS), to conduct an AHERA 3-year reinspection of Ridgemoor Park Montessori (RPM) located at 2555 Inverness SE in Grand Rapids, Michigan. The inspection was conducted according to the protocol described in the U.S. Environmental Protection Agency Asbestos Hazard Emergency Response Act of 1986 (40 CFR 763).

CERTIFICATION

The building inspection was conducted on January 3rd, 2019 by Mr. Grant Edgerly, a State of Michigan accredited Asbestos Building Inspector. Mr. Edgerly's, Accreditation Number is A41792.

REGULATORY BACKGROUND

As a public and commercial building, Ridgemoor is governed by 29 CFR 1910.1001, Occupational Health Standards for Asbestos in Construction/General Industry and the EPA's NESHAP for the normal course of business activities by GRPS employees and occupants.

There are three state agencies in Michigan that regulate asbestos in Michigan: the Michigan Department of Environmental Quality (DEQ), the Michigan Department of Licensing and Regulatory Affairs (DLARA) and the Michigan Department of State Police (MSP). The DEQ is concerned about the release of asbestos fibers to the outer air and proper waste disposal, while DLARA focuses on worker protection during renovation and demolition activities, contractor licensing, and worker training.

During construction or renovation activities, the persons performing those activities would be governed by 29 CFR 1926.1101, Occupational Health Standards for Asbestos in Construction. The Asbestos Hazard Emergency Response Act (AHERA), 40 CFR 763, (partial) and/or its associated requirements. However, there are some portions of AHERA that are used as guidelines for compliance with 29 CFR 1910.1001. In particular, 29 CFR 1910.1001(j)(1) requires owners of buildings constructed prior to 1980 to presume that certain types of building materials are asbestos-containing materials (ACM), unless the owner demonstrates that those materials are not ACM.

40 CFR Part 61, Subpart M (NESHAP) requires that a thorough inspection be conducted prior to all renovations and all demolitions. A thorough inspection for asbestos is required no matter the age of the facility because all uses of asbestos are not banned. The inspection must be completed before the commencement of a subject renovation and/or demolition activity.

BUILDING DESCRIPTION

The Ridgemoor Park Montessori building was constructed in 1972. The old part of the school was demolished in the summer of 2018 after all ACM was removed from the building. **In 2017, Ridgemoor underwent a large asbestos abatement. All asbestos was removed from Ridgemoor with the exception of the**

PREVIOUS INSPECTION

The most recent inspection was conducted by GRPS in 2018. MicroAir reviewed this report and incorporated the findings of the previous inspection and historical information into the current reinspection data.

In the previous inspection report suspect ACM materials were given a unique identification number (homogeneous material number), MicroAir has changed numbering from previous reports. The reinspection did include the collection of bulk samples. Results of the sampling can be found in Appendix A along with locations of remaining ACM in the building.

REINSPECTION PROCEDURES

With the assistance of GRPS maintenance staff, MicroAir re-inspected known and previously identified areas of the building including above suspended ceilings, pipe chases, and inside the tunnels.

It was beyond the scope of this reinspection to locate, identify, or quantify ACM in areas that were concealed and/or inaccessible areas, such as within walls, hard ceilings, or equipment.

2019 REINSPECTION FINDINGS

The following suspect asbestos-containing materials were observed at Ridgemoor Park Montessori during the asbestos inspection and the bulk sampling. Materials in **bold** were found to be greater than 1% ACM.

- Roof drain insulation
- Mudded fittings on cold water lines
- Mudded fittings on hot water lines
- Lag cloth
- **Purple/White sink undercoating**
- Cove base w/mastic
- 1'x2' white ceiling tile
- **12"x12" green floor tile w/mastic**
- 12"x12" cream floor tile w/mastic
- Exterior overhang texture
- Vibration dampeners on ductwork
- Drywall
- Concrete
- Grouts
- Mortars
- Caulks and sealants
- Asphalt roofing under rubber
- **Asphalt roofing under stones**
- **Fire doors**

Some of the materials listed above are assumed to contain asbestos until bulk samples can be collected and analyzed.

Appendix A of this report is a table that identifies the confirmed and suspect ACM homogeneous materials in Ridgemoor, their corresponding identification number and locations, and the general condition of ACMs identified during the reinspection.

CONCLUSIONS AND RECOMMENDATIONS

MicroAir was retained by Grand Rapids Public Schools to conduct a 3-year asbestos-containing material (ACM) reinspection of Ridgemoor Park Montessori located at 2555 Inverness SE in Grand Rapids, Michigan. MicroAir completed the reinspection on January 3rd, 2019. The inspection was conducted by a State of Michigan accredited Asbestos Building Inspector.

During the reinspection, MicroAir identified and assessed 19 homogeneous materials remaining in Ridgemoor Park Montessori.

Any personnel entering a tunnel or chase area must be notified of ACM locations and explained the requirement to wear personal protective equipment.

If GRPS plans to conduct any renovation or demolition, the identified ACMs should be removed by a licensed asbestos abatement contractor, as required by current federal, state, and local laws and regulations, should perform any necessary removal and disposal of the identified ACM. MicroAir notes that if suspect ACM other

than those identified during this reinspection are encountered during any renovation or demolition, such materials should be sampled and analyzed using PLM to verify presence of asbestos.

We also recommend that visual observations, verification of removal and cleanup, and air monitoring or clearance air monitoring for asbestos fibers be performed by a third party retained by GRPS to demonstrate compliance with applicable regulations, and to confirm the suitability or the area for re-entry. MicroAir can perform these services.

Warning labels should be affixed in all non-public areas where ACM or assumed ACM is present. After completion of repairs or removal of the ACM, fill out an O&M Activities Form and file it in the management plan.

As required by AHERA, GRPS should continue to send the annual notifications including information on planned response actions and reinspections. Copies of the notifications should be kept in the Management Plan.

LIMITATIONS

The conclusions drawn from the observations and sample results are only valid for the time the observations occurred. In the process of gathering the field data included in this report, procedures were followed that represent reasonable and acceptable industrial hygiene practices and procedures in a manner consistent with the level of care and skill ordinarily exercised by other members of this profession currently practicing under similar conditions. However, the information and opinions provided in this report are not to be construed as a warranty of the conditions of this site in any way, implied or explicit. MicroAir accepts no responsibility for the use, interpretation, or reliance by other parties on the information contained herein, nor does this report represent an instrument of regulatory compliance or an asbestos abatement specification.

In conducting the reinspection there are a number of obstacles and limitations that can affect the final outcome of the report. These limitations include but are not limited to the following factors: access concerns, materials that can not be intrusively sampled or damaged, materials that have been replaced by renovation activities, materials with conflicting laboratory results, and materials that are located in inaccessible and/or concealed areas which limits its quantification. Due to these limitations, the results of this investigation cannot be construed as a certification of the presence or absence of ACM, beyond the materials identified, but rather a diligent and prudent review of available data within an established work scope, and time and budgetary constraints.

If you have any questions or require additional information, please contact me at 616-302-0819 or microairconsulting@gmail.com. Thank you.

Sincerely,

MicroAir Consulting, LLC

Christian T. Decker

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Accredited Building Inspector and Management Planner

APPENDIX A

TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS

APPENDIX A- 3 YEAR REINSPECTION
TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS
RIDGEMOOR PARK MONTESSORI
INSPECTION DATE: JANUARY 3RD, 2019

HSA NO.	HSA MATERIAL DESCRIPTION	ASBESTOS?	MATERIAL TYPE	F/NF	FUNCTIONAL AREA	CONDITION
RD-1	Roof drain insulation	No	TSI	--	Pool Area	--
MFC-2	Mudded fittings on cold water lines	No	TSI	--	Boiler room and air handler rooms	--
MFH-3	Mudded fittings on hot water lines	No	TSI	--	Boiler room and air handler rooms	--
LC-4	Lag cloth	No	TSI	--	Boiler room and air handler rooms	--
SC-5	Purple/White sink undercoating	**Yes**	MM	NF-II	**REMOVED IN 2017**	Good
CB-6	Cove base w/mastic	No	MM	--	Interior walls	--
CT-7	1'x2' white ceiling tile	No	MM	--	Center area	--
FT-8	12"x12" green floor tile w/mastic	Tile- **Yes** Mastic- No	MM	NF-I	**REMOVED IN 2017**	Good
FT-9	12"x12" cream floor tile w/mastic	Tile- No Mastic- No	MM	--	All cream floor tile	--
EO-10	Exterior overhang texture	No	MM	--	Outside overhangs	--
VD-11	Vibration dampeners on ductwork	No	MM	--	Boiler room and air handler rooms	--
DW-12	Drywall	No	SM	--	Interior walls	Good
CO-13	Concrete	Assumed	MM	NF-II	All concrete	Good
G-14	Grouts	Assumed	MM	NF-I	All ceramic tile areas	Good
M-15	Mortars	Assumed	MM	NF-II	All block and brick walls	Good
CS-16	Caulks and sealants	Assumed	MM	NF-II	All original caulks and sealants	Good

FRIABILITY:
F: Friable
NF-I: Non-friable Category I
NF-II: Non-friable Category II

MATERIAL TYPE:
TSI: Thermal System Insulation
SM: Surfacing Material
MM: Miscellaneous Material

CONDITION:
Good: Little or no damage
Damaged: Less than 10% damage of total surface area, or less than 25% damage in a localized area
Significantly Damaged: Greater than 10% damage of total surface area, or greater than 25% damage in a localized area

SF: Square feet LF: Linear feet FT: Fittings NQ: Not Quantified

APPENDIX A- 3 YEAR REINSPECTION
TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS
RIDGEMOOR PARK MONTESSORI
INSPECTION DATE: JANUARY 3RD, 2019

HSA NO.	HSA MATERIAL DESCRIPTION	ASBESTOS?	MATERIAL TYPE	F/NF	FUNCTIONAL AREA	CONDITION
RF-1	Asphalt roofing under rubber	No	MM	--	Center area and towards perimeter of building	--
RF-2	Asphalt roofing under stones	**Yes**	MM	NF-I	4 asphalt roofs around the building (525 SF)	Good
FD-1	Fire doors	**--**	--	--	**REMOVED IN 2017**	--

FRIABILITY:
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NF-I: Non-friable Category I
NF-II: Non-friable Category II

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TESTED SUSPECT LEAD-CONTAINING PAINTS - 2017
RIDGEMOOR PARK MONTESSORI

SAMPLE NO.	SAMPLE LOCATION	COMPONENT	COLOR	REPORTING LIMIT	LEAD CONCENTRATION
RM-1	Custodial area	Floor	Brown	0.017%	<RL%
RM-2	Boiler room	Louver	Gray	0.0051%	**2.5%**
RM-3	Interior walls	Wall	Blue	0.0025%	0.16%
RM-4	Interior walls	Wall	White	0.0025%	0.14%

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March 11th, 2020
Project Number: MA-117-19

Mr. Marc Bennett
Grand Rapids Public Schools
900 Union, NE
Grand Rapids, MI 49503

MicroAir Consulting, LLC
119 West Cass Street
P.O. Box 908
Grand Rapids, MI 48838
Phone: 616-302-0819
Web: microairconsulting.com
Email: microairconsulting@gmail.com

Re: AHERA 3 Year Reinspection Report
Grand Rapids Public Schools – Harrison Park Elementary School

Dear Mr. Bennett:

MicroAir Consulting, LLC (MicroAir) was retained by Grand Rapids Public Schools (GRPS), to conduct an AHERA 3-year reinspection of Harrison Park Elementary School located at 1440 Davis Avenue NW in Grand Rapids, Michigan. The inspection was conducted according to the protocol described in the U.S. Environmental Protection Agency Asbestos Hazard Emergency Response Act of 1986 (40 CFR 763).

CERTIFICATION

The building inspection was conducted on February 21st, 2020 by Mr. Grant Edgerly, a State of Michigan accredited Asbestos Building Inspector. Mr. Edgerly's, Accreditation Number is A41792.

REGULATORY BACKGROUND

As a public and commercial building, Harrison Park is governed by 29 CFR 1910.1001, Occupational Health Standards for Asbestos in Construction/General Industry and the EPA's NESHAP for the normal course of business activities by GRPS employees and occupants.

There are three state agencies in Michigan that regulate asbestos in Michigan: the Michigan Department of Environmental Quality (DEQ), the Michigan Department of Licensing and Regulatory Affairs (DLARA) and the Michigan Department of State Police (MSP). The DEQ is concerned about the release of asbestos fibers to the outer air and proper waste disposal, while DLARA focuses on worker protection during renovation and demolition activities, contractor licensing, and worker training.

During construction or renovation activities, the persons performing those activities would be governed by 29 CFR 1926.1101, Occupational Health Standards for Asbestos in Construction. The Asbestos Hazard Emergency Response Act (AHERA), 40 CFR 763, (partial) and/or its associated requirements. However, there are some portions of AHERA that are used as guidelines for compliance with 29 CFR 1910.1001. In particular, 29 CFR 1910.1001(j)(1) requires owners of buildings constructed prior to 1980 to presume that certain types of building materials are asbestos-containing materials (ACM), unless the owner demonstrates that those materials are not ACM.

40 CFR Part 61, Subpart M (NESHAP) requires that a thorough inspection be conducted prior to all renovations and all demolitions. A thorough inspection for asbestos is required no matter the age of the facility because all uses of asbestos are not banned. The inspection must be completed before the commencement of a subject renovation and/or demolition activity.

BUILDING DESCRIPTION

The Harrison Park Elementary School building was built in 1925 and fully renovated in 2006.

PREVIOUS INSPECTION

No previous inspection data.

REINSPECTION PROCEDURES

With the assistance of GRPS maintenance staff, MicroAir re-inspected known and previously identified areas of the building including above suspended ceilings and pipe chases.

It was beyond the scope of this reinspection to locate, identify, or quantify ACM in areas that were concealed and/or inaccessible areas, such as within walls, hard ceilings, or equipment.

2020 REINSPECTION FINDINGS

The following suspect asbestos-containing materials were observed at Harrison Park Elementary School during the asbestos inspection and the bulk sampling.

- 2'x2' ceiling tile
- Drywall, tape and mud
- Concrete
- Brick mortar
- Block mortar
- Exterior caulk

Some of the materials listed above are assumed to contain asbestos until bulk samples can be collected and analyzed.

Appendix A of this report is a table that identifies the confirmed and suspect ACM homogeneous materials in Harrison Park Elementary School, their corresponding identification number and locations, and the general condition of ACMs identified during the reinspection.

CONCLUSIONS AND RECOMMENDATIONS

MicroAir was retained by Grand Rapids Public Schools to conduct a 3-year asbestos-containing material (ACM) reinspection of Harrison Park Elementary School located at 1440 Davis Avenue NW in Grand Rapids, Michigan. MicroAir completed the reinspection on February 21st, 2020. The inspection was conducted by a State of Michigan accredited Asbestos Building Inspector.

During the reinspection, MicroAir identified and assessed 6 homogeneous materials remaining in Harrison Park Elementary School.

If GRPS plans to conduct any renovation or demolition, the identified ACMs should be removed by a licensed asbestos abatement contractor, as required by current federal, state, and local laws and regulations, should perform any necessary removal and disposal of the identified ACM. MicroAir notes that if suspect ACM other than those identified during this reinspection are encountered during any renovation or demolition, such materials should be sampled and analyzed using PLM to verify presence of asbestos.

We also recommend that visual observations, verification of removal and cleanup, and air monitoring or clearance air monitoring for asbestos fibers be performed by a third party retained by GRPS to demonstrate compliance with applicable regulations, and to confirm the suitability or the area for re-entry. MicroAir can perform these services.

Warning labels should be affixed in all non-public areas where ACM or assumed ACM is present. After completion of repairs or removal of the ACM, fill out an O&M Activities Form and file it in the management plan.

As required by AHERA, GRPS should continue to send the annual notifications including information on planned response actions and reinspections. Copies of the notifications should be kept in the Management Plan.

LIMITATIONS

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In conducting the reinspection there are a number of obstacles and limitations that can affect the final outcome of the report. These limitations include but are not limited to the following factors: access concerns, materials that cannot be intrusively sampled or damaged, materials that have been replaced by renovation activities, materials with conflicting laboratory results, and materials that are located in inaccessible and/or concealed areas which limits its quantification. Due to these limitations, the results of this investigation cannot be construed as a certification of the presence or absence of ACM, beyond the materials identified, but rather a diligent and prudent review of available data within an established work scope, and time and budgetary constraints.

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APPENDIX A

TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS

APPENDIX A- 3 YEAR REINSPECTION
TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS
HARRISON PARK ELEMENTARY SCHOOL
INSPECTION DATE: FEBRUARY 21st, 2020

HSA NO.	HSA MATERIAL DESCRIPTION	ASBESTOS?	MATERIAL TYPE	F/NF	FUNCTIONAL AREA	CONDITION
HP-1	2'x2' ceiling tile	No	SM	--	Interior drop ceiling	--
HP-2	Drywall, tape and mud	No	SM	--	Interior drywall	--
HP-3	Concrete	Assumed	MM	NF-II	All concrete	Good
HP-4	Brick mortar	Assumed	MM	NF-II	All brick walls	Good
HP-5	Block mortar	Assumed	MM	NF-II	All cinderblock walls	Good
HP-6	Exterior caulk	Assumed	MM	NF-II	Around windows, doors and wall seams	Good

FRIABILITY:
F: Friable
NF-I: Non-friable Category I
NF-II: Non-friable Category II

MATERIAL TYPE:
TSI: Thermal System Insulation
SM: Surfacing Material
MM: Miscellaneous Material

CONDITION:
Good: Little or no damage
Damaged: Less than 10% damage of total surface area, or less than 25% damage in a localized area
Significantly Damaged: Greater than 10% damage of total surface area, or greater than 25% damage in a localized area

SF: Square feet LF: Linear feet FT: Fittings NQ: Not Quantified

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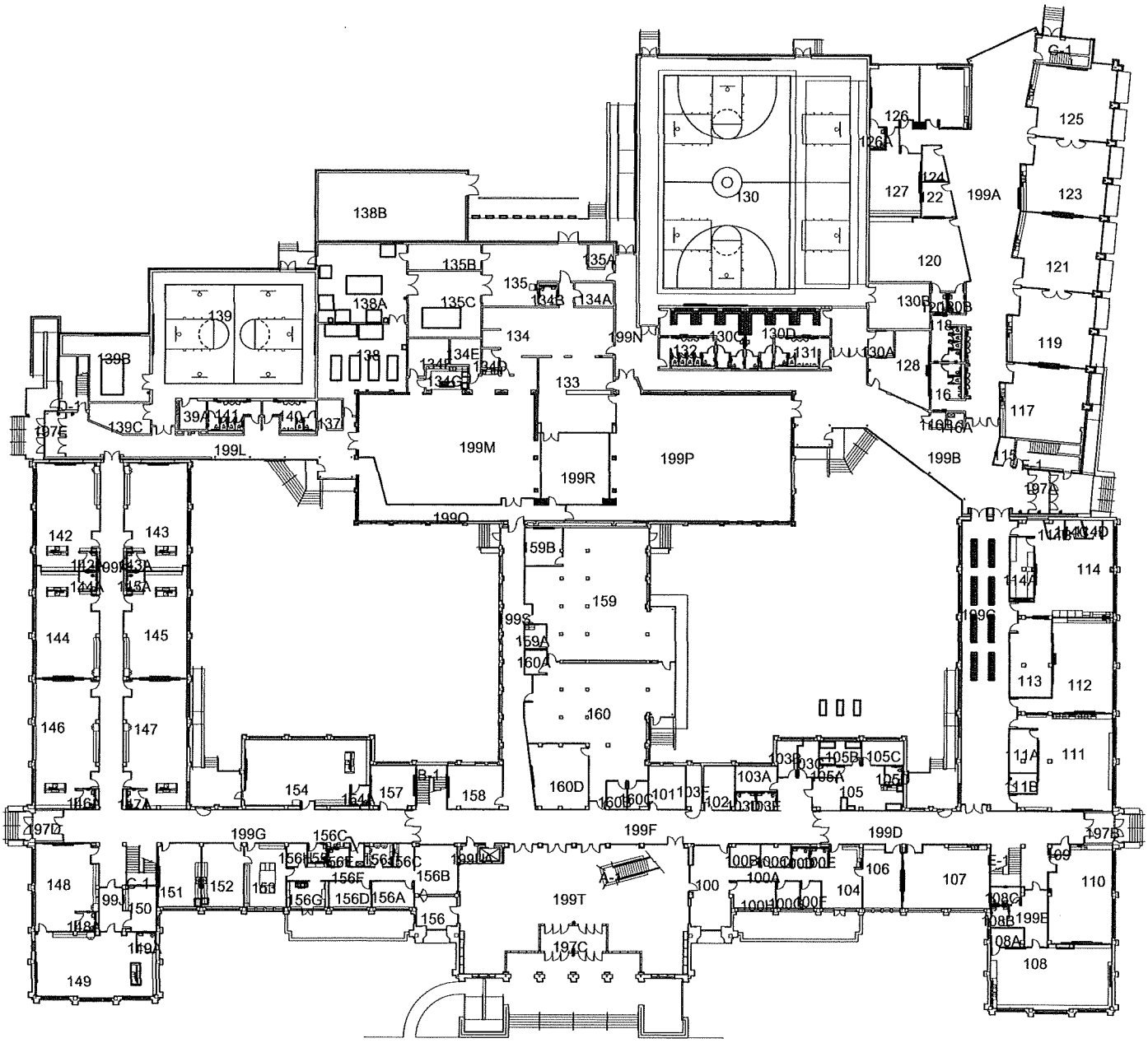
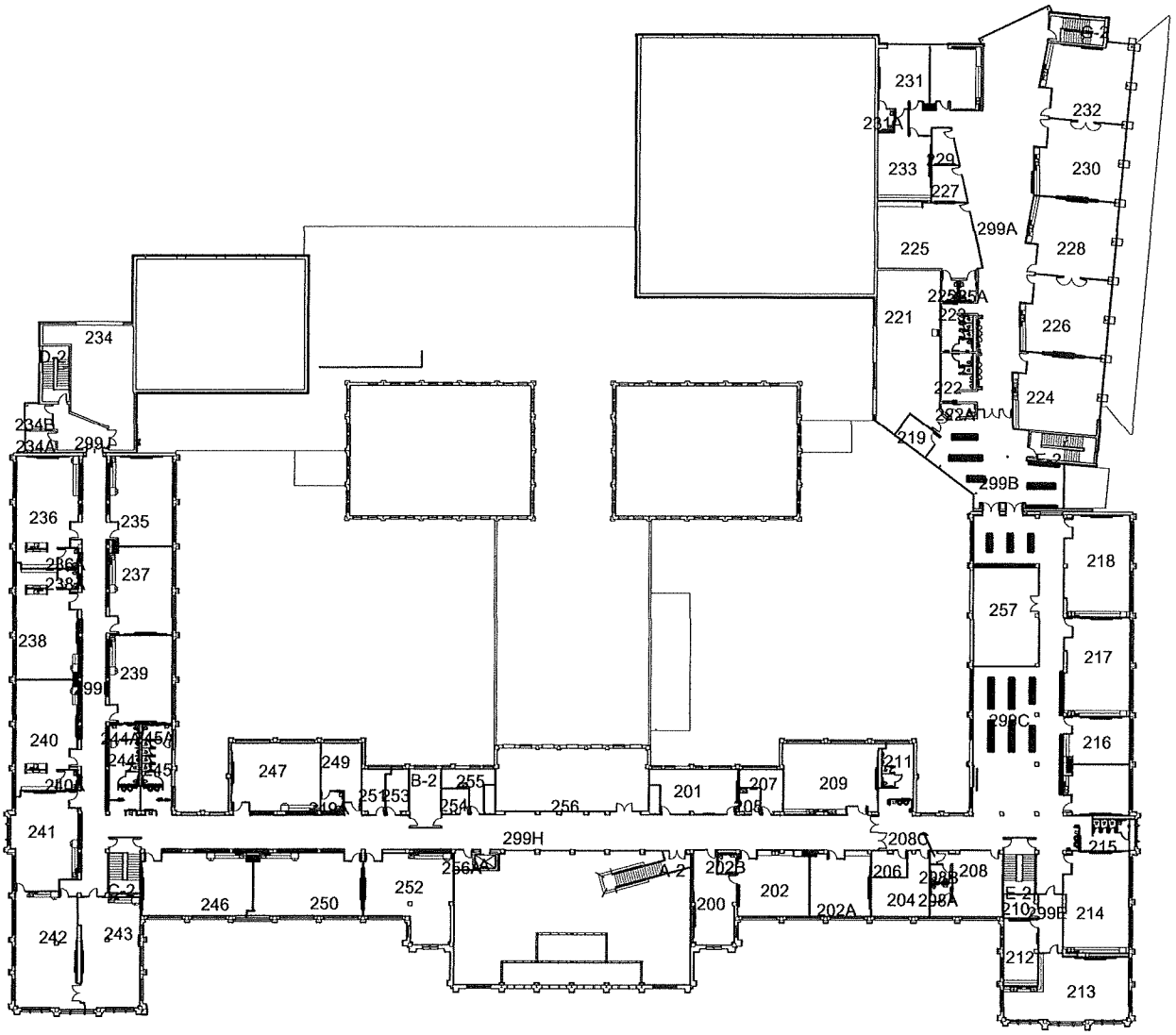


Grand Rapids Public Schools DRAWING UPDATED: 09-25-03 ORIGINAL BUILDING: 1925 ADDITION(S):	SCHOOL ADDRESS: 1440 DAVIS NW GRAND RAPIDS, MI. 49504 PH: 819.2565 FAX: 819.2567	N	Harrison Park School	FLOOR LEVEL 1st 148953 SF



Grand Rapids Public Schools DRAWING UPDATED: 6-25-02 ORIGINAL BUILDING: 1925 ADDITION(S):	SCHOOL ADDRESS: 1440 DAVIS NW GRAND RAPIDS, MI. 49504 PH: 819.2565 FAX: 819.2567	N	Harrison Park School	FLOOR LEVEL 2nd 43697 SF

Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project : GRPS- Horizon Park & Briggs

Report To:
Mr. Chris Decker
MicroAir Consulting
P.O. Box 908
Greenville, MI 48838

ARI Report # 20-89058
Date Collected: 02/21/20
Date Received: 02/28/20
Date Analyzed: 02/28/20
Date Reported: 03/02/20

Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 89058 - 01 Cust. #: HP-1 Material: 2x2 Ceiling Tile Drop In Location: Appearance: beige,fibrous,homogenous Layer: 1 of 1	Asbestos Present: **NO** No Asbestos Observed	Cellulose - 40% Mineral Wool - 5% Fiberglass - 30% Other - 25%
Lab ID #: 89058 - 02 Cust. #: HP-2-1 Material: Drywall Location: Appearance: beige,fibrous,nonhomogenous Layer: 1 of 2	Asbestos Present: **NO** No Asbestos Observed	Cellulose - 20% Fiberglass - 2% Other - 78%
Lab ID #: 89058 - 02a Cust. #: HP-2-1 Material: Joint Compound Location: Appearance: white,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: **NO** No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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

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Date Collected: 02/21/20
Date Received: 02/28/20
Date Analyzed: 02/28/20
Date Reported: 03/02/20

Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 89058 - 03 Cust. #: HP-2-2 Material: Drywall Location: Appearance: beige,fibrous,nonhomogenous Layer: 1 of 3	Asbestos Present: **NO** No Asbestos Observed	Cellulose - 20% Fiberglass - 2% Other - 78%
Lab ID #: 89058 - 03a Cust. #: HP-2-2 Material: Joint Compound Location: Appearance: white,nonfibrous,homogenous Layer: 2 of 3	Asbestos Present: **NO** No Asbestos Observed	Other - 100%
Lab ID #: 89058 - 03b Cust. #: HP-2-2 Material: Glue on Paint Location: Appearance: beige,nonfibrous,homogenous Layer: 3 of 3	Asbestos Present: **NO** No Asbestos Observed	Other - 100%

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Date Collected: 02/21/20
Date Received: 02/28/20
Date Analyzed: 02/28/20
Date Reported: 03/02/20

Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 89058 - 04 Cust. #: HP-2-3 Material: Drywall Location: Appearance: beige,fibrous,nonhomogenous Layer: 1 of 2	Asbestos Present: **NO** No Asbestos Observed	Cellulose - 20% Fiberglass - 2% Other - 78%
Lab ID #: 89058 - 04a Cust. #: HP-2-3 Material: Joint Compound Location: Appearance: white,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: **NO** No Asbestos Observed	Other - 100%
Lab ID #: 89058 - 05 Cust. #: HP-2-4 Material: Drywall Location: Appearance: beige,fibrous,nonhomogenous Layer: 1 of 2	Asbestos Present: **NO** No Asbestos Observed	Cellulose - 20% Fiberglass - 2% Other - 78%

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Date Analyzed: 02/28/20
Date Reported: 03/02/20

Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 89058 - 05a Cust. #: HP-2-4 Material: Joint Compound Location: Appearance: white,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: **NO** No Asbestos Observed	Other - 100%
Lab ID #: 89058 - 06 Cust. #: HP-2-5 Material: Drywall Location: Appearance: beige,fibrous,nonhomogenous Layer: 1 of 2	Asbestos Present: **NO** No Asbestos Observed	Cellulose - 20% Fiberglass - 2% Other - 78%
Lab ID #: 89058 - 06a Cust. #: HP-2-5 Material: Joint Compound Location: Appearance: white,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: **NO** No Asbestos Observed	Other - 100%

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Date Analyzed: 02/28/20
Date Reported: 03/02/20

Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 89058 - 07 Cust. #: HP-2-6 Material: Drywall Location: Appearance: beige,fibrous,nonhomogenous Layer: 1 of 2	Asbestos Present: **NO** No Asbestos Observed	Cellulose - 20% Fiberglass - 2% Other - 78%
Lab ID #: 89058 - 07a Cust. #: HP-2-6 Material: Joint Compound Location: Appearance: white,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: **NO** No Asbestos Observed	Other - 100%
Lab ID #: 89058 - 08 Cust. #: HP-2-7 Material: Drywall Location: Appearance: beige,fibrous,nonhomogenous Layer: 1 of 2	Asbestos Present: **NO** No Asbestos Observed	Cellulose - 20% Fiberglass - 2% Other - 78%

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Robert T. Letarte Jr., Laboratory Director

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ARI Report # 20-89058
Date Collected: 02/21/20
Date Received: 02/28/20
Date Analyzed: 02/28/20
Date Reported: 03/02/20

Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 89058 - 08a Cust. #: HP-2-7 Material: Joint Compound Location: Appearance: white,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: **NO** No Asbestos Observed	Other - 100%
Lab ID #: [illegible] Cust. #: [illegible] Material: [illegible] Location: Appearance: [illegible] Layer: [illegible]	Asbestos Present: [illegible] No Asbestos Observed	Fiberglass - [illegible] Other - [illegible]
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

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

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NVLAP Lab Code 102118-0

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

January 25th, 2019
Project Number: MA-158-18 – **Updated September 18, 2019**

Mr. Marc Bennett
Grand Rapids Public Schools
900 Union, NE
Grand Rapids, MI 49503

Re: AHERA 3 Year Reinspection Report
Grand Rapids Public Schools – **Union High School**

Micro Air Consulting, LLC
119 West Cass Street
P.O. Box 908
Greenville, MI 48838
Phone: 616-302-0819
Web: microairconsulting.com
Email: microairconsulting@gmail.com

Dear Mr. Bennett:

MicroAir Consulting, LLC (MicroAir) was retained by Grand Rapids Public Schools (GRPS), to conduct an AHERA 3-year reinspection of Union High School (UHS) located at 1800 Tremont NW in Grand Rapids, Michigan. The inspection was conducted according to the protocol described in the U.S. Environmental Protection Agency Asbestos Hazard Emergency Response Act of 1986 (40 CFR 763).

CERTIFICATION

The building inspection was conducted on December 24th, 2018 and updated with bulk sampling in January 2019. Mr. Grant Edgerly is a State of Michigan accredited Asbestos Building Inspector. Mr. Edgerly's, Accreditation Number is A41792.

REGULATORY BACKGROUND

As a public and commercial building, UHS is governed by 29 CFR 1910.1001, Occupational Health Standards for Asbestos in Construction/General Industry and the EPA's NESHAP for the normal course of business activities by GRPS employees and occupants.

There are three state agencies in Michigan that regulate asbestos in Michigan: the Michigan Department of Environmental Quality (DEQ), the Michigan Department of Licensing and Regulatory Affairs (DLARA) and the Michigan Department of State Police (MSP). The DEQ is concerned about the release of asbestos fibers to the outer air and proper waste disposal, while DLARA focuses on worker protection during renovation and demolition activities, contractor licensing, and worker training.

During construction or renovation activities, the persons performing those activities would be governed by 29 CFR 1926.1101, Occupational Health Standards for Asbestos in Construction. The Asbestos Hazard Emergency Response Act (AHERA), 40 CFR 763, (partial) and/or its associated requirements. However, there are some portions of AHERA that are used as guidelines for compliance with 29 CFR 1910.1001. In particular, 29 CFR 1910.1001(j)(1) requires owners of buildings constructed prior to 1980 to presume that certain types of building materials are asbestos-containing materials (ACM), unless the owner demonstrates that those materials are not ACM.

40 CFR Part 61, Subpart M (NESHAP) requires that a thorough inspection be conducted prior to all renovations and all demolitions. A thorough inspection for asbestos is required no matter the age of the facility because all uses of asbestos are not banned. The inspection must be completed before the commencement of a subject renovation and/or demolition activity.

BUILDING DESCRIPTION

The Union High School is a two-story building constructed in 1967 with an additions in 1980 and 2005. The building is approximately 200,000 square feet in size. Since its construction, the building has undergone various renovations.

PREVIOUS INSPECTION

The most recent inspection was conducted by GRPS in 2018. MicroAir reviewed this report and incorporated the findings of the previous inspection and historical information into the current reinspection data.

In the previous inspection report suspect ACM materials were given a unique identification number (homogeneous material number), MicroAir has changed numbering from previous reports. The reinspection did include the collection of bulk samples. Results of the sampling can be found in Appendix A along with locations of remaining ACM in the building.

REINSPECTION PROCEDURES

With the assistance of GRPS maintenance staff, MicroAir re-inspected known and previously identified areas of the building including above suspended ceilings, pipe chases, and inside the tunnels.

It was beyond the scope of this reinspection to locate, identify, or quantify ACM in areas that were concealed and/or inaccessible areas, such as within walls, hard ceilings, or equipment.

2019 REINSPECTION FINDINGS

The following suspect asbestos-containing materials were observed at Union High School during the asbestos inspection and the bulk sampling. Materials in **bold** were found to be greater than 1% ACM.

- Pool ceiling plaster
- Roof louver caulking
- Textured wall plaster
- Smooth plaster
- **Black lab counter tops**
- **Transite**
- **Tank insulation**
- **Mudded fittings on fiberglass lines**
- **Mudded roof drains**
- Ceramic grout
- **9"x9" Floor Tile and mastic**
- **12"x12" Floor Tile and mastic**
- 1'x1' ceiling tile textured w/holes and glue pods
- Block mortar
- Brick mortar
- 2'x2' drop ceiling tile textured w/holes
- 2'x2' drop ceiling tile w/holes
- Ceiling texture
- Stage floor underlayment
- Vibration dampener
- **Boiler breeching**
- Boiler materials
- Fire doors
- Concrete
- Sealants
- Roofing materials
- Sink undercoating
- Gym flooring undercoating
- Vibration dampener
- Boiler door mud
- Wood floor mastic
- Boiler gasket
- Boiler door gasket
- Rear boiler gasket
- **Window glazing (boiler room windows)**
- Office spray-on
- Wall board pod
- Fiberglass duct lining
- **Aluminum framed windows (glazing)**
- 2'x4' Ceiling tile
- Black floor mastic
- Boiler room roofing

Some of the materials listed above are assumed to contain asbestos until bulk samples can be collected and analyzed.

Appendix A of this report is a table that identifies the confirmed and suspect ACM homogeneous materials in UHS, their corresponding identification number and locations, and the general condition of ACMs identified during the reinspection.

CONCLUSIONS AND RECOMMENDATIONS

MicroAir was retained by Grand Rapids Public Schools to conduct a 3-year asbestos-containing material (ACM) reinspection of Union High School located at 1800 Tremont NW in Grand Rapids, Michigan. MicroAir completed the reinspection on December 24th, 2018. The inspection was conducted by a State of Michigan accredited Asbestos Building Inspector.

Since 2017, the floor tile and mastic has been removed from Rooms 123, 139, 141, 160, 172, 173, 183, 203, 204, 209, 211, 216, 218, 231, 233 and 235.

Any personnel entering a tunnel or chase area must be notified of ACM locations and explained the requirement to wear personal protective equipment.

If GRPS plans to conduct any renovation or demolition, the identified ACMs should be removed by a licensed asbestos abatement contractor, as required by current federal, state, and local laws and regulations, should perform any necessary removal and disposal of the identified ACM. MicroAir notes that if suspect ACM other than those identified during this reinspection are encountered during any renovation or demolition, such materials should be sampled and analyzed using PLM to verify presence of asbestos.

We also recommend that visual observations, verification of removal and cleanup, and air monitoring or clearance air monitoring for asbestos fibers be performed by a third party retained by GRPS to demonstrate compliance with applicable regulations, and to confirm the suitability or the area for re-entry. MicroAir can perform these services.

Warning labels should be affixed in all non-public areas where ACM or assumed ACM is present. After completion of repairs or removal of the ACM, fill out an O&M Activities Form and file it in the management plan.

As required by AHERA, GRPS should continue to send the annual notifications including information on planned response actions and reinspections. Copies of the notifications should be kept in the Management Plan.

LIMITATIONS

The conclusions drawn from the observations and sample results are only valid for the time the observations occurred. In the process of gathering the field data included in this report, procedures were followed that represent reasonable and acceptable industrial hygiene practices and procedures in a manner consistent with the level of care and skill ordinarily exercised by other members of this profession currently practicing under similar conditions. However, the information and opinions provided in this report are not to be construed as a warranty of the conditions of this site in any way, implied or explicit. MicroAir accepts no responsibility for the use, interpretation, or reliance by other parties on the information contained herein, nor does this report represent an instrument of regulatory compliance or an asbestos abatement specification.

In conducting the reinspection there are a number of obstacles and limitations that can affect the final outcome of the report. These limitations include but are not limited to the following factors: access concerns, materials that cannot be intrusively sampled or damaged, materials that have been replaced by renovation activities, materials with conflicting laboratory results, and materials that are located in inaccessible and/or concealed areas which limits its quantification. Due to these limitations, the results of this investigation cannot be construed as a certification of the presence or absence of ACM, beyond the materials identified, but rather a diligent and prudent review of available data within an established work scope, and time and budgetary constraints.

If you have any questions or require additional information, please contact me at 616-302-0819 or microairconsulting@gmail.com. Thank you.

Sincerely,

MicroAir Consulting, LLC

Christian T. Decker

Christian T. Decker
Accredited Building Inspector and Management Planner

APPENDIX A

TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIAL

APPENDIX A – 3-YEAR REINSPECTIONS
TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS
UNION HIGH SCHOOL
INSPECTION DATE: AUGUST 12-30, 2019 ***1967 BUILDING***

HSA NO.	HSA MATERIAL DESCRIPTION	ASBESTOS?	MATERIAL TYPE	F/NF	FUNCTIONAL AREA	CONDITION
U-2	Roof louver caulking	No	MM	--	Roof	--
U-4	Smooth plaster	No	SM	--	Interior walls and ceilings	-
U-5	Black lab counter tops	**Yes**	MM	NF-II	Rooms 150, 152, 153, 155, 156, 158, 160 and 161	Good
U-6	Transite	**Yes**	MM	NF-II	Room 119 on north wall, 120 on east and west walls, 174, 174A and Greenhouse growing tables	Good
U-7	Tank insulation	**Yes**	TSI	F	Boiler room and pool mechanical room on hot water storage tanks	Good
U-8	Mudded fittings on fiberglass lines	**Yes**	TSI	F	All tunnels; Boiler room; Above all ceilings on 1st floor, locker rooms, hallways, 99A and pool mechanical rooms. Rooms 3, 3A, 4, 6, 9, 10, 29, 31, 39, 40, 45, 54A, 100, 114, 116B, 118, 119E, 124, 138, 144, 175C, 178, 182 in pit, 220 and 226	Good
U-9	Mudded roof drains	**Yes**	TSI	F	All roof drains including 145A and mechanical room	Good
U-10	Ceramic grout	No	MM	--	Restrooms	-
U-11 U-12	Floor tile w/mastic Both sizes 9″x9″ and 12″x12″	**Yes** **Tile and Mastic**	MM	NF-I	Most hallways and not previously abated classrooms.	Good
U-13	1′x1′ ceiling tile textured w/holes and glue pods	No	MM	--	Rooms 122, 122A, 122B, 122C, 122D, 122E and Corridor 199D	-
U-14	Block mortar	No	MM	--	All cinderblock walls	-
U-15	Brick mortar	No	MM	--	All brick walls	-
U-16	2′x2′ drop ceiling tile textured w/holes	No	MM	--	Classrooms	-
U-17	2′x2′ drop ceiling tile w/holes	No	MM	--	Possible around wall heater units	-

FRIABILITY:
F: Friable
NF-I: Non-friable Category I
NF-II: Non-friable Category II

MATERIAL TYPE:
TSI: Thermal System Insulation
SM: Surfacing Material
MM: Miscellaneous Material

CONDITION:
Good: Little or no damage
Damaged: Less than 10% damage of total surface area, or less than 25% damage in a localized area
Significantly Damaged: Greater than 10% damage of total surface area, or greater than 25% damage in a localized area

SF: Square feet LF: Linear feet FT: Fittings NQ: Not Quantified

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TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS
UNION HIGH SCHOOL
INSPECTION DATE: AUGUST 12-30, 2019 ***1967 BUILDING***

HSA NO.	HSA MATERIAL DESCRIPTION	ASBESTOS?	MATERIAL TYPE	F/NF	FUNCTIONAL AREA	CONDITION
U-20	Vibration dampener	No	MM	--	HVAC equipment and ductwork	-
U-21	Boiler breeching	**Yes**	TSI	F	Boiler exhaust	Good
U-22	Boiler materials	Assumed (not sampled)	TSI	F	Inside boiler	Good
U-23	Fire doors	**Yes**	MM	NF-II	All tagged fire doors	Good
U-24	Concrete	No	MM	--	All concrete	-
U-25	Sealants	No	MM	--	All original caulk	-
U-26	Roofing materials	No	MM	--	Exterior roof	-
U-27 & U-27B	Sink undercoating – Purple and Grey	No	MM	--	Under metal sinks	-
U-29	Vibration dampener	No	TSI	--	Boiler Room	-
U-30	Boiler door mud	**Yes**	TSI	NF-II	Boiler Room	Good
U-31	Wood floor mastic	**Yes**	MM	NF-I	Room 182 **(Removed in 2019)**	Good
U-32	Boiler gasket	**Yes**	MM	NF-II	Boiler Room	Good
U-33	Boiler door gasket	No	MM	--	Boiler Room	-
U-34	Rear boiler gasket	No	MM	--	Boiler Room	-
U-35	Window caulking (boiler windows)	**Yes**	MM	NF-II	Boiler Room **(Removed in 2019)**	-

FRIABILITY:
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MATERIAL TYPE:
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INSPECTION DATE: AUGUST 12-30, 2019 ***1967 BUILDING***

HSA NO.	HSA MATERIAL DESCRIPTION	ASBESTOS?	MATERIAL TYPE	F/NF	FUNCTIONAL AREA	CONDITION
U-36	Office spray-on insulation	No	SM	--	Office area	-
U-37	Wall board pod	No	MM	--	Hallways and classrooms	-
U-38	Fiberglass duct lining	No	MM	--	Duct work throughout	-
U-39	Roofing	No	MM	--	Exterior roof	-
U-40	Aluminum framed windows glazing	**Yes**	MM	NF-II	Hallways, classrooms, and offices	Good
U-44	2'x4' Ceiling tile	No	MM	--	Hallways, classrooms, and offices	--
U-45	Black floor mastic	No	MM	--	Under wood floors	--
U-46	Boiler room roofing	No	MM	--	Exterior boiler room	--

FRIABILITY:
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MATERIAL TYPE:
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TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS
UNION HIGH SCHOOL
INSPECTION DATE: AUGUST 12-30, 2019 ***1980 BUILDING***

HSA NO.	HSA MATERIAL DESCRIPTION	ASBESTOS?	MATERIAL TYPE	F/NF	FUNCTIONAL AREA	CONDITION
U-1	Pool ceiling plaster	No	SM	--	Pool area	--
U-2B	Roof louver caulking	No	MM	--	Roof	--
U-3	Textured wall plaster	No	SM	--	Pool mechanical room	-
U-4B	Smooth plaster	No	SM	--	Interior walls and ceilings	-
U-7B	Tank insulation	**Yes**	TSI	F	Boiler room and pool mechanical room on hot water storage tanks	Good
U-8B	Mudded fittings on fiberglass lines	**Yes**	TSI	F	All tunnels; Boiler room; Above all ceilings on 1st floor, locker rooms, hallways, 99A and pool mechanical rooms. Rooms 3, 3A, 4, 6, 9, 10, 29, 31, 39, 40, 45, 54A, 100, 114, 116B, 118, 119E, 124, 138, 144, 175C, 178, 182 in pit, 220 and 226	Good
U-9B	Mudded roof drains	**Yes**	TSI	F	All roof drains including 145A and mechanical room	Good
U-10B	Ceramic grout	No	MM	--	Pool area, locker rooms and restrooms	-
U-14B	Block mortar	No	MM	--	All cinderblock walls	--
U-15B	Brick mortar	Assumed	MM	NF-II	All brick walls	Good
U-16B	2'x2' drop ceiling tile textured w/holes	No	MM	--	Pool area	--
U-18	Ceiling texture	Assumed (not sampled)	SM	F	Auditorium	Good
U-19	Stage floor underlayment	Assumed (not sampled)	MM	NF-I	Auditorium	Good
U-20B	Vibration dampener	No	MM	--	HVAC equipment and ductwork	-
U-23	Fire doors	**Yes**	MM	NF-II	All tagged fire doors	Good
U-24B	Concrete	No	MM	--	All concrete	-

FRIABILITY:
F: Friable
NF-I: Non-friable Category I
NF-II: Non-friable Category II

MATERIAL TYPE:
TSI: Thermal System Insulation
SM: Surfacing Material
MM: Miscellaneous Material

CONDITION:
Good: Little or no damage
Damaged: Less than 10% damage of total surface area, or less than 25% damage in a localized area
Significantly Damaged: Greater than 10% damage of total surface area, or greater than 25% damage in a localized area

SF: Square feet LF: Linear feet FT: Fittings NQ: Not Quantified

APPENDIX A – 3-YEAR REINSPECTIONS
TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS
UNION HIGH SCHOOL
INSPECTION DATE: AUGUST 12-30, 2019 ***1980 BUILDING***

HSA NO.	HSA MATERIAL DESCRIPTION	ASBESTOS?	MATERIAL TYPE	F/NF	FUNCTIONAL AREA	CONDITION
U-25B	Sealants	No	MM	--	All original caulk	-
U-26B	Roofing materials	Assumed	MM	NF-I	Roof	Good
U-28	Gym floor undercoating	No	MM	--	Gym floors	-
U-40B	Aluminum framed windows glazing	No	MM	--	Hallways, classrooms, and offices	--
U-41	Drywall, tape and mud	No	SM	--	Interior drywall areas	--
U-44	2'x4' Ceiling tile	No	MM	--	Hallways, classrooms, and offices	--
U-45	Black floor mastic	No	MM	--	Under wood floors	--

FRIABILITY:
F: Friable
NF-I: Non-friable Category I
NF-II: Non-friable Category II

MATERIAL TYPE:
TSI: Thermal System Insulation
SM: Surfacing Material
MM: Miscellaneous Material

CONDITION:
Good: Little or no damage
Damaged: Less than 10% damage of total surface area, or less than 25% damage in a localized area
Significantly Damaged: Greater than 10% damage of total surface area, or greater than 25% damage in a localized area

SF: Square feet LF: Linear feet FT: Fittings NQ: Not Quantified

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Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project : GRPS- Union HS

Report To:
Mr. Chris Decker
MicroAir Consulting
P.O. Box 908
Greenville, MI 48838

ARI Report # 20-90987
Date Collected: 08/13/20
Date Received: 08/19/20
Date Analyzed: 08/21/20
Date Reported: 08/24/20

Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 90987 - 01 Cust. #: U-10B Material: Ceramic Grout Location: Appearance: grey,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: **NO** No Asbestos Observed	Other - 100%
Lab ID #: 90987 - 02 Cust. #: U-14B Material: Block Mortar Location: Appearance: grey,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: **NO** No Asbestos Observed	Other - 100%
Lab ID #: 90987 - 03 Cust. #: U-15B Material: Brick Mortar Location: Appearance: grey,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: **NO** No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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

Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project : GRPS- Union HS

Report To:
Mr. Chris Decker
MicroAir Consulting
P.O. Box 908
Greenville, MI 48838

ARI Report # 20-90987
Date Collected: 08/13/20
Date Received: 08/19/20
Date Analyzed: 08/21/20
Date Reported: 08/24/20

Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 90987 - 04 Cust. #: U-16B Material: 2'x2' Ceiling Tile (Fiberglass) Location: Appearance: yellow,fibrous,nonhomogenous Layer: 1 of 1	Asbestos Present: **NO** No Asbestos Observed	Fiberglass - 65% Other - 35%
Lab ID #: 90987 - 05 Cust. #: U-20B Material: Vibration Dampener Location: Appearance: black,fibrous,nonhomogenous Layer: 1 of 1	Asbestos Present: **NO** No Asbestos Observed	Synthetic - 25% Other - 75%
Lab ID #: 90987 - 06 Cust. #: U-24B Material: Concrete Location: Appearance: grey,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: **NO** No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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

Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project : GRPS- Union HS

Report To:
Mr. Chris Decker
MicroAir Consulting
P.O. Box 908
Greenville, MI 48838

ARI Report # 20-90987
Date Collected: 08/13/20
Date Received: 08/19/20
Date Analyzed: 08/21/20
Date Reported: 08/24/20

Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 90987 - 07 Cust. #: U-25B Material: Sealants Location: Appearance: grey,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: **NO** No Asbestos Observed	Other - 100%
Lab ID #: 90987 - 08 Cust. #: U-40B Material: Aluminum Window Glaze Location: Appearance: grey,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: **NO** No Asbestos Observed	Other - 100%
Lab ID #: 90987 - 09 Cust. #: U-41-1 Material: 1980 Drywall Location: Appearance: white,fibrous,nonhomogenous Layer: 1 of 3	Asbestos Present: **NO** No Asbestos Observed	Cellulose - 20% Fiberglass - 2% Other - 78%

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

Robert T. Letarte Jr., Laboratory Director

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

Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project : GRPS- Union HS

Report To:
Mr. Chris Decker
MicroAir Consulting
P.O. Box 908
Greenville, MI 48838

ARI Report # 20-90987
Date Collected: 08/13/20
Date Received: 08/19/20
Date Analyzed: 08/21/20
Date Reported: 08/24/20

Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 90987 - 09a Cust. #: U-41-1 Material: Plaster Finish Coat Location: Appearance: white,nonfibrous,homogenous Layer: 2 of 3	Asbestos Present: **NO** No Asbestos Observed	Other - 100%
Lab ID #: 90987 - 09b Cust. #: U-41-1 Material: Plaster Base Coat Location: Appearance: grey,nonfibrous,homogenous Layer: 3 of 3	Asbestos Present: **NO** No Asbestos Observed	Other - 100%
Lab ID #: 90987 - 10 Cust. #: U-41-2 Material: 1980 Drywall Location: Appearance: white,fibrous,nonhomogenous Layer: 1 of 1	Asbestos Present: **NO** No Asbestos Observed	Cellulose - 20% Fiberglass - 2% Other - 78%

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

Robert T. Letarte Jr., Laboratory Director

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

Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project : GRPS- Union HS

Report To:
Mr. Chris Decker
MicroAir Consulting
P.O. Box 908
Greenville, MI 48838

ARI Report # 20-90987
Date Collected: 08/13/20
Date Received: 08/19/20
Date Analyzed: 08/21/20
Date Reported: 08/24/20

Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 90987 - 11 Cust. #: U-41-3 Material: 1980 Drywall Location: Appearance: white,fibrous,nonhomogenous Layer: 1 of 1	Asbestos Present: **NO** No Asbestos Observed	Cellulose - 20% Fiberglass - 2% Other - 78%
Lab ID #: 90987 - 12 Cust. #: U-41-4 Material: 1980 Drywall Location: Appearance: white,fibrous,nonhomogenous Layer: 1 of 1	Asbestos Present: **NO** No Asbestos Observed	Cellulose - 20% Fiberglass - 2% Other - 78%
Lab ID #: 90987 - 13 Cust. #: H-41-5 Material: 1980 Drywall Location: Appearance: white,fibrous,nonhomogenous Layer: 1 of 1	Asbestos Present: **NO** No Asbestos Observed	Cellulose - 20% Fiberglass - 2% Other - 78%

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

Robert T. Letarte Jr., Laboratory Director

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

Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project : GRPS- Union HS

Report To:
Mr. Chris Decker
MicroAir Consulting
P.O. Box 908
Greenville, MI 48838

ARI Report # 20-90987
Date Collected: 08/13/20
Date Received: 08/19/20
Date Analyzed: 08/21/20
Date Reported: 08/24/20

Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 90987 - 14 Cust. #: H-41-6 Material: 1980 Drywall Location: Appearance: white,fibrous,nonhomogenous Layer: 1 of 1	Asbestos Present: **NO** No Asbestos Observed	Cellulose - 20% Fiberglass - 2% Other - 78%
Lab ID #: 90987 - 15 Cust. #: H-41-7 Material: 1980 Drywall Location: Appearance: white,fibrous,nonhomogenous Layer: 1 of 1	Asbestos Present: **NO** No Asbestos Observed	Cellulose - 20% Fiberglass - 2% Other - 78%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

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

Robert T. Letarte Jr., Laboratory Director

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

NVLAP Lab Code 102118-0

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

GRPS Asbestos 6-Month Surveillance Form

The reinspection was performed based on the requirements outlined in Asbestos Hazard Emergency Response Act (AHERA), EPA 40CFR, Part 763.85, Section (b), titled "Re-Inspection" for school buildings. The initial inspection was conducted 1988. MicroAir Consulting, LLC reviewed GRPS's management plan and incorporated the findings of the previous reinspections and historical information into the current management plan.

School Building Name: Union High School

Tested Building Materials Containing Asbestos:

1967, 1980 Tagged Fire Doors and Frames
1967 Black Lab Counter Tops
1967 Transite
1967 Tank Insulation (Boiler and Pool Mechanical Areas)
1967 Mudded Fittings on Fiberglass Lines
1967 Mudded Roof Drains
1967 12"X12" Floor Tile and Mastic
1967 9"x9" Floor Tile and Mastic
1967 Aluminum Framed Window Glazing
1980 Tank Insulation
1980 Mudded Fittings on Fiberglass Lines
1980 Mudded Roof Drains

Date(s): January 1, 2020 / July 6, 2020
Condition of Tested/Assumed Materials: No Change in Materials

Additional Notes:

1967 Boiler Room Materials were Removed in 2019/2020
1967 Wood Floor Mastic in Room 182 was removed in 2019
1967 Chalkboards tested negative

Signature: *Chris Decker* Date: 02/01/2020 + 7/30/20

October 31st, 2019
Project Number: MA-117-19

Mr. Marc Bennett
Grand Rapids Public Schools
900 Union, NE
Grand Rapids, MI 49503

Re: AHERA 3 Year Reinspection Report
Grand Rapids Public Schools – Congress Elementary School

MicroAir Consulting, LLC
119 West Cass Street
P.O. Box 908
Grand Rapids, MI 48838
Phone: 616-302-0819
Web: microairconsulting.com
Email: microairconsulting@gmail.com

Dear Mr. Bennett:

MicroAir Consulting, LLC (MicroAir) was retained by Grand Rapids Public Schools (GRPS), to conduct an AHERA 3-year reinspection of Congress Elementary School located at 940 Baldwin Street SE in Grand Rapids, Michigan. The inspection was conducted according to the protocol described in the U.S. Environmental Protection Agency Asbestos Hazard Emergency Response Act of 1986 (40 CFR 763).

CERTIFICATION

The building inspection was conducted on October 14th, 2019 by Mr. Ryan Emmons, a State of Michigan accredited Asbestos Building Inspector. Mr. Emmons's, Accreditation Number is A55220.

REGULATORY BACKGROUND

As a public and commercial building, Congress is governed by 29 CFR 1910.1001, Occupational Health Standards for Asbestos in Construction/General Industry and the EPA's NESHAP for the normal course of business activities by GRPS employees and occupants.

There are three state agencies in Michigan that regulate asbestos in Michigan: the Michigan Department of Environmental Quality (DEQ), the Michigan Department of Licensing and Regulatory Affairs (DLARA) and the Michigan Department of State Police (MSP). The DEQ is concerned about the release of asbestos fibers to the outer air and proper waste disposal, while DLARA focuses on worker protection during renovation and demolition activities, contractor licensing, and worker training.

During construction or renovation activities, the persons performing those activities would be governed by 29 CFR 1926.1101, Occupational Health Standards for Asbestos in Construction. The Asbestos Hazard Emergency Response Act (AHERA), 40 CFR 763, (partial) and/or its associated requirements. However, there are some portions of AHERA that are used as guidelines for compliance with 29 CFR 1910.1001. In particular, 29 CFR 1910.1001(j)(1) requires owners of buildings constructed prior to 1980 to presume that certain types of building materials are asbestos-containing materials (ACM), unless the owner demonstrates that those materials are not ACM.

40 CFR Part 61, Subpart M (NESHAP) requires that a thorough inspection be conducted prior to all renovations and all demolitions. A thorough inspection for asbestos is required no matter the age of the facility because all uses of asbestos are not banned. The inspection must be completed before the commencement of a subject renovation and/or demolition activity.

BUILDING DESCRIPTION

The Congress Elementary School building was constructed in 1920. Some building renovations have occurred throughout over the years as well.

PREVIOUS INSPECTION

The most recent inspection was conducted by GRPS. MicroAir reviewed this report and incorporated the findings of the previous inspection and historical information into the current reinspection data.

In the previous inspection report suspect ACM materials were given a unique identification number (homogeneous material number), MicroAir has changed numbering from previous reports. The reinspection did include the collection of bulk samples. Results of the sampling can be found in Appendix A along with locations of remaining ACM in the building.

REINSPECTION PROCEDURES

With the assistance of GRPS maintenance staff, MicroAir re-inspected known and previously identified areas of the building including above suspended ceilings, pipe chases, and inside the tunnels.

It was beyond the scope of this reinspection to locate, identify, or quantify ACM in areas that were concealed and/or inaccessible areas, such as within walls, hard ceilings, or equipment.

2019 REINSPECTION FINDINGS

The following suspect asbestos-containing materials were observed at Congress Elementary School during the asbestos inspection and the bulk sampling. Materials in **bold** were found to be greater than 1% ACM.

- Vinyl stair tread
- **Plaster**
- 1'x1' ceiling tiles
- 12"x12" Green floor tile w/mastic
- Brick mortar
- Concrete
- **Fire doors and frames**
- Ceramic grout
- Wood floor underlayment
- 12"x12" Tan floor tile w/mastic
- 12"x12" Black floor tile w/mastic
- Older chalkboards
- 2'x2' ceiling tile w/holes and fissures
- Sink undercoating
- 2'x2' ceiling tile w/holes
- 2'x2' ceiling tile smooth
- Drywall, tape and mud
- Blue cove base w/mastic
- Black cove base w/mastic
- 12"x12" Multi-colored floor tile w/mastic
- 2'x2' ceiling tile w/pins and fissures
- 12"x12" Creme floor tile w/mastic
- Brown cove base w/mastic
- EIFS
- Decorative concrete
- Block mortar

Some of the materials listed above are assumed to contain asbestos until bulk samples can be collected and analyzed.

Appendix A of this report is a table that identifies the confirmed and suspect ACM homogeneous materials in Congress, their corresponding identification number and locations, and the general condition of ACMs identified during the reinspection.

CONCLUSIONS AND RECOMMENDATIONS

MicroAir was retained by Grand Rapids Public Schools to conduct a 3-year asbestos-containing material (ACM) reinspection of Congress Elementary School located at 940 Baldwin Street SE in Grand Rapids, Michigan. MicroAir completed the reinspection on October 14th, 2019. The inspection was conducted by a State of Michigan accredited Asbestos Building Inspector.

During the reinspection, MicroAir identified and assessed 26 homogeneous materials remaining in Congress Elementary School.

Any personnel entering a tunnel or chase area must be notified of ACM locations and explained the requirement to wear personal protective equipment.

If GRPS plans to conduct any renovation or demolition, the identified ACMs should be removed by a licensed asbestos abatement contractor, as required by current federal, state, and local laws and regulations, should perform any necessary removal and disposal of the identified ACM. MicroAir notes that if suspect ACM other than those identified during this reinspection are encountered during any renovation or demolition, such materials should be sampled and analyzed using PLM to verify presence of asbestos.

We also recommend that visual observations, verification of removal and cleanup, and air monitoring or clearance air monitoring for asbestos fibers be performed by a third party retained by GRPS to demonstrate compliance with applicable regulations, and to confirm the suitability or the area for re-entry. MicroAir can perform these services.

Warning labels should be affixed in all non-public areas where ACM or assumed ACM is present. After completion of repairs or removal of the ACM, fill out an O&M Activities Form and file it in the management plan.

As required by AHERA, GRPS should continue to send the annual notifications including information on planned response actions and reinspections. Copies of the notifications should be kept in the Management Plan.

LIMITATIONS

The conclusions drawn from the observations and sample results are only valid for the time the observations occurred. In the process of gathering the field data included in this report, procedures were followed that represent reasonable and acceptable industrial hygiene practices and procedures in a manner consistent with the level of care and skill ordinarily exercised by other members of this profession currently practicing under similar conditions. However, the information and opinions provided in this report are not to be construed as a warranty of the conditions of this site in any way, implied or explicit. MicroAir accepts no responsibility for the use, interpretation, or reliance by other parties on the information contained herein, nor does this report represent an instrument of regulatory compliance or an asbestos abatement specification.

In conducting the reinspection there are a number of obstacles and limitations that can affect the final outcome of the report. These limitations include but are not limited to the following factors: access concerns, materials that can not be intrusively sampled or damaged, materials that have been replaced by renovation activities, materials with conflicting laboratory results, and materials that are located in inaccessible and/or concealed areas which limits its quantification. Due to these limitations, the results of this investigation cannot be construed as a certification of the presence or absence of ACM, beyond the materials identified, but rather a diligent and prudent review of available data within an established work scope, and time and budgetary constraints.

If you have any questions or require additional information, please contact me at 616-302-0819 or microairconsulting@gmail.com.

Sincerely,

MicroAir Consulting, LLC

Christian T. Decker

Christian T. Decker
Accredited Building Inspector and Management Planner

APPENDIX A

TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS

APPENDIX A- 3 YEAR REINSPECTION
TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS
CONGRESS ELEMENTARY SCHOOL
INSPECTION DATE: OCTOBER 13th, 2019

HSA NO.	HSA MATERIAL DESCRIPTION	ASBESTOS?	MATERIAL TYPE	F/NF	FUNCTIONAL AREA	CONDITION
CES-1	Vinyl stair tread	Assumed	MM	NF-I	Entrance stairway	Good
CES-2	Plaster	**Yes**	SM	F	Interior walls and ceilings	Good
CES-3	1'x1' ceiling tiles	Assumed	MM	NF-II	Interior ceilings	Good
CES-4	12"x12" Green floor tile w/mastic	Assumed	MM	NF-I	Classrooms	Good
CES-5	Brick mortar	Assumed	MM	NF-II	All brick walls	Good
CES-6	Concrete	Assumed	MM	NF-II	All concrete	Good
CES-7	Fire doors and frames	**Yes**	MM	NF-II	All tagged fire doors	Good
CES-8	Ceramic grout	Assumed	MM	NF-I	Bathrooms	Good
CES-9	Wood floor underlayment	Assumed	MM	NF-I	Classrooms and gym	Good
CES-10	12"x12" Tan floor tile w/mastic	Assumed	MM	NF-I	3rd floor hallway	Good
CES-11	12"x12" Black floor tile w/mastic	Assumed	MM	NF-I	Hallway	Good
CES-12	Older chalkboards	Assumed	MM	NF-II	Classrooms and hallways	Good
CES-13	2'x2' ceiling tile w/holes and fissures	Assumed	MM	NF-II	Printing room by office	Good
CES-14	Sink undercoating	Assumed	MM	NF-II	Under metal sinks	Good
CES-15	2'x2' ceiling tile w/holes	Assumed	MM	NF-II	Library	Good
CES-16	2'x2' ceiling tile smooth	Assumed	MM	NF-II	Bathrooms	Good
CES-17	Drywall, tape and mud	No	SM	--	Lower floor bathrooms and closets	--
CES-18	Blue cove base w/mastic	Assumed	MM	NF-II	Bathrooms and closets	Good

FRIABILITY:
F: Friable
NF-I: Non-friable Category I
NF-II: Non-friable Category II

MATERIAL TYPE:
TSI: Thermal System Insulation
SM: Surfacing Material
MM: Miscellaneous Material

CONDITION:
Good: Little or no damage
Damaged: Less than 10% damage of total surface area, or less than 25% damage in a localized area
Significantly Damaged: Greater than 10% damage of total surface area, or greater than 25% damage in a localized area

SF: Square feet LF: Linear feet FT: Fittings NQ: Not Quantified

APPENDIX A- 3 YEAR REINSPECTION
TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS
CONGRESS ELEMENTARY SCHOOL
INSPECTION DATE: OCTOBER 13th, 2019

HSA NO.	HSA MATERIAL DESCRIPTION	ASBESTOS?	MATERIAL TYPE	F/NF	FUNCTIONAL AREA	CONDITION
CES-19	Black cove base w/mastic	Assumed	MM	NF-II	Lower level hallways	Good
CES-20	12"x12" Multi-colored floor tile w/mastic	Assumed	MM	NF-I	Music room	Good
CES-21	2'x2' ceiling tile w/pins and fissures	Assumed	MM	NF-II	Music room	Good
CES-22	12"x12" Creme floor tile w/mastic	Assumed	MM	NF-I	Lower level	Good
CES-23	Brown cove base w/mastic	Assumed	MM	NF-II	Under lockers	Good
CES-24	EIFS	Assumed	MM	NF-II	Exterior around windows and doors	Good
CES-25	Decorative concrete	Assumed	MM	NF-II	Exterior façade	Good
CES-26	Block mortar	Assumed	MM	NF-II	All cinderblock walls	Good

FRIABILITY:
F: Friable
NF-I: Non-friable Category I
NF-II: Non-friable Category II

MATERIAL TYPE:
TSI: Thermal System Insulation
SM: Surfacing Material
MM: Miscellaneous Material

CONDITION:
Good: Little or no damage
Damaged: Less than 10% damage of total surface area, or less than 25% damage in a localized area
Significantly Damaged: Greater than 10% damage of total surface area, or greater than 25% damage in a localized area

SF: Square feet LF: Linear feet FT: Fittings NQ: Not Quantified

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October 31st, 2019
Project Number: MA-117-19

Mr. Marc Bennett
Grand Rapids Public Schools
900 Union, NE
Grand Rapids, MI 49503

Re: AHERA 3 Year Reinspection Report
Grand Rapids Public Schools – Ken-o-sha Elementary School

MicroAir Consulting, LLC
119 West Cass Street
P.O. Box 908
Grand Rapids, MI 48838
Phone: 616-302-0819
Web: microairconsulting.com
Email: microairconsulting@gmail.com

Dear Mr. Bennett:

MicroAir Consulting, LLC (MicroAir) was retained by Grand Rapids Public Schools (GRPS), to conduct an AHERA 3-year reinspection of Ken-o-sha Elementary School located at 1353 Van Auken Street SE in Grand Rapids, Michigan. The inspection was conducted according to the protocol described in the U.S. Environmental Protection Agency Asbestos Hazard Emergency Response Act of 1986 (40 CFR 763).

CERTIFICATION

The building inspection was conducted on October 14th, 2019 by Mr. Ryan Emmons, a State of Michigan accredited Asbestos Building Inspector. Mr. Emmons's, Accreditation Number is A55220.

REGULATORY BACKGROUND

As a public and commercial building, Ken-o-sha is governed by 29 CFR 1910.1001, Occupational Health Standards for Asbestos in Construction/General Industry and the EPA's NESHAP for the normal course of business activities by GRPS employees and occupants.

There are three state agencies in Michigan that regulate asbestos in Michigan: the Michigan Department of Environmental Quality (DEQ), the Michigan Department of Licensing and Regulatory Affairs (DLARA) and the Michigan Department of State Police (MSP). The DEQ is concerned about the release of asbestos fibers to the outer air and proper waste disposal, while DLARA focuses on worker protection during renovation and demolition activities, contractor licensing, and worker training.

During construction or renovation activities, the persons performing those activities would be governed by 29 CFR 1926.1101, Occupational Health Standards for Asbestos in Construction. The Asbestos Hazard Emergency Response Act (AHERA), 40 CFR 763, (partial) and/or its associated requirements. However, there are some portions of AHERA that are used as guidelines for compliance with 29 CFR 1910.1001. In particular, 29 CFR 1910.1001(j)(1) requires owners of buildings constructed prior to 1980 to presume that certain types of building materials are asbestos-containing materials (ACM), unless the owner demonstrates that those materials are not ACM.

40 CFR Part 61, Subpart M (NESHAP) requires that a thorough inspection be conducted prior to all renovations and all demolitions. A thorough inspection for asbestos is required no matter the age of the facility because all uses of asbestos are not banned. The inspection must be completed before the commencement of a subject renovation and/or demolition activity.

BUILDING DESCRIPTION

The Ken-o-sha Elementary School building was constructed in 1964 with an addition in 1975. Some building renovations have occurred throughout over the years as well.

PREVIOUS INSPECTION

The most recent inspection was conducted by GRPS. MicroAir reviewed this report and incorporated the findings of the previous inspection and historical information into the current reinspection data.

In the previous inspection report suspect ACM materials were given a unique identification number (homogeneous material number), MicroAir has changed numbering from previous reports. The reinspec-

tion did include the collection of bulk samples. Results of the sampling can be found in Appendix A along with locations of remaining ACM in the building.

REINSPECTION PROCEDURES

With the assistance of GRPS maintenance staff, MicroAir re-inspected known and previously identified areas of the building including above suspended ceilings, pipe chases, and inside the tunnels.

It was beyond the scope of this reinspection to locate, identify, or quantify ACM in areas that were concealed and/or inaccessible areas, such as within walls, hard ceilings, or equipment.

2019 REINSPECTION FINDINGS

The following suspect asbestos-containing materials were observed at Ken-o-sha Elementary School during the asbestos inspection and the bulk sampling. Materials in **bold** were found to be greater than 1% ACM.

- Plaster
- Block mortar
- Brick mortar
- 1'x1' ceiling tiles w/glue pod
- 2'x2' ceiling tile
- Ceramic grout
- **Fire doors and frames**
- 12"x12" White/specs floor tile w/mastic
- Sink undercoating
- Curtains
- 9"x9" White w/black floor tile w/mastic
- Wood floor underlayment
- 2'x2' ceiling tile smooth white
- Tall black cove base w/mastic
- Dark cove base w/mastic
- 12"x12" Peppered floor tile w/mastic
- Brown cove base w/mastic
- **Drywall, tape and mud**
- Overhead plaster
- 2'x2' ceiling tile w/holes and fissures
- Roofing

Some of the materials listed above are assumed to contain asbestos until bulk samples can be collected and analyzed.

Appendix A of this report is a table that identifies the confirmed and suspect ACM homogeneous materials in Ken-o-sha, their corresponding identification number and locations, and the general condition of ACMs identified during the reinspection.

CONCLUSIONS AND RECOMMENDATIONS

MicroAir was retained by Grand Rapids Public Schools to conduct a 3-year asbestos-containing material (ACM) reinspection of Ken-o-sha Elementary School located at 1353 Van Auken Street SE in Grand Rapids, Michigan. MicroAir completed the reinspection on October 14th, 2019. The inspection was conducted by a State of Michigan accredited Asbestos Building Inspector.

During the reinspection, MicroAir identified and assessed 21 homogeneous materials remaining in Ken-o-sha Elementary School.

Any personnel entering a tunnel or chase area must be notified of ACM locations and explained the requirement to wear personal protective equipment.

If GRPS plans to conduct any renovation or demolition, the identified ACMs should be removed by a licensed asbestos abatement contractor, as required by current federal, state, and local laws and regulations, should perform any necessary removal and disposal of the identified ACM. MicroAir notes that if suspect ACM other than those identified during this reinspection are encountered during any

renovation or demolition, such materials should be sampled and analyzed using PLM to verify presence of asbestos.

We also recommend that visual observations, verification of removal and cleanup, and air monitoring or clearance air monitoring for asbestos fibers be performed by a third party retained by GRPS to demonstrate compliance with applicable regulations, and to confirm the suitability or the area for re-entry. MicroAir can perform these services.

Warning labels should be affixed in all non-public areas where ACM or assumed ACM is present. After completion of repairs or removal of the ACM, fill out an O&M Activities Form and file it in the management plan.

As required by AHERA, GRPS should continue to send the annual notifications including information on planned response actions and reinspections. Copies of the notifications should be kept in the Management Plan.

LIMITATIONS

The conclusions drawn from the observations and sample results are only valid for the time the observations occurred. In the process of gathering the field data included in this report, procedures were followed that represent reasonable and acceptable industrial hygiene practices and procedures in a manner consistent with the level of care and skill ordinarily exercised by other members of this profession currently practicing under similar conditions. However, the information and opinions provided in this report are not to be construed as a warranty of the conditions of this site in any way, implied or explicit. MicroAir accepts no responsibility for the use, interpretation, or reliance by other parties on the information contained herein, nor does this report represent an instrument of regulatory compliance or an asbestos abatement specification.

In conducting the reinspection there are a number of obstacles and limitations that can affect the final outcome of the report. These limitations include but are not limited to the following factors: access concerns, materials that cannot be intrusively sampled or damaged, materials that have been replaced by renovation activities, materials with conflicting laboratory results, and materials that are located in inaccessible and/or concealed areas which limits its quantification. Due to these limitations, the results of this investigation cannot be construed as a certification of the presence or absence of ACM, beyond the materials identified, but rather a diligent and prudent review of available data within an established work scope, and time and budgetary constraints.

If you have any questions or require additional information, please contact me at 616-302-0819 or microairconsulting@gmail.com.

Sincerely,

MicroAir Consulting, LLC

Christian T. Decker

Christian T. Decker
Accredited Building Inspector and Management Planner

APPENDIX A

TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS

APPENDIX A- 3 YEAR REINSPECTION
TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS
KEN-O-SHA ELEMENTARY SCHOOL
INSPECTION DATE: OCTOBER 13th, 2019

HSA NO.	HSA MATERIAL DESCRIPTION	ASBESTOS?	MATERIAL TYPE	F/NF	FUNCTIONAL AREA	CONDITION
KES-1	Plaster	No	SM	--	Interior walls and ceilings	--
KES-2	Block mortar	Assumed	MM	NF-II	All cinderblock walls	Good
KES-3	Brick mortar	Assumed	MM	NF-II	All brick walls	Good
KES-4	1'x1' ceiling tiles w/glue pod	Assumed	MM	NF-II	Hallways and classrooms	Good
KES-5	2'x2' ceiling tile	Assumed	MM	NF-II	Classrooms	Good
KES-6	Ceramic grout	Assumed	MM	NF-I	Hallways, bathrooms and windowsills	Good
KES-7	Fire doors and frames	**Yes**	MM	NF-II	All tagged fire doors	Good
KES-8	12"x12" White/specs floor tile w/mastic	Assumed	MM	NF-I	Under carpet in classrooms	Good
KES-9	Sink undercoating	Assumed	MM	NF-II	Under metal sinks	Good
KES-10	Curtains	Assumed	MM	NF-II	Music room and stage	Good
KES-11	9"x9" White w/black floor tile w/mastic	Assumed	MM	NF-I	Closets and some rooms	Good
KES-12	Wood floor underlayment	Assumed	MM	NF-I	Gym and stage	Good
KES-13	2'x2' ceiling tile smooth white	Assumed	MM	NF-II	Hallways	Good
KES-14	Tall black cove base w/mastic	Assumed	MM	NF-II	Library	Good
KES-15	Dark cove base w/mastic	Assumed	MM	NF-II	Hallways	Good
KES-16	12"x12" Peppered floor tile w/mastic	Assumed	MM	NF-I	Health office	Good
KES-17	Brown cove base w/mastic	Assumed	MM	NF-II	Hallways and classrooms	Good
KES-18	Drywall, tape and mud	**Yes**	SM	F	Interior drywall walls and ceilings	Good

FRIABILITY:
F: Friable
NF-I: Non-friable Category I
NF-II: Non-friable Category II

MATERIAL TYPE:
TSI: Thermal System Insulation
SM: Surfacing Material
MM: Miscellaneous Material

CONDITION:
Good: Little or no damage
Damaged: Less than 10% damage of total surface area, or less than 25% damage in a localized area
Significantly Damaged: Greater than 10% damage of total surface area, or greater than 25% damage in a localized area

SF: Square feet LF: Linear feet FT: Fittings NQ: Not Quantified

APPENDIX A- 3 YEAR REINSPECTION
TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS
KEN-O-SHA ELEMENTARY SCHOOL
INSPECTION DATE: OCTOBER 13th, 2019

HSA NO.	HSA MATERIAL DESCRIPTION	ASBESTOS?	MATERIAL TYPE	F/NF	FUNCTIONAL AREA	CONDITION
KES-19	Overhead plaster	No	SM	--	Exterior entrances	--
KES-20	2'x2' ceiling tile w/holes and fissures	Assumed	MM	NF-II	Classrooms	Good
KES-21	Roofing	Assumed	MM	NF-I	Exterior asphalt roofing	Good

FRIABILITY:
F: Friable
NF-I: Non-friable Category I
NF-II: Non-friable Category II

MATERIAL TYPE:
TSI: Thermal System Insulation
SM: Surfacing Material
MM: Miscellaneous Material

CONDITION:
Good: Little or no damage
Damaged: Less than 10% damage of total surface area, or less than 25% damage in a localized area
Significantly Damaged: Greater than 10% damage of total surface area, or greater than 25% damage in a localized area

SF: Square feet LF: Linear feet FT: Fittings NQ: Not Quantified

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November 4th, 2019
Project Number: MA-117-19

Mr. Marc Bennett
Grand Rapids Public Schools
900 Union, NE
Grand Rapids, MI 49503

119 West Cass Street
P.O. Box 908
Grand Rapids, MI 48838
Phone: 616-302-0819
Web: microairconsulting.com
Email: microairconsulting@gmail.com

Re: AHERA 3 Year Reinspection Report
Grand Rapids Public Schools – Kent Hills Elementary School

Dear Mr. Bennett:

MicroAir Consulting, LLC (MicroAir) was retained by Grand Rapids Public Schools (GRPS), to conduct an AHERA 3-year reinspection of Kent Hills Elementary School located at 1445 Emerald Avenue NE in Grand Rapids, Michigan. The inspection was conducted according to the protocol described in the U.S. Environmental Protection Agency Asbestos Hazard Emergency Response Act of 1986 (40 CFR 763).

CERTIFICATION

The building inspection was conducted on October 17th, 2019 by Mr. Ryan Emmons, a State of Michigan accredited Asbestos Building Inspector. Mr. Emmons's, Accreditation Number is A55220.

REGULATORY BACKGROUND

As a public and commercial building, Kent Hills is governed by 29 CFR 1910.1001, Occupational Health Standards for Asbestos in Construction/General Industry and the EPA's NESHAP for the normal course of business activities by GRPS employees and occupants.

There are three state agencies in Michigan that regulate asbestos in Michigan: the Michigan Department of Environmental Quality (DEQ), the Michigan Department of Licensing and Regulatory Affairs (DLARA) and the Michigan Department of State Police (MSP). The DEQ is concerned about the release of asbestos fibers to the outer air and proper waste disposal, while DLARA focuses on worker protection during renovation and demolition activities, contractor licensing, and worker training.

During construction or renovation activities, the persons performing those activities would be governed by 29 CFR 1926.1101, Occupational Health Standards for Asbestos in Construction. The Asbestos Hazard Emergency Response Act (AHERA), 40 CFR 763, (partial) and/or its associated requirements. However, there are some portions of AHERA that are used as guidelines for compliance with 29 CFR 1910.1001. In particular, 29 CFR 1910.1001(j)(1) requires owners of buildings constructed prior to 1980 to presume that certain types of building materials are asbestos-containing materials (ACM), unless the owner demonstrates that those materials are not ACM.

40 CFR Part 61, Subpart M (NESHAP) requires that a thorough inspection be conducted prior to all renovations and all demolitions. A thorough inspection for asbestos is required no matter the age of the facility because all uses of asbestos are not banned. The inspection must be completed before the commencement of a subject renovation and/or demolition activity.

BUILDING DESCRIPTION

The Kent Hills building was constructed in 1954 with additions in 1956 and 2008. Some building renovations have occurred throughout over the years as well.

PREVIOUS INSPECTION

The most recent inspection was conducted by GRPS. MicroAir reviewed this report and incorporated the findings of the previous inspection and historical information into the current reinspection data.

In the previous inspection report suspect ACM materials were given a unique identification number (homogeneous material number), MicroAir has changed numbering from previous reports. The reinspection did include the collection of bulk samples. Results of the sampling can be found in Appendix A along with locations of remaining ACM in the building.

REINSPECTION PROCEDURES

With the assistance of GRPS maintenance staff, MicroAir re-inspected known and previously identified areas of the building including above suspended ceilings, pipe chases, and inside the tunnels.

It was beyond the scope of this reinspection to locate, identify, or quantify ACM in areas that were concealed and/or inaccessible areas, such as within walls, hard ceilings, or equipment.

2019 REINSPECTION FINDINGS

The following suspect asbestos-containing materials were observed at Kent Hills Elementary School during the asbestos inspection and the bulk sampling. Materials in **bold** were found to be greater than 1% ACM.

- Brick mortar
- Block mortar
- Roofing
- **Fire doors and frames**
- EIFS
- Concrete
- Tan cove base w/mastic
- 12"x12" Brown/Blue floor tile w/mastic
- 2'x2' ceiling tile w/pins and fissures
- Ceramic grout
- Sink undercoating
- Brown cove base w/mastic
- 1'x1' ceiling tile w/glue pods
- Leveling compound
- Green rolled vinyl flooring w/mastic
- Orange rolled vinyl flooring w/mastic
- Drywall, tape and mud
- Dark gray cove base w/mastic
- 12"x12" Tan floor tile w/mastic
- Orange cove base w/mastic
- Blue rolled vinyl flooring w/mastic
- Rolled vinyl flooring w/mastic
- Fireplace materials

Some of the materials listed above are assumed to contain asbestos until bulk samples can be collected and analyzed.

Appendix A of this report is a table that identifies the confirmed and suspect ACM homogeneous materials in Kent Hills Elementary School, their corresponding identification number and locations, and the general condition of ACMs identified during the reinspection.

CONCLUSIONS AND RECOMMENDATIONS

MicroAir was retained by Grand Rapids Public Schools to conduct a 3-year asbestos-containing material (ACM) reinspection of Kent Hills Elementary School located at 1445 Emerald Avenue NE in Grand Rapids, Michigan. MicroAir completed the reinspection on October 17th, 2019. The inspection was conducted by a State of Michigan accredited Asbestos Building Inspector.

During the reinspection, MicroAir identified and assessed 23 homogeneous materials remaining in Kent Hills Elementary School.

Any personnel entering a tunnel or chase area must be notified of ACM locations and explained the requirement to wear personal protective equipment.

If GRPS plans to conduct any renovation or demolition, the identified ACMs should be removed by a licensed asbestos abatement contractor, as required by current federal, state, and local laws and regulations, should perform any necessary removal and disposal of the identified ACM. MicroAir notes that if suspect ACM other than those identified during this reinspection are encountered during any renovation or demolition, such materials should be sampled and analyzed using PLM to verify presence of asbestos.

We also recommend that visual observations, verification of removal and cleanup, and air monitoring or clearance air monitoring for asbestos fibers be performed by a third party retained by GRPS to demonstrate compliance with applicable regulations, and to confirm the suitability or the area for re-entry. MicroAir can perform these services.

Warning labels should be affixed in all non-public areas where ACM or assumed ACM is present. After completion of repairs or removal of the ACM, fill out an O&M Activities Form and file it in the management plan.

As required by AHERA, GRPS should continue to send the annual notifications including information on planned response actions and reinspections. Copies of the notifications should be kept in the Management Plan.

LIMITATIONS

The conclusions drawn from the observations and sample results are only valid for the time the observations occurred. In the process of gathering the field data included in this report, procedures were followed that represent reasonable and acceptable industrial hygiene practices and procedures in a manner consistent with the level of care and skill ordinarily exercised by other members of this profession currently practicing under similar conditions. However, the information and opinions provided in this report are not to be construed as a warranty of the conditions of this site in any way, implied or explicit. MicroAir accepts no responsibility for the use, interpretation, or reliance by other parties on the information contained herein, nor does this report represent an instrument of regulatory compliance or an asbestos abatement specification.

In conducting the reinspection there are a number of obstacles and limitations that can affect the final outcome of the report. These limitations include but are not limited to the following factors: access concerns, materials that cannot be intrusively sampled or damaged, materials that have been replaced by renovation activities, materials with conflicting laboratory results, and materials that are located in inaccessible and/or concealed areas which limits its quantification. Due to these limitations, the results of this investigation cannot be construed as a certification of the presence or absence of ACM, beyond the materials identified, but rather a diligent and prudent review of available data within an established work scope, and time and budgetary constraints.

If you have any questions or require additional information, please contact me at 616-302-0819 or microairconsulting@gmail.com.

Sincerely,

MicroAir Consulting, LLC

Christian T. Decker

Christian T. Decker
Accredited Building Inspector and Management Planner

APPENDIX A

TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS

APPENDIX A- 3 YEAR REINSPECTION
TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS
KENT HILLS ELEMENTARY SCHOOL
INSPECTION DATE: OCTOBER 17th, 2019

HSA NO.	HSA MATERIAL DESCRIPTION	ASBESTOS?	MATERIAL TYPE	F/NF	FUNCTIONAL AREA	CONDITION
KHE-1	Brick mortar	Assumed	MM	NF-II	All brick walls	Good
KHE-2	Block mortar	Assumed	MM	NF-II	All cinderblock walls	Good
KHE-3	Roofing	Assumed	MM	NF-I	Exterior asphalt roofing	Good
KHE-4	Fire doors and frames	**Yes**	MM	NF-II	All tagged fire doors	Good
KHE-5	EIFS	Assumed	MM	NF-II	Exterior around doors and windows	Good
KHE-6	--	--	--	--	--	--
KHE-7	Concrete	Assumed	MM	NF-II	All concrete	Good
KHE-8	Tan cove base w/mastic	Assumed	MM	NF-II	Hallways, office and entrance	Good
KHE-9	12"x12" Brown/Blue floor tile w/mastic	Assumed	MM	NF-I	Hallways	Good
KHE-10	2'x2' ceiling tile w/pins and fissures	Assumed	MM	NF-II	Hallways and classrooms	Good
KHE-11	Ceramic grout	Assumed	MM	NF-I	Bathrooms and hallways	Good
KHE-12	Sink undercoating	Assumed	MM	NF-II	Under metal sinks	Good
KHE-13	Brown cove base w/mastic	Assumed	MM	NF-II	Hallways and classrooms	Good
KHE-14	1'x1' ceiling tile w/glue pods	Assumed	MM	NF-II	Lounge, bathrooms and closets	Good
KHE-15	Leveling compound	Assumed	MM	NF-I	Under carpeting	Good
KHE-16	Green rolled vinyl flooring w/mastic	Assumed	MM	NF-I	Teacher's lounge	Good
KHE-17	Orange rolled vinyl flooring w/mastic	Assumed	MM	NF-I	Art room and roof ladder room	Good

FRIABILITY:
F: Friable
NF-I: Non-friable Category I
NF-II: Non-friable Category II

MATERIAL TYPE:
TSI: Thermal System Insulation
SM: Surfacing Material
MM: Miscellaneous Material

CONDITION:
Good: Little or no damage
Damaged: Less than 10% damage of total surface area, or less than 25% damage in a localized area
Significantly Damaged: Greater than 10% damage of total surface area, or greater than 25% damage in a localized area

SF: Square feet LF: Linear feet FT: Fittings NQ: Not Quantified

APPENDIX A- 3 YEAR REINSPECTION
TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS
KENT HILLS ELEMENTARY SCHOOL
INSPECTION DATE: OCTOBER 17th, 2019

HSA NO.	HSA MATERIAL DESCRIPTION	ASBESTOS?	MATERIAL TYPE	F/NF	FUNCTIONAL AREA	CONDITION
KHE-18	Drywall, tape and mud	No	SM	--	Interior walls and ceilings	--
KHE-19	Dark gray cove base w/mastic	Assumed	MM	NF-II	Janitor's room by boiler	Good
KHE-20	12"x12" Tan floor tile w/mastic	Assumed	MM	NF-I	Room 114 nurse's office	Good
KHE-21	Orange cove base w/mastic	Assumed	MM	NF-II	Health room	Good
KHE-22	Blue rolled vinyl flooring w/mastic	Assumed	MM	NF-I	Health room	Good
KHE-23	Rolled vinyl flooring w/mastic	Assumed	MM	NF-I	Gym	Good
KHE-24	Fireplace materials	Assumed	MM	NF-II	In and around fireplace	Good

FRIABILITY:
F: Friable
NF-I: Non-friable Category I
NF-II: Non-friable Category II

MATERIAL TYPE:
TSI: Thermal System Insulation
SM: Surfacing Material
MM: Miscellaneous Material

CONDITION:
Good: Little or no damage
Damaged: Less than 10% damage of total surface area, or less than 25% damage in a localized area
Significantly Damaged: Greater than 10% damage of total surface area, or greater than 25% damage in a localized area

SF: Square feet LF: Linear feet FT: Fittings NQ: Not Quantified

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November 4th, 2019
Project Number: MA-117-19

Mr. Marc Bennett
Grand Rapids Public Schools
900 Union, NE
Grand Rapids, MI 49503

Re: AHERA 3 Year Reinspection Report
Grand Rapids Public Schools – Sibley School

MicroAir Consulting, LLC
119 West Cass Street
P.O. Box 908
Grand Rapids, MI 48838
Phone: 616-302-0819
Web: microairconsulting.com
Email: microairconsulting@gmail.com

Dear Mr. Bennett:

MicroAir Consulting, LLC (MicroAir) was retained by Grand Rapids Public Schools (GRPS), to conduct an AHERA 3-year reinspection of Sibley School located at 943 Sibley Street NW in Grand Rapids, Michigan. The inspection was conducted according to the protocol described in the U.S. Environmental Protection Agency Asbestos Hazard Emergency Response Act of 1986 (40 CFR 763).

CERTIFICATION

The building inspection was conducted on October 16th, 2019 by Mr. Ryan Emmons, a State of Michigan accredited Asbestos Building Inspector. Mr. Emmons's, Accreditation Number is A55220.

REGULATORY BACKGROUND

As a public and commercial building, Sibley School is governed by 29 CFR 1910.1001, Occupational Health Standards for Asbestos in Construction/General Industry and the EPA's NESHAP for the normal course of business activities by GRPS employees and occupants.

There are three state agencies in Michigan that regulate asbestos in Michigan: the Michigan Department of Environmental Quality (DEQ), the Michigan Department of Licensing and Regulatory Affairs (DLARA) and the Michigan Department of State Police (MSP). The DEQ is concerned about the release of asbestos fibers to the outer air and proper waste disposal, while DLARA focuses on worker protection during renovation and demolition activities, contractor licensing, and worker training.

During construction or renovation activities, the persons performing those activities would be governed by 29 CFR 1926.1101, Occupational Health Standards for Asbestos in Construction. The Asbestos Hazard Emergency Response Act (AHERA), 40 CFR 763, (partial) and/or its associated requirements. However, there are some portions of AHERA that are used as guidelines for compliance with 29 CFR 1910.1001. In particular, 29 CFR 1910.1001(j)(1) requires owners of buildings constructed prior to 1980 to presume that certain types of building materials are asbestos-containing materials (ACM), unless the owner demonstrates that those materials are not ACM.

40 CFR Part 61, Subpart M (NESHAP) requires that a thorough inspection be conducted prior to all renovations and all demolitions. A thorough inspection for asbestos is required no matter the age of the facility because all uses of asbestos are not banned. The inspection must be completed before the commencement of a subject renovation and/or demolition activity.

BUILDING DESCRIPTION

The Sibley School building was constructed in 2006.

PREVIOUS INSPECTION

The most recent inspection was conducted by GRPS. MicroAir reviewed this report and incorporated the findings of the previous inspection and historical information into the current reinspection data.

In the previous inspection report suspect ACM materials were given a unique identification number (homogeneous material number), MicroAir has changed numbering from previous reports. The reinspection did include the collection of bulk samples. Results of the sampling can be found in Appendix A along with locations of remaining ACM in the building.

REINSPECTION PROCEDURES

With the assistance of GRPS maintenance staff, MicroAir re-inspected known and previously identified areas of the building including above suspended ceilings, pipe chases, and inside the tunnels.

It was beyond the scope of this reinspection to locate, identify, or quantify ACM in areas that were concealed and/or inaccessible areas, such as within walls, hard ceilings, or equipment.

2019 REINSPECTION FINDINGS

The following suspect asbestos-containing materials were observed at Sibley School during the asbestos inspection and the bulk sampling.

- Brick mortar
- Block mortar
- Concrete
- Dark gray cove base w/mastic
- 2'x2' ceiling tile w/holes and fissures
- 12"x12" white w/gray floor tile w/mastic
- Sink undercoating
- Black cove base w/mastic
- Drywall, tape and mud
- Duct putty
- Vibration dampener
- 12"x12" off white w/spots floor tile w/mastic
- Wood floor underlayment
- Rolled vinyl flooring w/mastic
- Curtain
- Divider wall
- Ceramic grout
- Vinyl stair tread
- Tall black cove base w/mastic
- Fire doors and frames
- Overhead soffit
- Roofing

Some of the materials listed above are assumed to contain asbestos until bulk samples can be collected and analyzed.

Appendix A of this report is a table that identifies the confirmed and suspect ACM homogeneous materials in Sibley School, their corresponding identification number and locations, and the general condition of ACMs identified during the reinspection.

CONCLUSIONS AND RECOMMENDATIONS

MicroAir was retained by Grand Rapids Public Schools to conduct a 3-year asbestos-containing material (ACM) reinspection of Sibley School located at 943 Sibley Street NW in Grand Rapids, Michigan. MicroAir completed the reinspection on October 16th, 2019. The inspection was conducted by a State of Michigan accredited Asbestos Building Inspector.

During the reinspection, MicroAir identified and assessed 22 homogeneous materials remaining in Sibley School.

Any personnel entering a tunnel or chase area must be notified of ACM locations and explained the requirement to wear personal protective equipment.

If GRPS plans to conduct any renovation or demolition, the identified ACMs should be removed by a licensed asbestos abatement contractor, as required by current federal, state, and local laws and regulations, should perform any necessary removal and disposal of the identified ACM. MicroAir notes that if suspect ACM other than those identified during this reinspection are encountered during any renovation or demolition, such materials should be sampled and analyzed using PLM to verify presence of asbestos.

We also recommend that visual observations, verification of removal and cleanup, and air monitoring or clearance air monitoring for asbestos fibers be performed by a third party retained by GRPS to demonstrate compliance with applicable regulations, and to confirm the suitability or the area for re-entry. MicroAir can perform these services.

Warning labels should be affixed in all non-public areas where ACM or assumed ACM is present. After completion of repairs or removal of the ACM, fill out an O&M Activities Form and file it in the management plan.

As required by AHERA, GRPS should continue to send the annual notifications including information on planned response actions and reinspections. Copies of the notifications should be kept in the Management Plan.

LIMITATIONS

The conclusions drawn from the observations and sample results are only valid for the time the observations occurred. In the process of gathering the field data included in this report, procedures were followed that represent reasonable and acceptable industrial hygiene practices and procedures in a manner consistent with the level of care and skill ordinarily exercised by other members of this profession currently practicing under similar conditions. However, the information and opinions provided in this report are not to be construed as a warranty of the conditions of this site in any way, implied or explicit. MicroAir accepts no responsibility for the use, interpretation, or reliance by other parties on the information contained herein, nor does this report represent an instrument of regulatory compliance or an asbestos abatement specification.

In conducting the reinspection there are a number of obstacles and limitations that can affect the final outcome of the report. These limitations include but are not limited to the following factors: access concerns, materials that cannot be intrusively sampled or damaged, materials that have been replaced by renovation activities, materials with conflicting laboratory results, and materials that are located in inaccessible and/or concealed areas which limits its quantification. Due to these limitations, the results of this investigation cannot be construed as a certification of the presence or absence of ACM, beyond the materials identified, but rather a diligent and prudent review of available data within an established work scope, and time and budgetary constraints.

If you have any questions or require additional information, please contact me at 616-302-0819 or microairconsulting@gmail.com.

Sincerely,

MicroAir Consulting, LLC

Christian T. Decker

Christian T. Decker
Accredited Building Inspector and Management Planner

APPENDIX A

TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS

APPENDIX A- 3 YEAR REINSPECTION
TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS
SIBLEY SCHOOL
INSPECTION DATE: OCTOBER 16th, 2019

HSA NO.	HSA MATERIAL DESCRIPTION	ASBESTOS?	MATERIAL TYPE	F/NF	FUNCTIONAL AREA	CONDITION
SES-1	Brick mortar	Assumed	MM	NF-II	All brick walls	Good
SES-2	Block mortar	Assumed	MM	NF-II	All cinderblock walls	Good
SES-3	Concrete	Assumed	MM	NF-II	All concrete	Good
SES-4	Dark gray cove base w/mastic	Assumed	MM	NF-II	Office	Good
SES-5	2'x2' ceiling tile w/holes and fissures	Assumed	MM	NF-II	Hallways, office and classrooms	Good
SES-6	12"x12" white w/gray floor tile w/mastic	Assumed	MM	NF-I	Office and nurse's office	Good
SES-7	Sink undercoating	Assumed	MM	NF-II	Under metal sinks	Good
SES-8	Black cove base w/mastic	Assumed	MM	NF-II	Hallways, office and nurse's office	Good
SES-9	Drywall, tape and mud	No	SM	--	Interior walls and ceiling	--
SES-10	Duct putty	Assumed	MM	NF-II	HVAC ductwork seams	Good
SES-11	Vibration dampener	Assumed	MM	NF-II	HVAC ductwork	Good
SES-12	12"x12" off white w/spots floor tile w/mastic	Assumed	MM	NF-I	Mechanical room and kitchen storage	Good
SES-13	Wood floor underlayment	Assumed	MM	NF-I	Gym	Good
SES-14	Rolled vinyl flooring w/mastic	Assumed	MM	NF-I	Hallways and cafeteria	Good
SES-15	Curtain	Assumed	MM	NF-II	Music room	Good
SES-16	Divider wall	Assumed	MM	NF-II	Music room	Good
SES-17	Ceramic grout	Assumed	MM	NF-I	Bathrooms	Good

FRIABILITY:
F: Friable
NF-I: Non-friable Category I
NF-II: Non-friable Category II

MATERIAL TYPE:
TSI: Thermal System Insulation
SM: Surfacing Material
MM: Miscellaneous Material

CONDITION:
Good: Little or no damage
Damaged: Less than 10% damage of total surface area, or less than 25% damage in a localized area
Significantly Damaged: Greater than 10% damage of total surface area, or greater than 25% damage in a localized area

SF: Square feet LF: Linear feet FT: Fittings NQ: Not Quantified

APPENDIX A- 3 YEAR REINSPECTION
TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS
SIBLEY SCHOOL
INSPECTION DATE: OCTOBER 16th, 2019

HSA NO.	HSA MATERIAL DESCRIPTION	ASBESTOS?	MATERIAL TYPE	F/NF	FUNCTIONAL AREA	CONDITION
SES-18	Vinyl stair tread	Assumed	MM	NF-I	Stairways	Good
SES-19	Tall black cove base w/mastic	Assumed	MM	NF-II	2nd floor hallways	Good
SES-20	Fire doors and frames	Assumed	MM	NF-II	All tagged fire doors	Good
SES-21	Overhead soffit	Assumed	MM	NF-II	Entrance soffit	Good
SES-22	Roofing	Assumed	MM	NF-I	Exterior asphalt roofing	Good

FRIABILITY:
F: Friable
NF-I: Non-friable Category I
NF-II: Non-friable Category II

MATERIAL TYPE:
TSI: Thermal System Insulation
SM: Surfacing Material
MM: Miscellaneous Material

CONDITION:
Good: Little or no damage
Damaged: Less than 10% damage of total surface area, or less than 25% damage in a localized area
Significantly Damaged: Greater than 10% damage of total surface area, or greater than 25% damage in a localized area

SF: Square feet LF: Linear feet FT: Fittings NQ: Not Quantified

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November 6th, 2019
Project Number: MA-117-19

Mr. Marc Bennett
Grand Rapids Public Schools
900 Union, NE
Grand Rapids, MI 49503

119 West Cass Street
P.O. Box 908
Grand Rapids, MI 48838
Phone: 616-302-0819
Web: microairconsulting.com
Email: microairconsulting@gmail.com

Re: AHERA 3 Year Reinspection Report
Grand Rapids Public Schools – Mulick Park Elementary School

Dear Mr. Bennett:

MicroAir Consulting, LLC (MicroAir) was retained by Grand Rapids Public Schools (GRPS), to conduct an AHERA 3-year reinspection of Mulick Park Elementary School located at 1761 Rosewood Avenue SE in Grand Rapids, Michigan. The inspection was conducted according to the protocol described in the U.S. Environmental Protection Agency Asbestos Hazard Emergency Response Act of 1986 (40 CFR 763).

CERTIFICATION

The building inspection was conducted on October 10th, 2019 by Mr. Ryan Emmons, a State of Michigan accredited Asbestos Building Inspector. Mr. Emmons's, Accreditation Number is A55220.

REGULATORY BACKGROUND

As a public and commercial building, Mulick Park is governed by 29 CFR 1910.1001, Occupational Health Standards for Asbestos in Construction/General Industry and the EPA's NESHAP for the normal course of business activities by GRPS employees and occupants.

There are three state agencies in Michigan that regulate asbestos in Michigan: the Michigan Department of Environmental Quality (DEQ), the Michigan Department of Licensing and Regulatory Affairs (DLARA) and the Michigan Department of State Police (MSP). The DEQ is concerned about the release of asbestos fibers to the outer air and proper waste disposal, while DLARA focuses on worker protection during renovation and demolition activities, contractor licensing, and worker training.

During construction or renovation activities, the persons performing those activities would be governed by 29 CFR 1926.1101, Occupational Health Standards for Asbestos in Construction. The Asbestos Hazard Emergency Response Act (AHERA), 40 CFR 763, (partial) and/or its associated requirements. However, there are some portions of AHERA that are used as guidelines for compliance with 29 CFR 1910.1001. In particular, 29 CFR 1910.1001(j)(1) requires owners of buildings constructed prior to 1980 to presume that certain types of building materials are asbestos-containing materials (ACM), unless the owner demonstrates that those materials are not ACM.

40 CFR Part 61, Subpart M (NESHAP) requires that a thorough inspection be conducted prior to all renovations and all demolitions. A thorough inspection for asbestos is required no matter the age of the facility because all uses of asbestos are not banned. The inspection must be completed before the commencement of a subject renovation and/or demolition activity.

BUILDING DESCRIPTION

The Mulick Park Elementary School building was constructed in 1953 with an addition in 1955. Some building renovations have occurred throughout over the years as well.

PREVIOUS INSPECTION

The most recent inspection was conducted by GRPS. MicroAir reviewed this report and incorporated the findings of the previous inspection and historical information into the current reinspection data.

In the previous inspection report suspect ACM materials were given a unique identification number (homogeneous material number), MicroAir has changed numbering from previous reports. The reinspection did include the collection of bulk samples. Results of the sampling can be found in Appendix A along with locations of remaining ACM in the building.

REINSPECTION PROCEDURES

With the assistance of GRPS maintenance staff, MicroAir re-inspected known and previously identified areas of the building including above suspended ceilings, pipe chases, and inside the tunnels.

It was beyond the scope of this reinspection to locate, identify, or quantify ACM in areas that were concealed and/or inaccessible areas, such as within walls, hard ceilings, or equipment.

2019 REINSPECTION FINDINGS

The following suspect asbestos-containing materials were observed at Mulick Park Elementary School during the asbestos inspection and the bulk sampling. Materials in **bold** were found to be greater than 1% ACM.

- **9"x9" floor tile and mastic**
- Brown cove base and mastic
- **9"x9" Green floor tile w/lines and mastic**
- Wall and ceiling plaster
- Black cove base and mastic
- Linoleum on walls and counters
- **Pipe insulation and fittings**
- **Vibration dampener**
- 12"x12" Tan/brown floor tile and mastic
- 1'x1' ceiling tile smooth w/glue pod
- 1'x1' ceiling tile w/holes w/glue pod
- 2'x2' ceiling tile w/holes and fissures
- **Light fixture heat shield**
- **Fire doors and frames**
- 12"x12" Blue/beige w/streaks and mastic
- Glue pod above drop ceiling
- Drywall, tape and mud
- Plaster
- Brick mortar
- Concrete
- Blue cove base w/mastic
- Wood floor underlayment
- Sink undercoating
- Ceramic grout
- EIFS
- Older chalkboards
- Decorative block mortar
- Block mortar
- Wallboard glue pods

Some of the materials listed above are assumed to contain asbestos until bulk samples can be collected and analyzed.

Appendix A of this report is a table that identifies the confirmed and suspect ACM homogeneous materials in Mulick Park Elementary School, their corresponding identification number and locations, and the general condition of ACMs identified during the reinspection.

CONCLUSIONS AND RECOMMENDATIONS

MicroAir was retained by Grand Rapids Public Schools to conduct a 3-year asbestos-containing material (ACM) reinspection of Mulick Park Elementary School located at 1761 Rosewood Avenue SE in Grand Rapids, Michigan. MicroAir completed the reinspection on October 10th, 2019. The inspection was conducted by a State of Michigan accredited Asbestos Building Inspector.

During the reinspection, MicroAir identified and assessed 29 homogeneous materials remaining in Mulick Park Elementary School.

Any personnel entering a tunnel or chase area must be notified of ACM locations and explained the requirement to wear personal protective equipment.

If GRPS plans to conduct any renovation or demolition, the identified ACMs should be removed by a licensed asbestos abatement contractor, as required by current federal, state, and local laws and regulations, should perform any necessary removal and disposal of the identified ACM. MicroAir notes that if suspect ACM other than those identified during this reinspection are encountered during any renovation or demolition, such materials should be sampled and analyzed using PLM to verify presence of asbestos.

We also recommend that visual observations, verification of removal and cleanup, and air monitoring or clearance air monitoring for asbestos fibers be performed by a third party retained by GRPS to demonstrate compliance with applicable regulations, and to confirm the suitability or the area for re-entry. MicroAir can perform these services.

Warning labels should be affixed in all non-public areas where ACM or assumed ACM is present. After completion of repairs or removal of the ACM, fill out an O&M Activities Form and file it in the management plan.

As required by AHERA, GRPS should continue to send the annual notifications including information on planned response actions and reinspections. Copies of the notifications should be kept in the Management Plan.

LIMITATIONS

The conclusions drawn from the observations and sample results are only valid for the time the observations occurred. In the process of gathering the field data included in this report, procedures were followed that represent reasonable and acceptable industrial hygiene practices and procedures in a manner consistent with the level of care and skill ordinarily exercised by other members of this profession currently practicing under similar conditions. However, the information and opinions provided in this report are not to be construed as a warranty of the conditions of this site in any way, implied or explicit. MicroAir accepts no responsibility for the use, interpretation, or reliance by other parties on the information contained herein, nor does this report represent an instrument of regulatory compliance or an asbestos abatement specification.

In conducting the reinspection there are a number of obstacles and limitations that can affect the final outcome of the report. These limitations include but are not limited to the following factors: access concerns, materials that cannot be intrusively sampled or damaged, materials that have been replaced by renovation activities, materials with conflicting laboratory results, and materials that are located in inaccessible and/or concealed areas which limits its quantification. Due to these limitations, the results of this investigation cannot be construed as a certification of the presence or absence of ACM, beyond the materials identified, but rather a diligent and prudent review of available data within an established work scope, and time and budgetary constraints.

If you have any questions or require additional information, please contact me at 616-302-0819 or microairconsulting@gmail.com.

Sincerely,

MicroAir Consulting, LLC

Christian T. Decker

Christian T. Decker
Accredited Building Inspector and Management Planner

APPENDIX A

TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS

APPENDIX A- 3 YEAR REINSPECTION
TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS
MULICK PARK ELEMENTARY SCHOOL
INSPECTION DATE: OCTOBER 10th, 2019

HSA NO.	HSA MATERIAL DESCRIPTION	ASBESTOS?	MATERIAL TYPE	F/NF	FUNCTIONAL AREA	CONDITION
MP-HA1	9"x9" floor tile and mastic	Tile – **Yes** Mastic – No	MM	NF-I	Rooms 130, 131, 138, 140 and across from 112	Good
MP-HA2	Brown cove base and mastic	Both- No	MM	--	Interior wall bases	--
MP-HA3	9"x9" Green floor tile w/lines and mastic	Tile – **Yes** Mastic – No	MM	--	Removed	--
MP-HA4	Wall and ceiling plaster	No	SM	--	Interior walls and ceilings	--
MP-HA5	Black cove base and mastic	Both- No	MM	--	Room 106 and corridor 152	--
MP-HA6	Linoleum on walls and counters	Both- No	MM	--	Room 108	--
MP-HA7	Pipe insulation and fittings	**Yes**	TSI	F	West and east stage mechanical rooms and tunnels	Good
MP-HA8	Vibration dampener	**Yes**	MM	NF-II	West and east stage mechanical rooms	Good
MP-HA9	12"x12" Tan/brown floor tile and mastic	Both- No	MM	--	Room 149	--
MP-HA10	1'x1' ceiling tile smooth w/glue pod	Both- No	MM	--	Remaining ceilings	--
MP-HA11	1'x1' ceiling tile w/holes w/glue pod	Both- No	MM	--	Removed	--
MP-HA12	2'x2' ceiling tile w/holes and fissures	Both- No	MM	--	Rooms 111-121	--
MP-HA13	Light fixture heat shield	**Yes**	MM	NF-II	Older surface mounted lights	Good
MP-HA14	Fire doors and frames	**Yes**	MM	NF-II	All tagged fire doors	Good
MP-HA15	12"x12" Blue/beige w/streaks and mastic	Both- No	MM	--	Room 119	--
MP-HA16	Glue pod above drop ceiling	No	MM	--	Above ceilings	--

FRIABILITY:
F: Friable
NF-I: Non-friable Category I
NF-II: Non-friable Category II

MATERIAL TYPE:
TSI: Thermal System Insulation
SM: Surfacing Material
MM: Miscellaneous Material

CONDITION:
Good: Little or no damage
Damaged: Less than 10% damage of total surface area, or less than 25% damage in a localized area
Significantly Damaged: Greater than 10% damage of total surface area, or greater than 25% damage in a localized area

SF: Square feet LF: Linear feet FT: Fittings NQ: Not Quantified

APPENDIX A- 3 YEAR REINSPECTION
TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS
MULICK PARK ELEMENTARY SCHOOL
INSPECTION DATE: OCTOBER 10th, 2019

HSA NO.	HSA MATERIAL DESCRIPTION	ASBESTOS?	MATERIAL TYPE	F/NF	FUNCTIONAL AREA	CONDITION
MP-HA17	Drywall, tape and mud	No	SM	--	Interior drywall, Room 149	--
MP-HA18	Plaster	No	SM	--	All plaster	--
MP-HA19	Brick mortar	Assumed	MM	NF-II	All brick walls	Good
MP-HA20	Concrete	Assumed	MM	NF-II	All concrete	Good
MP-HA21	Blue cove base w/mastic	Assumed	MM	NF-II	Interior wall base	Good
MP-HA22	Wood floor underlayment	Assumed	MM	NF-I	Under wood flooring	Good
MP-HA23	Sink undercoating	Assumed	MM	NF-II	Under metal sinks	Good
MP-HA24	Ceramic grout	Assumed	MM	NF-I	Bathrooms, Hallways and classrooms	Good
MP-HA25	EIFS	Assumed	SM	F	Exterior around windows and doors	Good
MP-HA26	Older chalkboards	Assumed	MM	NF-II	Classrooms	Good
MP-HA27	Decorative block mortar	Assumed	MM	NF-II	Exterior decorative block	Good
MP-HA28	Block mortar	Assumed	MM	NF-II	All cinderblock walls	Good
MP-HA29	Wallboard glue pods	Assumed	MM	NF-II	Hallways	Good

FRIABILITY:
F: Friable
NF-I: Non-friable Category I
NF-II: Non-friable Category II

MATERIAL TYPE:
TSI: Thermal System Insulation
SM: Surfacing Material
MM: Miscellaneous Material

CONDITION:
Good: Little or no damage
Damaged: Less than 10% damage of total surface area, or less than 25% damage in a localized area
Significantly Damaged: Greater than 10% damage of total surface area, or greater than 25% damage in a localized area

SF: Square feet LF: Linear feet FT: Fittings NQ: Not Quantified

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November 6th, 2019
Project Number: MA-117-19

Mr. Marc Bennett
Grand Rapids Public Schools
900 Union, NE
Grand Rapids, MI 49503

Re: AHERA 3 Year Reinspection Report
Grand Rapids Public Schools – Houseman Field

MicroAir Consulting, LLC
119 West Cass Street
P.O. Box 908
Grand Rapids, MI 48838
Phone: 616-302-0819
Web: microairconsulting.com
Email: microairconsulting@gmail.com

Dear Mr. Bennett:

MicroAir Consulting, LLC (MicroAir) was retained by Grand Rapids Public Schools (GRPS), to conduct an AHERA 3-year reinspection of Houseman Field located at 162 Houseman Ave NE, in Grand Rapids, Michigan. The inspection was conducted according to the protocol described in the U.S. Environmental Protection Agency Asbestos Hazard Emergency Response Act of 1986 (40 CFR 763).

CERTIFICATION

The building inspection was conducted on October 29th, 2019 by Mr. Ryan Emmons, a State of Michigan accredited Asbestos Building Inspector. Mr. Emmons's, Accreditation Number is A55220.

REGULATORY BACKGROUND

As a public and commercial building, Houseman Field is governed by 29 CFR 1910.1001, Occupational Health Standards for Asbestos in Construction/General Industry and the EPA's NESHAP for the normal course of business activities by GRPS employees and occupants.

There are three state agencies in Michigan that regulate asbestos in Michigan: the Michigan Department of Environmental Quality (DEQ), the Michigan Department of Licensing and Regulatory Affairs (DLARA) and the Michigan Department of State Police (MSP). The DEQ is concerned about the release of asbestos fibers to the outer air and proper waste disposal, while DLARA focuses on worker protection during renovation and demolition activities, contractor licensing, and worker training.

During construction or renovation activities, the persons performing those activities would be governed by 29 CFR 1926.1101, Occupational Health Standards for Asbestos in Construction. The Asbestos Hazard Emergency Response Act (AHERA), 40 CFR 763, (partial) and/or its associated requirements. However, there are some portions of AHERA that are used as guidelines for compliance with 29 CFR 1910.1001. In particular, 29 CFR 1910.1001(j)(1) requires owners of buildings constructed prior to 1980 to presume that certain types of building materials are asbestos-containing materials (ACM), unless the owner demonstrates that those materials are not ACM.

40 CFR Part 61, Subpart M (NESHAP) requires that a thorough inspection be conducted prior to all renovations and all demolitions. A thorough inspection for asbestos is required no matter the age of the facility because all uses of asbestos are not banned. The inspection must be completed before the commencement of a subject renovation and/or demolition activity.

BUILDING DESCRIPTION

The Houseman Field construction date is newer. Some building renovations have occurred throughout over the years as well.

PREVIOUS INSPECTION

The most recent inspection was conducted by GRPS. MicroAir reviewed this report and incorporated the findings of the previous inspection and historical information into the current reinspection data.

In the previous inspection report suspect ACM materials were given a unique identification number (homogeneous material number), MicroAir has changed numbering from previous reports. The reinspection did include the collection of bulk samples. Results of the sampling can be found in Appendix A along with locations of remaining ACM in the building.

REINSPECTION PROCEDURES

With the assistance of GRPS maintenance staff, MicroAir re-inspected known and previously identified areas of the building including above suspended ceilings, pipe chases, and inside the tunnels.

It was beyond the scope of this reinspection to locate, identify, or quantify ACM in areas that were concealed and/or inaccessible areas, such as within walls, hard ceilings, or equipment.

2019 REINSPECTION FINDINGS

The following suspect asbestos-containing materials were observed at Houseman Field during the asbestos inspection and the bulk sampling. Materials in **bold** were found to be greater than 1% ACM.

- Older brick mortar
- Newer brick mortar
- Roofing
- Block mortar
- Concrete
- **Fire doors and frames**
- Black cove base w/mastic
- Drywall, tape and mud- Concessions
- Duct putty
- Rolled vinyl flooring w/mastic
- Vinyl stair tread w/mastic
- Drywall, tape and mud- Info booth
- EIFS
- 2'x2' ceiling tile smooth
- Drywall, tape and mud- Ticket booth
- Drywall, tape and mud- Announcer's booth
- Drywall, tape and mud- Visitor ticket booth

Some of the materials listed above are assumed to contain asbestos until bulk samples can be collected and analyzed.

Appendix A of this report is a table that identifies the confirmed and suspect ACM homogeneous materials in Houseman Field, their corresponding identification number and locations, and the general condition of ACMs identified during the reinspection.

CONCLUSIONS AND RECOMMENDATIONS

MicroAir was retained by Grand Rapids Public Schools to conduct a 3-year asbestos-containing material (ACM) reinspection of Houseman Field located at 162 Houseman Ave NE, in Grand Rapids, Michigan. MicroAir completed the reinspection on October 29th, 2019. The inspection was conducted by a State of Michigan accredited Asbestos Building Inspector.

During the reinspection, MicroAir identified and assessed 17 homogeneous materials remaining in Houseman Field.

Any personnel entering a tunnel or chase area must be notified of ACM locations and explained the requirement to wear personal protective equipment.

If GRPS plans to conduct any renovation or demolition, the identified ACMs should be removed by a licensed asbestos abatement contractor, as required by current federal, state, and local laws and regulations, should perform any necessary removal and disposal of the identified ACM. MicroAir notes that if suspect ACM other than those identified during this reinspection are encountered during any renovation or demolition, such materials should be sampled and analyzed using PLM to verify presence of asbestos.

We also recommend that visual observations, verification of removal and cleanup, and air monitoring or clearance air monitoring for asbestos fibers be performed by a third party retained by GRPS to demonstrate compliance with applicable regulations, and to confirm the suitability or the area for re-entry. MicroAir can perform these services.

Warning labels should be affixed in all non-public areas where ACM or assumed ACM is present. After completion of repairs or removal of the ACM, fill out an O&M Activities Form and file it in the management plan.

As required by AHERA, GRPS should continue to send the annual notifications including information on planned response actions and reinspections. Copies of the notifications should be kept in the Management Plan.

LIMITATIONS

The conclusions drawn from the observations and sample results are only valid for the time the observations occurred. In the process of gathering the field data included in this report, procedures were followed that represent reasonable and acceptable industrial hygiene practices and procedures in a manner consistent with the level of care and skill ordinarily exercised by other members of this profession currently practicing under similar conditions. However, the information and opinions provided in this report are not to be construed as a warranty of the conditions of this site in any way, implied or explicit. MicroAir accepts no responsibility for the use, interpretation, or reliance by other parties on the information contained herein, nor does this report represent an instrument of regulatory compliance or an asbestos abatement specification.

In conducting the reinspection there are a number of obstacles and limitations that can affect the final outcome of the report. These limitations include but are not limited to the following factors: access concerns, materials that cannot be intrusively sampled or damaged, materials that have been replaced by renovation activities, materials with conflicting laboratory results, and materials that are located in inaccessible and/or concealed areas which limits its quantification. Due to these limitations, the results of this investigation cannot be construed as a certification of the presence or absence of ACM, beyond the materials identified, but rather a diligent and prudent review of available data within an established work scope, and time and budgetary constraints.

If you have any questions or require additional information, please contact me at 616-302-0819 or microairconsulting@gmail.com.

Sincerely,

MicroAir Consulting, LLC

Christian T. Decker

Christian T. Decker
Accredited Building Inspector and Management Planner

APPENDIX A

TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS

APPENDIX A- 3 YEAR REINSPECTION
TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS
GRPS – HOUSEMAN FIELD
INSPECTION DATE: OCTOBER 29th, 2019

HSA NO.	HSA MATERIAL DESCRIPTION	ASBESTOS?	MATERIAL TYPE	F/NF	FUNCTIONAL AREA	CONDITION
HMF-1	Older brick mortar	Assumed	MM	NF-II	Older standard brick mortar	Good
HMF-2	Newer brick mortar	Assumed	MM	NF-II	Newer larger brick mortar	Good
HMF-3	Roofing	Assumed	MM	NF-I	Asphalt roofing	Good
HMF-4	Block mortar	Assumed	MM	NF-II	All cinderblock walls	Good
HMF-5	Concrete	Assumed	MM	NF-II	All concrete	Good
HMF-6	Fire doors and frames	**Yes**	MM	NF-II	All tagged fire doors	Good
HMF-7	Black cove base w/mastic	Assumed	MM	NF-II	Interior walls	Good
HMF-8	Drywall, tape and mud	No	SM	--	Concessions	--
HMF-9	Duct putty	Assumed	MM	NF-II	Concessions HVAC ductwork	Good
HMF-10	Rolled vinyl flooring w/mastic	Assumed	MM	NF-I	Concessions elevator	Good
HMF-11	Vinyl stair tread w/mastic	Assumed	MM	NF-I	Announcer's booth	Good
HMF-12	Drywall, tape and mud	No	SM	--	Info booth	--
HMF-13	EIFS	Assumed	SM	F	Exterior of concessions	Good
HMF-14	2'x2' ceiling tile smooth	Assumed	MM	NF-II	Concessions	Good
HMF-15	Drywall, tape and mud	No	SM	--	Ticket booth	--
HMF-16	Drywall, tape and mud	No	SM	--	Announcer's booth	--
HMF-17	Drywall, tape and mud	No	SM	--	Visitor ticket booth	--

FRIABILITY:
F: Friable
NF-I: Non-friable Category I
NF-II: Non-friable Category II

MATERIAL TYPE:
TSI: Thermal System Insulation
SM: Surfacing Material
MM: Miscellaneous Material

CONDITION:
Good: Little or no damage
Damaged: Less than 10% damage of total surface area, or less than 25% damage in a localized area
Significantly Damaged: Greater than 10% damage of total surface area, or greater than 25% damage in a localized area

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November 4th, 2019
Project Number: MA-117-19

Mr. Marc Bennett
Grand Rapids Public Schools
900 Union, NE
Grand Rapids, MI 49503

MicroAir Consulting, LLC
119 West Cass Street
P.O. Box 908
Grand Rapids, MI 48838
Phone: 616-302-0819
Web: microairconsulting.com
Email: microairconsulting@gmail.com

Re: AHERA 3 Year Reinspection Report
Grand Rapids Public Schools – Southeast Career Pathways

Dear Mr. Bennett:

MicroAir Consulting, LLC (MicroAir) was retained by Grand Rapids Public Schools (GRPS), to conduct an AHERA 3-year reinspection of Southeast Career Pathways located at 1356 Jefferson Ave, SE in Grand Rapids, Michigan. The inspection was conducted according to the protocol described in the U.S. Environmental Protection Agency Asbestos Hazard Emergency Response Act of 1986 (40 CFR 763).

CERTIFICATION

The building inspection was conducted on October 21st, 2019 by Mr. Ryan Emmons, a State of Michigan accredited Asbestos Building Inspector. Mr. Emmons's, Accreditation Number is A55220.

REGULATORY BACKGROUND

As a public and commercial building, Southeast Career Pathways is governed by 29 CFR 1910.1001, Occupational Health Standards for Asbestos in Construction/General Industry and the EPA's NESHAP for the normal course of business activities by GRPS employees and occupants.

There are three state agencies in Michigan that regulate asbestos in Michigan: the Michigan Department of Environmental Quality (DEQ), the Michigan Department of Licensing and Regulatory Affairs (DLARA) and the Michigan Department of State Police (MSP). The DEQ is concerned about the release of asbestos fibers to the outer air and proper waste disposal, while DLARA focuses on worker protection during renovation and demolition activities, contractor licensing, and worker training.

During construction or renovation activities, the persons performing those activities would be governed by 29 CFR 1926.1101, Occupational Health Standards for Asbestos in Construction. The Asbestos Hazard Emergency Response Act (AHERA), 40 CFR 763, (partial) and/or its associated requirements. However, there are some portions of AHERA that are used as guidelines for compliance with 29 CFR 1910.1001. In particular, 29 CFR 1910.1001(j)(1) requires owners of buildings constructed prior to 1980 to presume that certain types of building materials are asbestos-containing materials (ACM), unless the owner demonstrates that those materials are not ACM.

40 CFR Part 61, Subpart M (NESHAP) requires that a thorough inspection be conducted prior to all renovations and all demolitions. A thorough inspection for asbestos is required no matter the age of the facility because all uses of asbestos are not banned. The inspection must be completed before the commencement of a subject renovation and/or demolition activity.

BUILDING DESCRIPTION

The Southeast Career Pathways building was constructed in the 1950's. Some building renovations have occurred throughout over the years as well. Formerly Jefferson

PREVIOUS INSPECTION

The most recent inspection was conducted by GRPS. MicroAir reviewed this report and incorporated the findings of the previous inspection and historical information into the current reinspection data.

In the previous inspection report suspect ACM materials were given a unique identification number (homogeneous material number), MicroAir has changed numbering from previous reports. The reinspection did include the collection of bulk samples. Results of the sampling can be found in Appendix A along with locations of remaining ACM in the building.

REINSPECTION PROCEDURES

With the assistance of GRPS maintenance staff, MicroAir re-inspected known and previously identified areas of the building including above suspended ceilings, pipe chases, and inside the tunnels.

It was beyond the scope of this reinspection to locate, identify, or quantify ACM in areas that were concealed and/or inaccessible areas, such as within walls, hard ceilings, or equipment.

2019 REINSPECTION FINDINGS

The following suspect asbestos-containing materials were observed at Southeast Career Pathways during the asbestos inspection and the bulk sampling. Materials in **bold** were found to be greater than 1% ACM.

- Hard Plaster ceiling
- 12"x12" Brown/Tan floor tile w/mastic
- Brick mortar
- **Fire doors and frames**
- Block mortar
- 2'x4' ceiling tile smooth
- Brown cove base w/mastic
- Dark grey cove base w/mastic
- Drywall, tape and mud
- Ceramic grout
- Concrete
- Mudded fittings
- Cream cove base w/mastic
- 2'x2' ceiling tile smooth
- Wood floor underlayment
- Mudded roof drains
- 12"x12" White/gray floor tile w/mastic
- Sink undercoating
- Vibration dampener
- Textured drywall, tape and mud
- Tall gray cove base w/mastic
- 1'x1' ceiling tile w/glue pod
- 2'x4' ceiling tiles w/pins and fissures
- Black cove base w/mastic
- 9"x9" floor tile w/mastic
- Older chalkboards
- 2'x2' ceiling tile w/pins and fissures
- 12"x12" light brown floor tile w/mastic
- **Older Drywall, tape and mud**

Some of the materials listed above are assumed to contain asbestos until bulk samples can be collected and analyzed.

Appendix A of this report is a table that identifies the confirmed and suspect ACM homogeneous materials in Southeast Career Pathways, their corresponding identification number and locations, and the general condition of ACMs identified during the reinspection.

CONCLUSIONS AND RECOMMENDATIONS

MicroAir was retained by Grand Rapids Public Schools to conduct a 3-year asbestos-containing material (ACM) reinspection of Southeast Career Pathways located at 1356 Jefferson Ave, SE in Grand Rapids, Michigan. MicroAir completed the reinspection on October 21st, 2019. The inspection was conducted by a State of Michigan accredited Asbestos Building Inspector.

During the reinspection, MicroAir identified and assessed 29 homogeneous materials remaining in Southeast Career Pathways.

Any personnel entering a tunnel or chase area must be notified of ACM locations and explained the requirement to wear personal protective equipment.

If GRPS plans to conduct any renovation or demolition, the identified ACMs should be removed by a licensed asbestos abatement contractor, as required by current federal, state, and local laws and regulations, should perform any necessary removal and disposal of the identified ACM. MicroAir notes that if suspect ACM other than those identified during this reinspection are encountered during any renovation or demolition, such materials should be sampled and analyzed using PLM to verify presence of asbestos.

We also recommend that visual observations, verification of removal and cleanup, and air monitoring or clearance air monitoring for asbestos fibers be performed by a third party retained by GRPS to demonstrate compliance with applicable regulations, and to confirm the suitability or the area for re-entry. MicroAir can perform these services.

Warning labels should be affixed in all non-public areas where ACM or assumed ACM is present. After completion of repairs or removal of the ACM, fill out an O&M Activities Form and file it in the management plan.

As required by AHERA, GRPS should continue to send the annual notifications including information on planned response actions and reinspections. Copies of the notifications should be kept in the Management Plan.

LIMITATIONS

The conclusions drawn from the observations and sample results are only valid for the time the observations occurred. In the process of gathering the field data included in this report, procedures were followed that represent reasonable and acceptable industrial hygiene practices and procedures in a manner consistent with the level of care and skill ordinarily exercised by other members of this profession currently practicing under similar conditions. However, the information and opinions provided in this report are not to be construed as a warranty of the conditions of this site in any way, implied or explicit. MicroAir accepts no responsibility for the use, interpretation, or reliance by other parties on the information contained herein, nor does this report represent an instrument of regulatory compliance or an asbestos abatement specification.

In conducting the reinspection there are a number of obstacles and limitations that can affect the final outcome of the report. These limitations include but are not limited to the following factors: access concerns, materials that cannot be intrusively sampled or damaged, materials that have been replaced by renovation activities, materials with conflicting laboratory results, and materials that are located in inaccessible and/or concealed areas which limits its quantification. Due to these limitations, the results of this investigation cannot be construed as a certification of the presence or absence of ACM, beyond the materials identified, but rather a diligent and prudent review of available data within an established work scope, and time and budgetary constraints.

If you have any questions or require additional information, please contact me at 616-302-0819 or microairconsulting@gmail.com.

Sincerely,

MicroAir Consulting, LLC

Christian T. Decker

Christian T. Decker
Accredited Building Inspector and Management Planner

APPENDIX A

TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS

APPENDIX A- 3 YEAR REINSPECTION
TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS
GRPS – SOUTHEAST CAREER PATHWAYS
INSPECTION DATE: OCTOBER 21st, 2019

HSA NO.	HSA MATERIAL DESCRIPTION	ASBESTOS?	MATERIAL TYPE	F/NF	FUNCTIONAL AREA	CONDITION
CPS - 1	Hard Plaster ceiling	No	SM	--	Interior hard ceilings, storage and closets	--
CPS - 2	12"x12" Brown/Tan floor tile w/mastic	Assumed	MM	NF-I	Kitchen area	Good
CPS - 3	Brick mortar	Assumed	MM	NF-II	All brick walls	Good
CPS-4	Fire doors and frames	**Yes**	MM	NF-II	All tagged doors	Good
CPS-5	Block mortar	Assumed	MM	NF-II	All cinderblock walls	Good
CPS-6	2'x4' ceiling tile smooth	Assumed	MM	NF-II	Hallways and classrooms	Good
CPS-7	Brown cove base w/mastic	Assumed	MM	NF-II	Classrooms	Good
CPS-8	Dark grey cove base w/mastic	Assumed	MM	NF-II	Classrooms	Good
CPS-9	Drywall, tape and mud	No	SM	--	Interior drywall	--
CPS-10	Ceramic grout	Assumed	MM	NF-I	Hallways and bathrooms	Good
CPS-11	Concrete	Assumed	MM	NF-II	All concrete	Good
CPS-12	Mudded fittings	No	TSI	--	Mechanical areas	--
CPS-13	Cream cove base w/mastic	Assumed	MM	NF-II	Storage	Good
CPS-14	2'x2' ceiling tile smooth	Assumed	MM	NF-II	Kitchen	Good
CPS-15	Wood floor underlayment	Assumed	MM	NF-I	Under wood flooring	Good
CPS-16	Mudded roof drains	Assumed	TSI	F	Gym and throughout building	Good
CPS-17	12"x12" White/gray floor tile w/mastic	Assumed	MM	NF-I	Gym floor and storage	Good
CPS-18	Sink undercoating	Assumed	MM	NF-II	All metal sinks	Good

FRIABILITY:
F: Friable
NF-I: Non-friable Category I
NF-II: Non-friable Category II

MATERIAL TYPE:
TSI: Thermal System Insulation
SM: Surfacing Material
MM: Miscellaneous Material

CONDITION:
Good: Little or no damage
Damaged: Less than 10% damage of total surface area, or less than 25% damage in a localized area
Significantly Damaged: Greater than 10% damage of total surface area, or greater than 25% damage in a localized area

APPENDIX A- 3 YEAR REINSPECTION
TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS
GRPS – SOUTHEAST CAREER PATHWAYS
INSPECTION DATE: OCTOBER 21st, 2019

HSA NO.	HSA MATERIAL DESCRIPTION	ASBESTOS?	MATERIAL TYPE	F/NF	FUNCTIONAL AREA	CONDITION
CPS-19	Vibration dampener	Assumed	MM	NF-II	HVAC ductwork	Good
CPS-20	Textured drywall, tape and mud	No	SM	--	Bathroom ceilings and storage	--
CPS-21	Tall gray cove base w/mastic	Assumed	MM	NF-II	Near gym entrance/exit	Good
CPS-22	1'x1' ceiling tile w/glue pod	Assumed	MM	NF-II	Ceilings in hallways and some classrooms	Good
CPS-23	2'x4' ceiling tiles w/pins and fissures	Assumed	MM	NF-II	Classrooms	Good
CPS-24	Black cove base w/mastic	Assumed	MM	NF-II	Classrooms	Good
CPS-25	9"x9" floor tile w/mastic	Assumed	MM	NF-I	Laundry area	Good
CPS-26	Older chalkboards	Assumed	MM	NF-II	Classrooms	Good
CPS-27	2'x2' ceiling tile w/pins and fissures	Assumed	MM	NF-II	Classrooms	Good
CPS-28	12"x12" light brown floor tile w/mastic	Assumed	MM	NF-I	Classrooms	Good
CPS-29	Older Drywall, tape and **mud**	**Yes**	SM	F	Mechanical room	Good

FRIABILITY:
F: Friable
NF-I: Non-friable Category I
NF-II: Non-friable Category II

MATERIAL TYPE:
TSI: Thermal System Insulation
SM: Surfacing Material
MM: Miscellaneous Material

CONDITION:
Good: Little or no damage
Damaged: Less than 10% damage of total surface area, or less than 25% damage in a localized area
Significantly Damaged: Greater than 10% damage of total surface area, or greater than 25% damage in a localized area

SF: Square feet LF: Linear feet FT: Fittings NQ: Not Quantified

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October 31st, 2019
Project Number: MA-117-19

Mr. Marc Bennett
Grand Rapids Public Schools
900 Union, NE
Grand Rapids, MI 49503

Re: AHERA 3 Year Reinspection Report
Grand Rapids Public Schools – Aberdeen Elementary School

MicroAir Consulting, LLC
119 West Cass Street
P.O. Box 908
Grand Rapids, MI 48838
Phone: 616-302-0819
Web: microairconsulting.com
Email: microairconsulting@gmail.com

Dear Mr. Bennett:

MicroAir Consulting, LLC (MicroAir) was retained by Grand Rapids Public Schools (GRPS), to conduct an AHERA 3-year reinspection of Aberdeen Elementary School located at 928 Aberdeen Street NE in Grand Rapids, Michigan. The inspection was conducted according to the protocol described in the U.S. Environmental Protection Agency Asbestos Hazard Emergency Response Act of 1986 (40 CFR 763).

CERTIFICATION

The building inspection was conducted on October 13th, 2019 by Mr. Ryan Emmons, a State of Michigan accredited Asbestos Building Inspector. Mr. Emmons's, Accreditation Number is A55220.

REGULATORY BACKGROUND

As a public and commercial building, Aberdeen is governed by 29 CFR 1910.1001, Occupational Health Standards for Asbestos in Construction/General Industry and the EPA's NESHAP for the normal course of business activities by GRPS employees and occupants.

There are three state agencies in Michigan that regulate asbestos in Michigan: the Michigan Department of Environmental Quality (DEQ), the Michigan Department of Licensing and Regulatory Affairs (DLARA) and the Michigan Department of State Police (MSP). The DEQ is concerned about the release of asbestos fibers to the outer air and proper waste disposal, while DLARA focuses on worker protection during renovation and demolition activities, contractor licensing, and worker training.

During construction or renovation activities, the persons performing those activities would be governed by 29 CFR 1926.1101, Occupational Health Standards for Asbestos in Construction. The Asbestos Hazard Emergency Response Act (AHERA), 40 CFR 763, (partial) and/or its associated requirements. However, there are some portions of AHERA that are used as guidelines for compliance with 29 CFR 1910.1001. In particular, 29 CFR 1910.1001(j)(1) requires owners of buildings constructed prior to 1980 to presume that certain types of building materials are asbestos-containing materials (ACM), unless the owner demonstrates that those materials are not ACM.

40 CFR Part 61, Subpart M (NESHAP) requires that a thorough inspection be conducted prior to all renovations and all demolitions. A thorough inspection for asbestos is required no matter the age of the facility because all uses of asbestos are not banned. The inspection must be completed before the commencement of a subject renovation and/or demolition activity.

BUILDING DESCRIPTION

The Aberdeen Elementary School building was constructed in 1929. Some building renovations have occurred throughout over the years as well.

PREVIOUS INSPECTION

The most recent inspection was conducted by GRPS. MicroAir reviewed this report and incorporated the findings of the previous inspection and historical information into the current reinspection data.

In the previous inspection report suspect ACM materials were given a unique identification number (homogeneous material number), MicroAir has changed numbering from previous reports. The reinspection did include the collection of bulk samples. Results of the sampling can be found in Appendix A along with locations of remaining ACM in the building.

REINSPECTION PROCEDURES

With the assistance of GRPS maintenance staff, MicroAir re-inspected known and previously identified areas of the building including above suspended ceilings, pipe chases, and inside the tunnels.

It was beyond the scope of this reinspection to locate, identify, or quantify ACM in areas that were concealed and/or inaccessible areas, such as within walls, hard ceilings, or equipment.

2019 REINSPECTION FINDINGS

The following suspect asbestos-containing materials were observed at Aberdeen Elementary School during the asbestos inspection and the bulk sampling. Materials in **bold** were found to be greater than 1% ACM.

- Block mortar
- Brick mortar
- Concrete
- Ceramic grout
- Smooth plaster
- Vinyl stair tread
- 1'x1' ceiling tiles
- Textured plaster
- Green cove base w/mastic
- Wood floor underlayment
- 2'x2' ceiling tile w/pins and fissures
- Fireplace brick mortar
- 2'x2' ceiling tile smooth white
- Blue/green cove base w/mastic
- Drywall, tape and mud
- Sink undercoating
- 12"x12" White/specs floor tile w/mastic
- Slate chalkboards
- 9"x9" Brown floor tile w/mastic
- Brown cove base w/mastic
- Vibration dampener
- 1'x1' ceiling tile w/glue pod
- **Window glaze**
- Exterior caulk
- Boiler gaskets
- Tall brown cove base w/mastic
- EIFS
- Decorative brick/block mortar
- Roofing
- **Fire doors**
- Foundation block mortar
- Hard plaster
- Tall green cove base w/mastic
- Textured drywall
- 2'x2' ceiling tile
- Block/stone exterior caulk
- Interior brick mortar
- 12"x12" w/squares floor tile w/mastic
- Green cove base w/mastic

Some of the materials listed above are assumed to contain asbestos until bulk samples can be collected and analyzed.

Appendix A of this report is a table that identifies the confirmed and suspect ACM homogeneous materials in Aberdeen, their corresponding identification number and locations, and the general condition of ACMs identified during the reinspection.

CONCLUSIONS AND RECOMMENDATIONS

MicroAir was retained by Grand Rapids Public Schools to conduct a 3-year asbestos-containing material (ACM) reinspection of Aberdeen Elementary School located at 928 Aberdeen Street NE in Grand Rapids, Michigan. MicroAir completed the reinspection on October 13th, 2019. The inspection was conducted by a State of Michigan accredited Asbestos Building Inspector.

Any personnel entering a tunnel or chase area must be notified of ACM locations and explained the requirement to wear personal protective equipment.

If GRPS plans to conduct any renovation or demolition, the identified ACMs should be removed by a licensed asbestos abatement contractor, as required by current federal, state, and local laws and regulations, should perform any necessary removal and disposal of the identified ACM. MicroAir notes that if suspect ACM other than those identified during this reinspection are encountered during any renovation or demolition, such materials should be sampled and analyzed using PLM to verify presence of asbestos.

We also recommend that visual observations, verification of removal and cleanup, and air monitoring or clearance air monitoring for asbestos fibers be performed by a third party retained by GRPS to demonstrate compliance with applicable regulations, and to confirm the suitability or the area for re-entry. MicroAir can perform these services.

Warning labels should be affixed in all non-public areas where ACM or assumed ACM is present. After completion of repairs or removal of the ACM, fill out an O&M Activities Form and file it in the management plan.

As required by AHERA, GRPS should continue to send the annual notifications including information on planned response actions and reinspections. Copies of the notifications should be kept in the Management Plan.

LIMITATIONS

The conclusions drawn from the observations and sample results are only valid for the time the observations occurred. In the process of gathering the field data included in this report, procedures were followed that represent reasonable and acceptable industrial hygiene practices and procedures in a manner consistent with the level of care and skill ordinarily exercised by other members of this profession currently practicing under similar conditions. However, the information and opinions provided in this report are not to be construed as a warranty of the conditions of this site in any way, implied or explicit. MicroAir accepts no responsibility for the use, interpretation, or reliance by other parties on the information contained herein, nor does this report represent an instrument of regulatory compliance or an asbestos abatement specification.

In conducting the reinspection there are a number of obstacles and limitations that can affect the final outcome of the report. These limitations include but are not limited to the following factors: access concerns, materials that cannot be intrusively sampled or damaged, materials that have been replaced by renovation activities, materials with conflicting laboratory results, and materials that are located in inaccessible and/or concealed areas which limits its quantification. Due to these limitations, the results of this investigation cannot be construed as a certification of the presence or absence of ACM, beyond the materials identified, but rather a diligent and prudent review of available data within an established work scope, and time and budgetary constraints.

If you have any questions or require additional information, please contact me at 616-302-0819 or microairconsulting@gmail.com.

Sincerely,

MicroAir Consulting, LLC

Christian T. Decker

Christian T. Decker
Accredited Building Inspector and Management Planner

APPENDIX A

TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS

APPENDIX A- 3 YEAR REINSPECTION
TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS
ABERDEEN ELEMENTARY SCHOOL
INSPECTION DATE: OCTOBER 13th, 2019

HSA NO.	HSA MATERIAL DESCRIPTION	ASBESTOS?	MATERIAL TYPE	F/NF	FUNCTIONAL AREA	CONDITION
AES-1	Block mortar	Assumed	MM	NF-II	All cinderblock walls	Good
AES-2	Brick mortar	No	MM	--	All brick walls	--
AES-3	Concrete	Assumed	MM	NF-II	All concrete	Good
AES-4	Ceramic grout	Assumed	MM	NF-I	Ceramic tiled areas	Good
AES-5	Smooth plaster	No	SM	--	Hallways, classrooms and restrooms	--
AES-6	Vinyl stair tread	No	MM	--	Stairway to 2nd floor	--
AES-7	1'x1' ceiling tile w/glue pod	No	MM	--	Hallways and classrooms	--
AES-8	Textured plaster	No	SM	--	Walls and ceilings in hallways and classrooms	--
AES-9	Green cove base w/mastic	Assumed	MM	NF-II	Hallways	Good
AES-10	Wood floor underlayment	Assumed	MM	NF-I	Some classrooms and gym	Good
AES-12	Fireplace brick mortar	Assumed	MM	NF-II	Façade of fireplace in kindergarten	Good
AES-13	2'x2' ceiling tile smooth white	Assumed	MM	NF-II	Kitchen	Good
AES-14	Blue/green cove base w/mastic	Assumed	MM	NF-II	Cafeteria	Good
AES-15	Drywall, tape and mud	No	SM	--	Cafeteria	--
AES-16	Sink undercoating	Assumed	MM	NF-II	Under metal sinks	Good
AES-17	12"x12" White/specs floor tile w/mastic	Assumed	MM	NF-I	120 and other rooms	Good
AES-18	Slate chalkboards	Assumed	MM	NF-II	Classrooms	Good

FRIABILITY:
F: Friable
NF-I: Non-friable Category I
NF-II: Non-friable Category II

MATERIAL TYPE:
TSI: Thermal System Insulation
SM: Surfacing Material
MM: Miscellaneous Material

CONDITION:
Good: Little or no damage
Damaged: Less than 10% damage of total surface area, or less than 25% damage in a localized area
Significantly Damaged: Greater than 10% damage of total surface area, or greater than 25% damage in a localized area

SF: Square feet LF: Linear feet FT: Fittings NQ: Not Quantified

APPENDIX A- 3 YEAR REINSPECTION
TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS
ABERDEEN ELEMENTARY SCHOOL
INSPECTION DATE: OCTOBER 13th, 2019

HSA NO.	HSA MATERIAL DESCRIPTION	ASBESTOS?	MATERIAL TYPE	F/NF	FUNCTIONAL AREA	CONDITION
AES-19	9"x9" Brown floor tile w/mastic	Assumed	MM	NF-I	Stairway	Good
AES-20	Brown cove base w/mastic	Assumed	MM	NF-II	Under lockers	Good
AES-21	Vibration dampener	Assumed	MM	NF-II	Attic fan room	Good
AES-22	1'x1' ceiling tile w/glue pod	No	MM	--	Storage	--
AES-23	Window glaze	**Yes**	MM	NF-II	Boiler room windows	Good
AES-24	Exterior caulk	Assumed	MM	NF-II	Exterior around windows, doors and wall seams	Good
AES-25	Boiler gaskets	Assumed	MM	NF-II	Boiler room	Good
AES-26	Tall brown cove base w/mastic	No	MM	--	Back entrance	--
AES-27	EIFS	No	MM	--	Exterior around windows and doors	--
AES-28	Decorative brick/block mortar	No	MM	--	Entrance	--
AES-29	Roofing	Assumed	MM	NF-I	Exterior asphalt roofs	Good
AES-30	Fire doors	**Yes**	MM	NF-II	All tagged fire doors	Good
AES-31	Foundation block mortar	No	MM	--	Exterior building foundation	--
AES-31a	Hard plaster	No	SM	--	Boiler room	--
AES-32	Tall green cove base w/mastic	No	MM	--	Entrance	--
AES-32a	Textured drywall	No	MM	--	Main entrance wall	--
AES-33	2'x2' ceiling tile	No	MM	--	Hallways, classrooms and offices	--
AES-34	Block/stone exterior caulk	No	MM	--	Around exterior of building	--
AES-35	Interior brick mortar	No	MM	--	Interior of entrance	--

FRIABILITY:
F: Friable
NF-I: Non-friable Category I
NF-II: Non-friable Category II

MATERIAL TYPE:
TSI: Thermal System Insulation
SM: Surfacing Material
MM: Miscellaneous Material

CONDITION:
Good: Little or no damage
Damaged: Less than 10% damage of total surface area, or less than 25% damage in a localized area
Significantly Damaged: Greater than 10% damage of total surface area, or greater than 25% damage in a localized area

APPENDIX A- 3 YEAR REINSPECTION
TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS
ABERDEEN ELEMENTARY SCHOOL
INSPECTION DATE: OCTOBER 13th, 2019

HSA NO.	HSA MATERIAL DESCRIPTION	ASBESTOS?	MATERIAL TYPE	F/NF	FUNCTIONAL AREA	CONDITION
AES-36	12"x12" w/squares floor tile w/mastic	No	MM	--	Entrance	--
AES-37	Green cove base w/mastic	No	MM	--	Office	--

FRIABILITY:
F: Friable
NF-I: Non-friable Category I
NF-II: Non-friable Category II

MATERIAL TYPE:
TSI: Thermal System Insulation
SM: Surfacing Material
MM: Miscellaneous Material

CONDITION:
Good: Little or no damage
Damaged: Less than 10% damage of total surface area, or less than 25% damage in a localized area
Significantly Damaged: Greater than 10% damage of total surface area, or greater than 25% damage in a localized area

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November 6th, 2019
Project Number: MA-117-19

Mr. Marc Bennett
Grand Rapids Public Schools
900 Union, NE
Grand Rapids, MI 49503

119 West Cass Street
P.O. Box 908
Grand Rapids, MI 48838
Phone: 616-302-0819
Web: microairconsulting.com
Email: microairconsulting@gmail.com

Re: AHERA 3 Year Reinspection Report
Grand Rapids Public Schools – Alger Middle School

Dear Mr. Bennett:

MicroAir Consulting, LLC (MicroAir) was retained by Grand Rapids Public Schools (GRPS), to conduct an AHERA 3-year reinspection of Alger Middle School located at 921 Alger Street SE in Grand Rapids, Michigan. The inspection was conducted according to the protocol described in the U.S. Environmental Protection Agency Asbestos Hazard Emergency Response Act of 1986 (40 CFR 763).

CERTIFICATION

The building inspection was conducted on October 21st, 2019 by Mr. Ryan Emmons, a State of Michigan accredited Asbestos Building Inspector. Mr. Emmons's, Accreditation Number is A55220.

REGULATORY BACKGROUND

As a public and commercial building, Alger is governed by 29 CFR 1910.1001, Occupational Health Standards for Asbestos in Construction/General Industry and the EPA's NESHAP for the normal course of business activities by GRPS employees and occupants.

There are three state agencies in Michigan that regulate asbestos in Michigan: the Michigan Department of Environmental Quality (DEQ), the Michigan Department of Licensing and Regulatory Affairs (DLARA) and the Michigan Department of State Police (MSP). The DEQ is concerned about the release of asbestos fibers to the outer air and proper waste disposal, while DLARA focuses on worker protection during renovation and demolition activities, contractor licensing, and worker training.

During construction or renovation activities, the persons performing those activities would be governed by 29 CFR 1926.1101, Occupational Health Standards for Asbestos in Construction. The Asbestos Hazard Emergency Response Act (AHERA), 40 CFR 763, (partial) and/or its associated requirements. However, there are some portions of AHERA that are used as guidelines for compliance with 29 CFR 1910.1001. In particular, 29 CFR 1910.1001(j)(1) requires owners of buildings constructed prior to 1980 to presume that certain types of building materials are asbestos-containing materials (ACM), unless the owner demonstrates that those materials are not ACM.

40 CFR Part 61, Subpart M (NESHAP) requires that a thorough inspection be conducted prior to all renovations and all demolitions. A thorough inspection for asbestos is required no matter the age of the facility because all uses of asbestos are not banned. The inspection must be completed before the commencement of a subject renovation and/or demolition activity.

BUILDING DESCRIPTION

The Alger Middle School building was constructed in 2006.

PREVIOUS INSPECTION

No previous inspection data.

REINSPECTION PROCEDURES

With the assistance of GRPS maintenance staff, MicroAir re-inspected known and previously identified areas of the building including above suspended ceilings and pipe chases.

It was beyond the scope of this reinspection to locate, identify, or quantify ACM in areas that were concealed and/or inaccessible areas, such as within walls, hard ceilings, or equipment.

2019 REINSPECTION FINDINGS

The following suspect asbestos-containing materials were observed at Alger Middle School during the asbestos inspection and the bulk sampling.

- Drywall, tape and mud
- Concrete
- Brick mortar
- Block mortar
- Exterior caulk

Some of the materials listed above are assumed to contain asbestos until bulk samples can be collected and analyzed.

Appendix A of this report is a table that identifies the confirmed and suspect ACM homogeneous materials in Alger Middle School, their corresponding identification number and locations, and the general condition of ACMs identified during the reinspection.

CONCLUSIONS AND RECOMMENDATIONS

MicroAir was retained by Grand Rapids Public Schools to conduct a 3-year asbestos-containing material (ACM) reinspection of Alger Middle School located at 921 Alger Street SE in Grand Rapids, Michigan. MicroAir completed the reinspection on October 21st, 2019. The inspection was conducted by a State of Michigan accredited Asbestos Building Inspector.

During the reinspection, MicroAir identified and assessed 5 homogeneous materials remaining in Alger Middle School.

If GRPS plans to conduct any renovation or demolition, the identified ACMs should be removed by a licensed asbestos abatement contractor, as required by current federal, state, and local laws and regulations, should perform any necessary removal and disposal of the identified ACM. MicroAir notes that if suspect ACM other than those identified during this reinspection are encountered during any renovation or demolition, such materials should be sampled and analyzed using PLM to verify presence of asbestos.

We also recommend that visual observations, verification of removal and cleanup, and air monitoring or clearance air monitoring for asbestos fibers be performed by a third party retained by GRPS to demonstrate compliance with applicable regulations, and to confirm the suitability or the area for re-entry. MicroAir can perform these services.

Warning labels should be affixed in all non-public areas where ACM or assumed ACM is present. After completion of repairs or removal of the ACM, fill out an O&M Activities Form and file it in the management plan.

As required by AHERA, GRPS should continue to send the annual notifications including information on planned response actions and reinspections. Copies of the notifications should be kept in the Management Plan.

LIMITATIONS

The conclusions drawn from the observations and sample results are only valid for the time the observations occurred. In the process of gathering the field data included in this report, procedures were followed that represent reasonable and acceptable industrial hygiene practices and procedures in a manner consistent with the level of care and skill ordinarily exercised by other members of this profession currently practicing under similar conditions. However, the information and opinions provided in this report are not to be construed as a warranty of the conditions of this site in any way, implied or explicit. MicroAir accepts no responsibility for the use, interpretation, or reliance by other parties on the information contained herein, nor does this report represent an instrument of regulatory compliance or an asbestos abatement specification.

In conducting the reinspection there are a number of obstacles and limitations that can affect the final outcome of the report. These limitations include but are not limited to the following factors: access concerns, materials that cannot be intrusively sampled or damaged, materials that have been replaced by renovation activities, materials with conflicting laboratory results, and materials that are located in inaccessible and/or concealed areas which limits its quantification. Due to these limitations, the results of this investigation cannot be construed as a certification of the presence or absence of ACM, beyond the materials identified, but rather a diligent and prudent review of available data within an established work scope, and time and budgetary constraints.

If you have any questions or require additional information, please contact me at 616-302-0819 or microairconsulting@gmail.com.

Sincerely,

MicroAir Consulting, LLC

Christian T. Decker

Christian T. Decker
Accredited Building Inspector and Management Planner

APPENDIX A

TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS

APPENDIX A- 3 YEAR REINSPECTION
TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS
ALGER MIDDLE SCHOOL
INSPECTION DATE: OCTOBER 21st, 2019

HSA NO.	HSA MATERIAL DESCRIPTION	ASBESTOS?	MATERIAL TYPE	F/NF	FUNCTIONAL AREA	CONDITION
AMS-1	Drywall, tape and mud	No	SM	--	Interior drywall	--
AMS-2	Concrete	No	MM	--	All concrete	--
AMS-3	Brick mortar	Assumed	MM	NF-II	All brick walls	Good
AMS-4	Block mortar	Assumed	MM	NF-II	All cinderblock walls	Good
AMS-5	Exterior caulk	Assumed	MM	NF-II	Around windows, doors and wall seams	Good

FRIABILITY:
F: Friable
NF-I: Non-friable Category I
NF-II: Non-friable Category II

MATERIAL TYPE:
TSI: Thermal System Insulation
SM: Surfacing Material
MM: Miscellaneous Material

CONDITION:
Good: Little or no damage
Damaged: Less than 10% damage of total surface area, or less than 25% damage in a localized area
Significantly Damaged: Greater than 10% damage of total surface area, or greater than 25% damage in a localized area

SF: Square feet LF: Linear feet FT: Fittings NQ: Not Quantified

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October 25th, 2019

Project Number: MA-117-19

Mr. Marc Bennett
Grand Rapids Public Schools
900 Union, NE
Grand Rapids, MI 49503

119 West Cass Street
P.O. Box 908
Greenville, MI 48838
Phone: 616-302-0819
Web: microairconsulting.com
Email: microairconsulting@gmail.com

Re: AHERA 3 Year Reinspection Report
Grand Rapids Public Schools – **Burton Elementary/Middle School**

Dear Mr. Bennett:

MicroAir Consulting, LLC (MicroAir) was retained by Grand Rapids Public Schools (GRPS), to conduct an AHERA 3-year reinspection of Burton Elementary/Middle School located at 2133 Buchanan Avenue SW in Grand Rapids, Michigan. The inspection was conducted according to the protocol described in the U.S. Environmental Protection Agency Asbestos Hazard Emergency Response Act of 1986 (40 CFR 763).

CERTIFICATION

The building inspection was conducted on October 23rd, 2019 by Mr. Ryan Emmons, a State of Michigan accredited Asbestos Building Inspector. Mr. Emmons's, Accreditation Number is A55220.

REGULATORY BACKGROUND

As a public and commercial building, Burton is governed by 29 CFR 1910.1001, Occupational Health Standards for Asbestos in Construction/General Industry and the EPA's NESHAP for the normal course of business activities by GRPS employees and occupants.

There are three state agencies in Michigan that regulate asbestos in Michigan: the Michigan Department of Environmental Quality (DEQ), the Michigan Department of Licensing and Regulatory Affairs (DLARA) and the Michigan Department of State Police (MSP). The DEQ is concerned about the release of asbestos fibers to the outer air and proper waste disposal, while DLARA focuses on worker protection during renovation and demolition activities, contractor licensing, and worker training.

During construction or renovation activities, the persons performing those activities would be governed by 29 CFR 1926.1101, Occupational Health Standards for Asbestos in Construction. The Asbestos Hazard Emergency Response Act (AHERA), 40 CFR 763, (partial) and/or its associated requirements. However, there are some portions of AHERA that are used as guidelines for compliance with 29 CFR 1910.1001. In particular, 29 CFR 1910.1001(j)(1) requires owners of buildings constructed prior to 1980 to presume that certain types of building materials are asbestos-containing materials (ACM), unless the owner demonstrates that those materials are not ACM.

40 CFR Part 61, Subpart M (NESHAP) requires that a thorough inspection be conducted prior to all renovations and all demolitions. A thorough inspection for asbestos is required no matter the age of the facility because all uses of asbestos are not banned. The inspection must be completed before the commencement of a subject renovation and/or demolition activity.

BUILDING DESCRIPTION

The Burton Elementary/Middle School building was constructed in 1926 with an addition in 2007. Some building renovations have occurred throughout over the years as well.

PREVIOUS INSPECTION

The most recent inspection was conducted by GRPS. MicroAir reviewed this report and incorporated the findings of the previous inspection and historical information into the current reinspection data.

In the previous inspection report suspect ACM materials were given a unique identification number (homogeneous material number), MicroAir has changed numbering from previous reports. The reinspection did

include the collection of bulk samples. Results of the sampling can be found in Appendix A along with locations of remaining ACM in the building.

REINSPECTION PROCEDURES

With the assistance of GRPS maintenance staff, MicroAir re-inspected known and previously identified areas of the building including above suspended ceilings, pipe chases, and inside the tunnels.

It was beyond the scope of this reinspection to locate, identify, or quantify ACM in areas that were concealed and/or inaccessible areas, such as within walls, hard ceilings, or equipment.

2019 REINSPECTION FINDINGS

The following suspect asbestos-containing materials were observed at Burton Elementary/Middle School during the asbestos inspection and the bulk sampling. Materials in **bold** were found to be greater than 1% ACM.

- Brick mortar
- Cinderblock mortar
- Decorative block mortar
- Concrete
- Roofing
- **Fire doors and frames**
- Duct putty
- Vibration dampener
- 2'x4' drop ceiling tile pins and fissures
- Drywall, tape and mud
- Ceramic grout
- Tall black cove base w/mastic
- Gray textured drywall
- **Older plaster**
- Short black cove base w/mastic
- Purple drywall, tape and mud
- 2'x2' drop ceiling tile w/holes
- Spray-on insulation
- Wall tile w/glue pod
- Rolled vinyl flooring w/mastic
- Decorative brick mortar
- Sink undercoating
- Vinyl stair tread w/mastic
- Ceiling plaster
- Stage curtain
- Wood floor underlayment
- Textured plaster
- 12"x12" Red floor tile w/mastic
- 12"x12" White floor tile w/mastic

Some of the materials listed above are assumed to contain asbestos until bulk samples can be collected and analyzed.

Appendix A of this report is a table that identifies the confirmed and suspect ACM homogeneous materials in Burton Elementary/Middle School, their corresponding identification number and locations, and the general condition of ACMs identified during the reinspection.

CONCLUSIONS AND RECOMMENDATIONS

MicroAir was retained by Grand Rapids Public Schools to conduct a 3-year asbestos-containing material (ACM) reinspection of Burton Elementary/Middle School located at 2133 Buchanan Avenue SW in Grand Rapids, Michigan. MicroAir completed the reinspection on October 23rd, 2019. The inspection was conducted by a State of Michigan accredited Asbestos Building Inspector.

During the reinspection, MicroAir identified and assessed 29 homogeneous materials remaining in Burton Elementary/Middle School. Any personnel entering a tunnel or chase areas must be notified of ACM locations and explained the requirement to wear personal protective equipment.

If GRPS plans to conduct any renovation or demolition, the identified ACMs should be removed by a licensed asbestos abatement contractor, as required by current federal, state, and local laws and regulations, should perform any necessary removal and disposal of the identified ACM. MicroAir notes that if suspect ACM other than those identified during this reinspection are encountered during any renovation or demolition, such materials should be sampled and analyzed using PLM to verify presence of asbestos.

We also recommend that visual observations, verification of removal and cleanup, and air monitoring or clearance air monitoring for asbestos fibers be performed by a third party retained by GRPS to demonstrate compliance with applicable regulations, and to confirm the suitability or the area for re-entry. MicroAir can perform these services.

Warning labels should be affixed in all non-public areas where ACM or assumed ACM is present. After completion of repairs or removal of the ACM, fill out an O&M Activities Form and file it in the management plan.

As required by AHERA, GRPS should continue to send the annual notifications including information on planned response actions and reinspections. Copies of the notifications should be kept in the Management Plan.

LIMITATIONS

The conclusions drawn from the observations and sample results are only valid for the time the observations occurred. In the process of gathering the field data included in this report, procedures were followed that represent reasonable and acceptable industrial hygiene practices and procedures in a manner consistent with the level of care and skill ordinarily exercised by other members of this profession currently practicing under similar conditions. However, the information and opinions provided in this report are not to be construed as a warranty of the conditions of this site in any way, implied or explicit. MicroAir accepts no responsibility for the use, interpretation, or reliance by other parties on the information contained herein, nor does this report represent an instrument of regulatory compliance or an asbestos abatement specification.

In conducting the reinspection there are a number of obstacles and limitations that can affect the final outcome of the report. These limitations include but are not limited to the following factors: access concerns, materials that cannot be intrusively sampled or damaged, materials that have been replaced by renovation activities, materials with conflicting laboratory results, and materials that are located in inaccessible and/or concealed areas which limits its quantification. Due to these limitations, the results of this investigation cannot be construed as a certification of the presence or absence of ACM, beyond the materials identified, but rather a diligent and prudent review of available data within an established work scope, and time and budgetary constraints.

If you have any questions or require additional information, please contact me at 616-302-0819 or microairconsulting@gmail.com. Thank you.

Sincerely,

MicroAir Consulting, LLC

Christian T. Decker

Christian T. Decker
Accredited Building Inspector and Management Planner

APPENDIX A

TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS

APPENDIX A- 3 YEAR REINSPECTION
TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS
BURTON ELEMENTARY SCHOOL
INSPECTION DATE: OCTOBER 23rd, 2019

HSA NO.	HSA MATERIAL DESCRIPTION	ASBESTOS?	MATERIAL TYPE	F/NF	FUNCTIONAL AREA	CONDITION
BES-1	Brick mortar	Assumed	MM	NF-II	Brick walls	Good
BES-2	Cinderblock mortar	Assumed	MM	NF-II	Cinderblock walls	Good
BES-3	Decorative block mortar	Assumed	MM	NF-II	Exterior decorative block	Good
BES-4	Concrete	Assumed	MM	NF-II	All concrete	Good
BES-5	Roofing	Assumed	MM	NF-I	Exterior asphalt roofing	Good
BES-6	Fire doors and frames	**Yes**	MM	NF-II	All tagged fire doors	Good
BES-7	Duct putty	Assumed	MM	NF-II	HVAC duct work	Good
BES-8	Vibration dampener	Assumed	MM	NF-II	HVAC duct work	Good
BES-9	2'x4' drop ceiling tile pins and fissures	Assumed	MM	NF-II	Outside boiler room	Good
BES-10	Drywall, tape and mud	No	SM	--	Interior walls	--
BES-11	Ceramic grout	Assumed	MM	NF-I	Bathrooms, kitchen and smart room	Good
BES-12	Tall black cove base w/mastic	Assumed	MM	NF-II	Hallways	Good
BES-13	Gray textured drywall	No	SM	--	Elevator area	--
BES-14	Older plaster	**Yes**	SM	F	198G area, 290D all stairways	Good
BES-15	Short black cove base w/mastic	Assumed	MM	NF-II	198G area	Good
BES-16	Purple drywall, tape and mud	No	SM	--	198G area	--

FRIABILITY:
F: Friable
NF-I: Non-friable Category I
NF-II: Non-friable Category II

MATERIAL TYPE:
TSI: Thermal System Insulation
SM: Surfacing Material
MM: Miscellaneous Material

CONDITION:
Good: Little or no damage
Damaged: Less than 10% damage of total surface area, or less than 25% damage in a localized area
Significantly Damaged: Greater than 10% damage of total surface area, or greater than 25% damage in a localized area

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APPENDIX A- 3 YEAR REINSPECTION
TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS
BURTON ELEMENTARY SCHOOL
INSPECTION DATE: OCTOBER 23rd, 2019

HSA NO.	HSA MATERIAL DESCRIPTION	ASBESTOS?	MATERIAL TYPE	F/NF	FUNCTIONAL AREA	CONDITION
BES-17	2'x2' drop ceiling tile w/holes	Assumed	MM	NF-II	Hallways	Good
BES-18	Spray-on insulation	No	SM	--	2nd floor HVAC room	--
BES-19	Wall tile w/glue pod	Both- No	MM	--	2nd floor HVAC room	--
BES-20	Rolled vinyl flooring w/mastic	Assumed	MM	NF-I	Entrance, classrooms, cafeteria and storage	Good
BES-21	Decorative brick mortar	Assumed	MM	NF-II	2nd floor drinking fountain	Good
BES-22	Sink undercoating	Assumed	MM	NF-II	Under metal sinks	Good
BES-23	Vinyl stair tread w/mastic	Assumed	MM	NF-I	Stairways	Good
BES-24	Ceiling plaster	No	SM	--	Top floor HVAC room	--
BES-25	Stage curtain	Assumed	MM	NF-II	Auditorium	Good
BES-26	Wood floor underlayment	Assumed	MM	NF-I	Under wood floors	Good
BES-27	Textured plaster	No	SM	--	Auditorium and entrance ceilings	--
BES-28	12"x12" Red floor tile w/mastic	Assumed	MM	NF-I	Bathrooms and fountains	Good
BES-29	12"x12" White floor tile w/mastic	Assumed	MM	NF-I	Kitchen	Good

FRIABILITY:
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January 23rd, 2019
Project Number: MA-158-18

Mr. Marc Bennett
Grand Rapids Public Schools
900 Union, NE
Grand Rapids, MI 49503

Re: AHERA 3 Year Reinspection Report
Grand Rapids Public Schools – **Campus Elementary School**

MicroAir Consulting, LLC
119 West Cass Street
P.O. Box 908
Grand Rapids, MI 48838
Phone: 616-302-0819
Web: microairconsulting.com
Email: microairconsulting@gmail.com

Dear Mr. Bennett:

MicroAir Consulting, LLC (MicroAir) was retained by Grand Rapids Public Schools (GRPS), to conduct an AHERA 3-year reinspection of Campus Elementary School (C) located at 710 Benjamin Avenue SE in Grand Rapids, Michigan. The inspection was conducted according to the protocol described in the U.S. Environmental Protection Agency Asbestos Hazard Emergency Response Act of 1986 (40 CFR 763).

CERTIFICATION

The building inspection was conducted on January 4th, 2019 by Mr. Grant Edgerly, a State of Michigan accredited Asbestos Building Inspector. Mr. Edgerly's, Accreditation Number is A41792.

REGULATORY BACKGROUND

As a public and commercial building, Campus is governed by 29 CFR 1910.1001, Occupational Health Standards for Asbestos in Construction/General Industry and the EPA's NESHAP for the normal course of business activities by GRPS employees and occupants.

There are three state agencies in Michigan that regulate asbestos in Michigan: the Michigan Department of Environmental Quality (DEQ), the Michigan Department of Licensing and Regulatory Affairs (DLARA) and the Michigan Department of State Police (MSP). The DEQ is concerned about the release of asbestos fibers to the outer air and proper waste disposal, while DLARA focuses on worker protection during renovation and demolition activities, contractor licensing, and worker training.

During construction or renovation activities, the persons performing those activities would be governed by 29 CFR 1926.1101, Occupational Health Standards for Asbestos in Construction. The Asbestos Hazard Emergency Response Act (AHERA), 40 CFR 763, (partial) and/or its associated requirements. However, there are some portions of AHERA that are used as guidelines for compliance with 29 CFR 1910.1001. In particular, 29 CFR 1910.1001(j)(1) requires owners of buildings constructed prior to 1980 to presume that certain types of building materials are asbestos-containing materials (ACM), unless the owner demonstrates that those materials are not ACM.

40 CFR Part 61, Subpart M (NESHAP) requires that a thorough inspection be conducted prior to all renovations and all demolitions. A thorough inspection for asbestos is required no matter the age of the facility because all uses of asbestos are not banned. The inspection must be completed before the commencement of a subject renovation and/or demolition activity.

BUILDING DESCRIPTION

The Campus Elementary School building was constructed in 1950 with an addition in 1994. Some building renovations have occurred throughout over the years as well.

PREVIOUS INSPECTION

The most recent inspection was conducted by GRPS in 2018. MicroAir reviewed this report and incorporated the findings of the previous inspection and historical information into the current reinspection data.

In the previous inspection report suspect ACM materials were given a unique identification number (homogeneous material number), MicroAir has changed numbering from previous reports. The reinspection

did include the collection of bulk samples. Results of the sampling can be found in Appendix A along with locations of remaining ACM in the building.

REINSPECTION PROCEDURES

With the assistance of GRPS maintenance staff, MicroAir re-inspected known and previously identified areas of the building including above suspended ceilings, pipe chases, and inside the tunnels.

It was beyond the scope of this reinspection to locate, identify, or quantify ACM in areas that were concealed and/or inaccessible areas, such as within walls, hard ceilings, or equipment.

2019 REINSPECTION FINDINGS

The following suspect asbestos-containing materials were observed at Campus Elementary School during the asbestos inspection and the bulk sampling. Materials in **bold** were found to be greater than 1% ACM.

- Drywall, tape, and mud
- Plaster
- Sink undercoating
- Cream w/color spots 12"x12" Floor tile w/mastic
- 2'x2' Ceiling tile
- Cream cove base w/mastic
- Gray cove base w/mastic
- Black duct putty
- Caulks and sealants
- Mortars
- Ceramic grout
- Fire doors
- Concrete
- Roofing
- **Mudded fittings and drains**
- Black window sills
- Divider walls

Some of the materials listed above are assumed to contain asbestos until bulk samples can be collected and analyzed.

Appendix A of this report is a table that identifies the confirmed and suspect ACM homogeneous materials in Campus, their corresponding identification number and locations, and the general condition of ACMs identified during the reinspection.

CONCLUSIONS AND RECOMMENDATIONS

MicroAir was retained by Grand Rapids Public Schools to conduct a 3-year asbestos-containing material (ACM) reinspection of Campus Elementary School located at 710 Benjamin Avenue SE in Grand Rapids, Michigan. MicroAir completed the reinspection on January 4th, 2019. The inspection was conducted by a State of Michigan accredited Asbestos Building Inspector.

During the reinspection, MicroAir identified and assessed 17 homogeneous materials remaining in Campus Elementary School.

Any personnel entering a tunnel or chase area must be notified of ACM locations and explained the requirement to wear personal protective equipment.

If GRPS plans to conduct any renovation or demolition, the identified ACMs should be removed by a licensed asbestos abatement contractor, as required by current federal, state, and local laws and regulations, should perform any necessary removal and disposal of the identified ACM. MicroAir notes that if suspect ACM other than those identified during this reinspection are encountered during any renovation or demolition, such materials should be sampled and analyzed using PLM to verify presence of asbestos.

We also recommend that visual observations, verification of removal and cleanup, and air monitoring or clearance air monitoring for asbestos fibers be performed by a third party retained by GRPS to demonstrate

compliance with applicable regulations, and to confirm the suitability or the area for re-entry. MicroAir can perform these services.

Warning labels should be affixed in all non-public areas where ACM or assumed ACM is present. After completion of repairs or removal of the ACM, fill out an O&M Activities Form and file it in the management plan.

As required by AHERA, GRPS should continue to send the annual notifications including information on planned response actions and reinspections. Copies of the notifications should be kept in the Management Plan.

LIMITATIONS

The conclusions drawn from the observations and sample results are only valid for the time the observations occurred. In the process of gathering the field data included in this report, procedures were followed that represent reasonable and acceptable industrial hygiene practices and procedures in a manner consistent with the level of care and skill ordinarily exercised by other members of this profession currently practicing under similar conditions. However, the information and opinions provided in this report are not to be construed as a warranty of the conditions of this site in any way, implied or explicit. MicroAir accepts no responsibility for the use, interpretation, or reliance by other parties on the information contained herein, nor does this report represent an instrument of regulatory compliance or an asbestos abatement specification.

In conducting the reinspection there are a number of obstacles and limitations that can affect the final outcome of the report. These limitations include but are not limited to the following factors: access concerns, materials that can not be intrusively sampled or damaged, materials that have been replaced by renovation activities, materials with conflicting laboratory results, and materials that are located in inaccessible and/or concealed areas which limits its quantification. Due to these limitations, the results of this investigation cannot be construed as a certification of the presence or absence of ACM, beyond the materials identified, but rather a diligent and prudent review of available data within an established work scope, and time and budgetary constraints.

If you have any questions or require additional information, please contact me at 616-302-0819 or microairconsulting@gmail.com. Thank you.

Sincerely,

MicroAir Consulting, LLC

Christian T. Decker

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Accredited Building Inspector and Management Planner

APPENDIX A

TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS

APPENDIX A- 3 YEAR REINSPECTION
TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS
CAMPUS ELEMENTARY SCHOOL
INSPECTION DATE: JANUARY 4th, 2019

HSA NO.	HSA MATERIAL DESCRIPTION	ASBESTOS?	MATERIAL TYPE	F/NF	FUNCTIONAL AREA	CONDITION
C-1	Drywall, tape, and mud	No	SM	--	Walls and ceilings	--
C-2	Plaster	No	SM	--	Walls and ceilings	--
C-3	Sink undercoating	Assumed	MM	NF-II	Metal sinks	Good
C-4	Cream w/color spots 12"x12" Floor tile w/mastic	Assumed	MM	NF-I	Interior flooring	Good
C-5	2'x2' Ceiling tile	Assumed	MM	NF-II	Ceilings on grid	Good
C-6	Cream cove base w/mastic	Assumed	MM	NF-II	Interior walls	Good
C-7	Gray cove base w/mastic	Assumed	MM	NF-II	Interior walls	Good
C-8	Black duct putty	Assumed	MM	NF-II	HVAC ductwork	Good
C-9	Caulks and sealants	Assumed	MM	NF-II	All original caulks and sealants	Good
C-10	Mortars	Assumed	MM	NF-II	All block and brick walls	Good
C-11	Ceramic grout	Assumed	MM	NF-I	Ceramic tiled areas	Good
C-12	Fire doors	Assumed	MM	NF-II	Boiler room and other tagged fire doors	Good
C-13	Concrete	Assumed	MM	NF-II	All concrete	Good
C-14	Roofing	Assumed	MM	NF-I	Exterior roof (roof caulk 15%)	Good
C-15	Mudded fittings and roof drains	**Yes**	TSI	F	Above ceilings and in walls	Good

FRIABILITY:
F: Friable
NF-I: Non-friable Category I
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MATERIAL TYPE:
TSI: Thermal System Insulation
SM: Surfacing Material
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CONDITION:
Good: Little or no damage
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APPENDIX A- 3 YEAR REINSPECTION
TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS
CAMPUS ELEMENTARY SCHOOL
INSPECTION DATE: JANUARY 4th, 2019

HSA NO.	HSA MATERIAL DESCRIPTION	ASBESTOS?	MATERIAL TYPE	F/NF	FUNCTIONAL AREA	CONDITION
C-16	Black window sills	Assumed	MM	NF-I	Interior window sills	Good
C-17	Divider walls	Assumed	MM	NF-II	Rooms with divider walls	Good

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Project Number: MA-158-18

Mr. Marc Bennett
Grand Rapids Public Schools
900 Union, NE
Grand Rapids, MI 49503

Re: AHERA 3 Year Reinspection Report
Grand Rapids Public Schools – **Campus Elementary School**

119 West Cass Street
P.O. Box 908
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BUILDING DESCRIPTION

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The conclusions drawn from the observations and sample results are only valid for the time the observations occurred. In the process of gathering the field data included in this report, procedures were followed that represent reasonable and acceptable industrial hygiene practices and procedures in a manner consistent with the level of care and skill ordinarily exercised by other members of this profession currently practicing under similar conditions. However, the information and opinions provided in this report are not to be construed as a warranty of the conditions of this site in any way, implied or explicit. MicroAir accepts no responsibility for the use, interpretation, or reliance by other parties on the information contained herein, nor does this report represent an instrument of regulatory compliance or an asbestos abatement specification.

In conducting the reinspection there are a number of obstacles and limitations that can affect the final outcome of the report. These limitations include but are not limited to the following factors: access concerns, materials that can not be intrusively sampled or damaged, materials that have been replaced by renovation activities, materials with conflicting laboratory results, and materials that are located in inaccessible and/or concealed areas which limits its quantification. Due to these limitations, the results of this investigation cannot be construed as a certification of the presence or absence of ACM, beyond the materials identified, but rather a diligent and prudent review of available data within an established work scope, and time and budgetary constraints.

If you have any questions or require additional information, please contact me at 616-302-0819 or microairconsulting@gmail.com. Thank you.

Sincerely,

MicroAir Consulting, LLC

Christian T. Decker

Christian T. Decker
Accredited Building Inspector and Management Planner

APPENDIX A

TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS

APPENDIX A- 3 YEAR REINSPECTION
TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS
CAMPUS ELEMENTARY SCHOOL
INSPECTION DATE: JANUARY 4th, 2019

HSA NO.	HSA MATERIAL DESCRIPTION	ASBESTOS?	MATERIAL TYPE	F/NF	FUNCTIONAL AREA	CONDITION
C-1	Drywall, tape, and mud	No	SM	--	Walls and ceilings	--
C-2	Plaster	No	SM	--	Walls and ceilings	--
C-3	Sink undercoating	Assumed	MM	NF-II	Metal sinks	Good
C-4	Cream w/color spots 12"x12" Floor tile w/mastic	Assumed	MM	NF-I	Interior flooring	Good
C-5	2'x2' Ceiling tile	Assumed	MM	NF-II	Ceilings on grid	Good
C-6	Cream cove base w/mastic	Assumed	MM	NF-II	Interior walls	Good
C-7	Gray cove base w/mastic	Assumed	MM	NF-II	Interior walls	Good
C-8	Black duct putty	Assumed	MM	NF-II	HVAC ductwork	Good
C-9	Caulks and sealants	Assumed	MM	NF-II	All original caulks and sealants	Good
C-10	Mortars	Assumed	MM	NF-II	All block and brick walls	Good
C-11	Ceramic grout	Assumed	MM	NF-I	Ceramic tiled areas	Good
C-12	Fire doors	Assumed	MM	NF-II	Boiler room and other tagged fire doors	Good
C-13	Concrete	Assumed	MM	NF-II	All concrete	Good
C-14	Roofing	Assumed	MM	NF-I	Exterior roof (roof caulk 15%)	Good
C-15	Mudded fittings and roof drains	**Yes**	TSI	F	Above ceilings and in walls	Good

FRIABILITY:
F: Friable
NF-I: Non-friable Category I
NF-II: Non-friable Category II

MATERIAL TYPE:
TSI: Thermal System Insulation
SM: Surfacing Material
MM: Miscellaneous Material

CONDITION:
Good: Little or no damage
Damaged: Less than 10% damage of total surface area, or less than 25% damage in a localized area
Significantly Damaged: Greater than 10% damage of total surface area, or greater than 25% damage in a localized area

SF: Square feet LF: Linear feet FT: Fittings NQ: Not Quantified

APPENDIX A- 3 YEAR REINSPECTION
TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS
CAMPUS ELEMENTARY SCHOOL
INSPECTION DATE: JANUARY 4th, 2019

HSA NO.	HSA MATERIAL DESCRIPTION	ASBESTOS?	MATERIAL TYPE	F/NF	FUNCTIONAL AREA	CONDITION
C-16	Black window sills	Assumed	MM	NF-I	Interior window sills	Good
C-17	Divider walls	Assumed	MM	NF-II	Rooms with divider walls	Good

FRIABILITY:
F: Friable
NF-I: Non-friable Category I
NF-II: Non-friable Category II

MATERIAL TYPE:
TSI: Thermal System Insulation
SM: Surfacing Material
MM: Miscellaneous Material

CONDITION:
Good: Little or no damage
Damaged: Less than 10% damage of total surface area, or less than 25% damage in a localized area
Significantly Damaged: Greater than 10% damage of total surface area, or greater than 25% damage in a localized area

SF: Square feet LF: Linear feet FT: Fittings NQ: Not Quantified

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October 25th, 2019
Project Number: MA-117-19

Mr. Marc Bennett
Grand Rapids Public Schools
900 Union, NE
Grand Rapids, MI 49503

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Phone: 616-302-0819
Web: microairconsulting.com
Email: microairconsulting@gmail.com

Re: AHERA 3-Year Reinspection Report
Grand Rapids Public Schools – **City High Middle School**

Dear Mr. Bennett:

MicroAir Consulting, LLC (MicroAir) was retained by Grand Rapids Public Schools (GRPS), to conduct an AHERA 3-year reinspection of City High Middle School (CHMS) located at 1720 Plainfield Ave NE in Grand Rapids, Michigan. The inspection was conducted according to the protocol described in the U.S. Environmental Protection Agency Asbestos Hazard Emergency Response Act of 1986 (40 CFR 763).

CERTIFICATION

The building inspection was conducted on October 25th, 2019 by Mr. Chris Decker, a State of Michigan accredited Asbestos Building Inspector. Mr. Decker's, Accreditation Number is A26683.

REGULATORY BACKGROUND

As a public and commercial building, the CHMS is governed by 29 CFR 1910.1001, Occupational Health Standards for Asbestos in Construction/General Industry and the EPA's NESHAP for the normal course of business activities by GRPS employees.

There are three state agencies in Michigan that regulate asbestos: the Michigan Department of Environmental Quality (DEQ), the Michigan Department of Licensing and Regulatory Affairs (DLARA) and the Michigan Department of State Police (MSP). The DEQ is concerned about the release of asbestos fibers to the outer air and proper waste disposal, while DLARA focuses on worker protection during renovation and demolition activities, contractor licensing, and worker training.

During construction or renovation activities, the persons performing those activities would be governed by 29 CFR 1926.1101, Occupational Health Standards for Asbestos in Construction. The Asbestos Hazard Emergency Response Act (AHERA), 40 CFR 763, (partial) and/or its associated requirements. However, there are some portions of AHERA that are used as guidelines for compliance with 29 CFR 1910.1001. In particular, 29 CFR 1910.1001(j)(1) requires owners of buildings constructed prior to 1980 to presume that certain types of building materials are asbestos-containing materials (ACM), unless the owner demonstrates that those materials are not ACM.

40 CFR Part 61, Subpart M (NESHAP) requires that a thorough inspection be conducted prior to all renovations and all demolitions. A thorough inspection for asbestos is required no matter the age of the facility because all uses of asbestos are not banned. The inspection must be completed before the commencement of a subject renovation and/or demolition activity.

BUILDING DESCRIPTION

The City High Middle School building was constructed in 1923 with additions in 1928 and 1980. It is a 3-story building with a large attic space. The building is approximately 200,000 square feet in size. Since its construction, the building has undergone various renovations.

PREVIOUS INSPECTION

The most recent inspection was conducted by GRPS in 2019. MicroAir reviewed this report and incorporated the findings of the previous inspection and historical information into the current reinspection data.

In the previous inspection report suspect ACM materials were given a unique identification number (homogeneous material number), MicroAir has changed numbering from previous reports. The reinspection did

include the collection of bulk samples. Results of the sampling can be found in Appendix A along with locations of remaining ACM in the building.

REINSPECTION PROCEDURES

With the assistance of GRPS maintenance staff, MicroAir re-inspected known and previously identified areas of the building including above suspended ceilings, pipe chases, and inside the tunnels.

It was beyond the scope of this reinspection to locate, identify, or quantify ACM in areas that were concealed and/or inaccessible areas, such as within walls, hard ceilings, or equipment.

2019 REINSPECTION FINDINGS

The following suspect asbestos-containing materials were observed at City High Middle School during the asbestos inspection and the bulk sampling. Materials in **bold** were found to be greater than 1% ACM.

- Wall and ceiling plaster
- Skim coated concrete
- 4th floor ceiling plaster
- 2nd floor mechanical ceiling plaster
- Drywall, tape and mud
- Decorative plaster
- Firebrick
- Firebrick mortar
- **Exterior masonry caulk**
- 1936 window glazing
- **Grey sink undercoating**
- **Green 9”x9” floor tile w/mastic**
- White w/grey streaks 12”x12” floor tile w/mastic
- Blue vinyl stair tread w/mastic
- **Tan w/brown streaks 12”x12” floor tile w/mastic**
- Blue 12”x12” floor tile w/mastic
- 1’x1’ ceiling tile w/glue pod
- Pipe insulation fittings
- **Stage rope**
- **Stage light bar wiring**
- 2’x4’ drop in ceiling tile
- Spray-on insulation
- **Fume hood and vent pipes**
- Wood floor underlayment
- **Black lab top tables**
- **Transite panels**
- Cove base w/mastic
- Boiler materials
- **Tagged fire doors and frames**
- Roofing materials
- Brown wall mastic
- Black mastic
- Beige 9”x9” floor tile w/mastic
- Steam water tank insulation
- Incinerator fire brick
- Pink boiler door material
- Boiler cone
- Boiler floor debris
- **Heat shield inside radiator**
- Ceramic grout
- Fire brick

Many of the ACM materials listed above were removed as part of the 2018-2019 building renovations.

Appendix A of this report is a table that identifies the confirmed and suspect ACM homogeneous materials in CHMS, their corresponding identification number and locations, and the general condition of ACMs identified during the reinspection.

CONCLUSIONS AND RECOMMENDATIONS

MicroAir was retained by Grand Rapids Public Schools to conduct a 3-year asbestos-containing material (ACM) reinspection of City High Middle School located at 1720 Plainfield Ave NE in Grand Rapids, Michigan. MicroAir completed the reinspection on October 25th, 2019. The inspection was conducted by a State of Michigan accredited Asbestos Building Inspector.

During the reinspection, MicroAir identified and assessed 41 homogeneous materials remaining in City High Middle School.

Any personnel entering a tunnel or chase area must be notified of ACM locations and explained the requirement to wear personal protective equipment.

If GRPS plans to conduct any renovation or demolition, the identified ACMs should be removed by a licensed asbestos abatement contractor, as required by current federal, state, and local laws and regulations, should perform any necessary removal and disposal of the identified ACM. MicroAir notes that if suspect ACM other than those identified during this reinspection are encountered during any renovation or demolition, such materials should be sampled and analyzed using PLM to verify presence of asbestos.

We also recommend that visual observations, verification of removal and cleanup, and air monitoring or clearance air monitoring for asbestos fibers be performed by a third party retained by GRPS to demonstrate compliance with applicable regulations, and to confirm the suitability or the area for re-entry. MicroAir can perform these services.

Warning labels should be affixed in all non-public areas where ACM or assumed ACM is present. After completion of repairs or removal of the ACM, fill out an O&M Activities Form and file it in the management plan.

As required by AHERA, GRPS should continue to send the annual notifications including information on planned response actions and reinspections. Copies of the notifications should be kept in the Management Plan.

LIMITATIONS

The conclusions drawn from the observations and sample results are only valid for the time the observations occurred. In the process of gathering the field data included in this report, procedures were followed that represent reasonable and acceptable industrial hygiene practices and procedures in a manner consistent with the level of care and skill ordinarily exercised by other members of this profession currently practicing under similar conditions. However, the information and opinions provided in this report are not to be construed as a warranty of the conditions of this site in any way, implied or explicit. MicroAir accepts no responsibility for the use, interpretation, or reliance by other parties on the information contained herein, nor does this report represent an instrument of regulatory compliance or an asbestos abatement specification.

In conducting the reinspection there are a number of obstacles and limitations that can affect the final outcome of the report. These limitations include but are not limited to the following factors: access concerns, materials that cannot be intrusively sampled or damaged, materials that have been replaced by renovation activities, materials with conflicting laboratory results, and materials that are located in inaccessible and/or concealed areas which limits its quantification. Due to these limitations, the results of this investigation cannot be construed as a certification of the presence or absence of ACM, beyond the materials identified, but rather a diligent and prudent review of available data within an established work scope, and time and budgetary constraints.

If you have any questions or require additional information, please contact me at 616-302-0819 or microairconsulting@gmail.com. Thank you.

Sincerely,

MicroAir Consulting, LLC

Christian T. Decker

Christian T. Decker
Accredited Building Inspector and Management Planner

APPENDIX A

TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS

APPENDIX A – 3-YEAR REINSPECTIONS
TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS
CITY HIGH MIDDLE SCHOOL
INSPECTION DATE: OCTOBER 25th, 2019

HSA NO.	HSA MATERIAL DESCRIPTION	ASBESTOS?	MATERIAL TYPE	F/NF	FUNCTIONAL AREA	CONDITION
CH-1	Wall and ceiling plaster	No	SM	--	All 3 floors	--
CH-2	Skim coated concrete	No	SM	--	Stairway walls to 4th floor	--
CH-3	4th floor ceiling plaster	No	SM	--	Fan room ceiling on 4th floor	--
CH-4	2nd floor ceiling plaster	No	SM	--	Mechanical room ceiling on 2nd floor	--
CH-5	Drywall, tape and mud	No	SM	--	Closets on floors 1-3	--
CH-6	Decorative plaster	No	SM	--	Library	--
CH-7	Firebrick	No	TSI	--	Boiler rooms	--
CH-8	Firebrick mortar	No	TSI	--	Boiler rooms	--
CH-9	Exterior masonry caulk	**Yes**	MM	NF-II	Exterior decorative masonry caps	Good
CH-10	1936 window glazing	No	MM	--	Art rooms (7), Greenhouse area (5), 2nd floor science area (3), 4th floor (4), (4)	--
CH-11	Sink undercoating	**Yes**	MM	NF-II	**REMOVED FROM FLOORS 1-3**	--
CH-12	Green 9”x9” floor tile w/mastic	**Tile- Yes** Mastic- No	MM	NF-I	**REMOVED FROM FLOORS 1-3**	--
CH-13	White w/grey streaks 12”x12” floor tile w/mastic	Tile- No Mastic- No	MM	--	Stairways	--
CH-14	Blue vinyl stair tread w/mastic	No	MM	--	Stairways	--
CH-15	Tan w/brown streaks 12”x12” floor tile w/mastic	Tile- No **Mastic- Yes**	MM	NF-I	Room 319 (1,400 SF)	Good

FRIABILITY:
F: Friable
NF-I: Non-friable Category I
NF-II: Non-friable Category II

MATERIAL TYPE:
TSI: Thermal System Insulation
SM: Surfacing Material
MM: Miscellaneous Material

CONDITION:
Good: Little or no damage
Damaged: Less than 10% damage of total surface area, or less than 25% damage in a localized area
Significantly Damaged: Greater than 10% damage of total surface area, or greater than 25% damage in a localized area

SF: Square feet LF: Linear feet FT: Fittings NQ: Not Quantified

APPENDIX A – 3-YEAR REINSPECTIONS
TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS
CITY HIGH MIDDLE SCHOOL
INSPECTION DATE: OCTOBER 25th, 2019

HSA NO.	HSA MATERIAL DESCRIPTION	ASBESTOS?	MATERIAL TYPE	F/NF	FUNCTIONAL AREA	CONDITION
CH-16	Blue 12"x12" floor tile w/mastic	Tile- No Mastic- No	MM	--	Classrooms and Storage	--
CH-17	1'x1' ceiling tile w/ glue pods	Tile- No Gluepod- No	MM	--	Floors 1-3	--
CH-18	Pipe insulation fittings	**Yes**	MM	NF-II	**REMOVED IN 2018. HIDDEN PIPE INSULATION COULD BE IN WALLS AND CEILINGS**	Good
CH-19	Stage rope	**Yes**	TSI	F	Front stage in Auditorium	Good
CH-20	Stage light bar wiring	**Yes**	SM	F	Auditorium Room 138	Good
CH-21	2'x4' drop in ceiling tile	No	MM	--	Ceiling grids on floors 1-3	--
CH-22	Spray-on insulation	No	MM	--	Kitchen	--
CH-23	Fume hood and vent pipes	**Yes**	TSI	F	**REMOVED**	--
CH-24	Wood floor underlayment	No	TSI	F	All wood floors	Good
CH-25	Black lab top tables	**Yes**	MM	NF-II	**REMOVED**	--
CH-26	Transite panels	**Yes**	MM	NF-II	**REMOVED**	--
CH-27	Cove base w/mastic	No	MM	--	Floors 1-3	--
CH-28	Boiler materials	No	TSI	--	**REMOVED**	--

FRIABILITY:
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NF-I: Non-friable Category I
NF-II: Non-friable Category II

MATERIAL TYPE:
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MM: Miscellaneous Material

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APPENDIX A – 3-YEAR REINSPECTIONS
TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS
CITY HIGH MIDDLE SCHOOL
INSPECTION DATE: OCTOBER 25th, 2019

HSA NO.	HSA MATERIAL DESCRIPTION	ASBESTOS?	MATERIAL TYPE	F/NF	FUNCTIONAL AREA	CONDITION
CH-29	Tagged Fire doors and frames	**Yes**	MM	NF-II	Rooms 322 N. door, 346 W. end, 329, 206A (2), 210, 227 (2), 100 N. door, 104 S. hall, 144, 144A, Stage hall, Industrial Arts Rooms 251, 252 N. hall, 254, 256 E. hall, 258 hall, 261 hall.	Good
CH-30	Roofing materials	No	MM	--	Exterior roof	--
CH-31	Brown wall mastic	No	MM	--	Holding up boards on 2nd floor	--
CH-32	Black mastic	No	MM	--	Hallway 2nd floor	--
CH-33	Beige 9"x9" floor tile w/mastic	Tile- No Mastic- No	MM	--	Under cabinets and some lockers	--
CH-34	Steam water tank insulation	No	TSI	--	Corner of boiler room	--
CH-35	Incinerator fire brick	No	TSI	--	Boiler room	--
CH-36	Pink boiler door material	No	TSI	--	Inside boiler	--
CH-37	Boiler cone	No	TSI	--	Inside boiler	--
CH-38	Boiler floor debris	No	--	--	Boiler room floor	--
CH-39	Heat shield inside radiator	**Yes**	MM	NF-II	**REMOVED FROM FLOOR 1 IN 2018. HEAT SHIELDS MAY BE PRESENT IN OTHER AREAS OF THE BUILDING**	Good
CH-40	Ceramic grout	No	MM	--	Near entryways	-
CH-41	Fire brick	No	MM	--	Near main entrance	--

FRIABILITY:
F: Friable
NF-I: Non-friable Category I
NF-II: Non-friable Category II

MATERIAL TYPE:
TSI: Thermal System Insulation
SM: Surfacing Material
MM: Miscellaneous Material

CONDITION:
Good: Little or no damage
Damaged: Less than 10% damage of total surface area, or less than 25% damage in a localized area
Significantly Damaged: Greater than 10% damage of total surface area, or greater than 25% damage in a localized area

SF: Square feet LF: Linear feet FT: Fittings NQ: Not Quantified

TESTED SUSPECT LEAD-BASED and CAD/CHROM VI PAINT MATERIALS
CITY HIGH MIDDLE SCHOOL
GRAND RAPIDS, MICHIGAN

SAMPLE NO.	SAMPLE LOCATION	COMPONENT	COLOR	CADMIUM REPORTING LIMIT	CAD (%)	CHROMIUM REPORTING LIMIT	CHROMIUM (VI) (%)	LEAD REPORTING LIMIT	LEAD (%)
CHM-1	Boiler Room	Wall	Gold	0.00075 %	<RL	0.0013 %	0.056	0.0025 %	0.44
CHM-2	Boiler Room	Boiler	Silver	0.00075 %	<RL	0.0013 %	0.029	0.0025 %	0.24
CHM-3	Boiler Room	Floor	Grey/Red	0.0023 %	<RL	0.0038 %	0.11	0.0076 %	0.80
CHM-4	1st floor Hallway	Trim	Blue	0.0048 %	<RL	0.0080 %	<RL	0.016 %	0.025
CHM-5	Room 120	Brick	Green/White	0.00075 %	<RL	0.0013 %	0.012	0.0025 %	0.11
CHM-6	Room 224	Floor	Clear	0.0031 %	<RL	0.0052 %	<RL	0.010 %	0.013
CHM-7	Room 222	Wall	Green/Beige	0.00075 %	<RL	0.0013 %	0.046	0.0025 %	0.35
CHM-8	2nd floor Hallway	Wall	Yellow	0.0033 %	<RL	0.0055 %	<RL	0.011 %	<RL
CHM-9	3rd Floor	Handrail	Blue	0.0087 %	<RL	0.014 %	2.2	0.029 %	<RL
CHM-10	3rd Floor	Wall	Bright Yellow	0.0099 %	<RL	0.016 %	<RL	0.033 %	<RL
CHM-11	3rd Floor	Wall (Brick)	Yellow	0.0016 %	<RL	0.0027 %	<RL	0.0054 %	<RL
CHM-12	Attic	Stairway Wall	Grey	0.0011 %	<RL	0.0019 %	<RL	0.0038 %	<RL
CHM-13	Attic	Stairs	Green/Grey	0.0086 %	<RL	0.014 %	0.25	0.029 %	1.2
CHM-14	Boiler room	Ceiling	Tan	--	--	--	--	0.0025 %	0.20

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October 24th, 2019

Project Number: MA-117-19

Mr. Marc Bennett
Grand Rapids Public Schools
900 Union, NE
Grand Rapids, MI 49503

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Greenville, MI 48838
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Web: microairconsulting.com
Email: microairconsulting@gmail.com

Re: AHERA 3 Year Reinspection Report
Grand Rapids Public Schools – **Coit Arts Academy**

Dear Mr. Bennett:

MicroAir Consulting, LLC (MicroAir) was retained by Grand Rapids Public Schools (GRPS), to conduct an AHERA 3-year reinspection of Coit Arts Academy located at 617 Coit Avenue NE in Grand Rapids, Michigan. The inspection was conducted according to the protocol described in the U.S. Environmental Protection Agency Asbestos Hazard Emergency Response Act of 1986 (40 CFR 763).

CERTIFICATION

The building inspection was conducted on October 18th, 2019 by Mr. Ryan Emmons, a State of Michigan accredited Asbestos Building Inspector. Mr. Emmons's, Accreditation Number is A55220.

REGULATORY BACKGROUND

As a public and commercial building, Coit is governed by 29 CFR 1910.1001, Occupational Health Standards for Asbestos in Construction/General Industry and the EPA's NESHAP for the normal course of business activities by GRPS employees and occupants.

There are three state agencies in Michigan that regulate asbestos in Michigan: the Michigan Department of Environmental Quality (DEQ), the Michigan Department of Licensing and Regulatory Affairs (DLARA) and the Michigan Department of State Police (MSP). The DEQ is concerned about the release of asbestos fibers to the outer air and proper waste disposal, while DLARA focuses on worker protection during renovation and demolition activities, contractor licensing, and worker training.

During construction or renovation activities, the persons performing those activities would be governed by 29 CFR 1926.1101, Occupational Health Standards for Asbestos in Construction. The Asbestos Hazard Emergency Response Act (AHERA), 40 CFR 763, (partial) and/or its associated requirements. However, there are some portions of AHERA that are used as guidelines for compliance with 29 CFR 1910.1001. In particular, 29 CFR 1910.1001(j)(1) requires owners of buildings constructed prior to 1980 to presume that certain types of building materials are asbestos-containing materials (ACM), unless the owner demonstrates that those materials are not ACM.

40 CFR Part 61, Subpart M (NESHAP) requires that a thorough inspection be conducted prior to all renovations and all demolitions. A thorough inspection for asbestos is required no matter the age of the facility because all uses of asbestos are not banned. The inspection must be completed before the commencement of a subject renovation and/or demolition activity.

BUILDING DESCRIPTION

The Coit Arts Academy building was constructed in 1880 with additions in 1908, 1922 and 2002. Some building renovations have occurred throughout over the years as well.

PREVIOUS INSPECTION

The most recent inspection was conducted by GRPS. MicroAir reviewed this report and incorporated the findings of the previous inspection and historical information into the current reinspection data.

In the previous inspection report suspect ACM materials were given a unique identification number (homogeneous material number), MicroAir has changed numbering from previous reports. The reinspection did

include the collection of bulk samples. Results of the sampling can be found in Appendix A along with locations of remaining ACM in the building.

REINSPECTION PROCEDURES

With the assistance of GRPS maintenance staff, MicroAir re-inspected known and previously identified areas of the building including above suspended ceilings, pipe chases, and inside the tunnels.

It was beyond the scope of this reinspection to locate, identify, or quantify ACM in areas that were concealed and/or inaccessible areas, such as within walls, hard ceilings, or equipment.

2019 REINSPECTION FINDINGS

The following suspect asbestos-containing materials were observed at Coit Arts Academy School during the asbestos inspection and the bulk sampling. Materials in **bold** were found to be greater than 1% ACM.

- Brick mortar
- Cinderblock mortar
- Concrete
- Roofing
- **Fire doors and frames**
- Decorative block mortar
- Glass block mortar
- Blue cove base w/mastic
- Cream 12"x12" Floor tile w/mastic
- Wood floor underlayment
- Cream cove base w/mastic
- Ceramic grout
- 2'x4' drop ceiling tile smooth
- 2'x2' drop ceiling tile w/holes
- Wall plaster
- Textured drywall
- Ceiling plaster
- Drywall, tape and mud
- Black cove base w/mastic
- Smooth wall plaster
- Sink undercoating
- Divider wall
- Gray 12"x12" Floor tile w/mastic
- Drywall, tape and mud- downstairs
- Drywall, tape and mud- main floor

Some of the materials listed above are assumed to contain asbestos until bulk samples can be collected and analyzed.

Appendix A of this report is a table that identifies the confirmed and suspect ACM homogeneous materials in Coit Arts Academy, their corresponding identification number and locations, and the general condition of ACMs identified during the reinspection.

CONCLUSIONS AND RECOMMENDATIONS

MicroAir was retained by Grand Rapids Public Schools to conduct a 3-year asbestos-containing material (ACM) reinspection of Coit Arts Academy located at 617 Coit Avenue NE in Grand Rapids, Michigan. MicroAir completed the reinspection on October 18th, 2019. The inspection was conducted by a State of Michigan accredited Asbestos Building Inspector.

During the reinspection, MicroAir identified and assessed 25 homogeneous materials remaining in Coit Arts Academy. Any personnel entering a tunnel or chase areas must be notified of ACM locations and explained

the requirement to wear personal protective equipment.

If GRPS plans to conduct any renovation or demolition, the identified ACMs should be removed by a licensed asbestos abatement contractor, as required by current federal, state, and local laws and regulations, should perform any necessary removal and disposal of the identified ACM. MicroAir notes that if suspect ACM other than those identified during this reinspection are encountered during any renovation or demolition, such materials should be sampled and analyzed using PLM to verify presence of asbestos.

We also recommend that visual observations, verification of removal and cleanup, and air monitoring or clearance air monitoring for asbestos fibers be performed by a third party retained by GRPS to demonstrate compliance with applicable regulations, and to confirm the suitability or the area for re-entry. MicroAir can perform these services.

Warning labels should be affixed in all non-public areas where ACM or assumed ACM is present. After completion of repairs or removal of the ACM, fill out an O&M Activities Form and file it in the management plan.

As required by AHERA, GRPS should continue to send the annual notifications including information on planned response actions and reinspections. Copies of the notifications should be kept in the Management Plan.

LIMITATIONS

The conclusions drawn from the observations and sample results are only valid for the time the observations occurred. In the process of gathering the field data included in this report, procedures were followed that represent reasonable and acceptable industrial hygiene practices and procedures in a manner consistent with the level of care and skill ordinarily exercised by other members of this profession currently practicing under similar conditions. However, the information and opinions provided in this report are not to be construed as a warranty of the conditions of this site in any way, implied or explicit. MicroAir accepts no responsibility for the use, interpretation, or reliance by other parties on the information contained herein, nor does this report represent an instrument of regulatory compliance or an asbestos abatement specification.

In conducting the reinspection there are a number of obstacles and limitations that can affect the final outcome of the report. These limitations include but are not limited to the following factors: access concerns, materials that cannot be intrusively sampled or damaged, materials that have been replaced by renovation activities, materials with conflicting laboratory results, and materials that are located in inaccessible and/or concealed areas which limits its quantification. Due to these limitations, the results of this investigation cannot be construed as a certification of the presence or absence of ACM, beyond the materials identified, but rather a diligent and prudent review of available data within an established work scope, and time and budgetary constraints.

If you have any questions or require additional information, please contact me at 616-302-0819 or microairconsulting@gmail.com. Thank you.

Sincerely,

MicroAir Consulting, LLC

Christian T. Decker

Christian T. Decker
Accredited Building Inspector and Management Planner

APPENDIX A

TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS

APPENDIX A- 3 YEAR REINSPECTION
TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS
COIT ARTS ACADEMY
INSPECTION DATE: OCTOBER 18th, 2019

HSA NO.	HSA MATERIAL DESCRIPTION	ASBESTOS?	MATERIAL TYPE	F/NF	FUNCTIONAL AREA	CONDITION
Coit-1	Brick mortar	Assumed	MM	NF-II	Brick walls	Good
Coit-2	Cinderblock mortar	Assumed	MM	NF-II	Cinderblock walls	Good
Coit-3	Concrete	Assumed	MM	NF-II	All concrete	Good
Coit-4	Roofing	Assumed	MM	NF-I	Exterior asphalt roof	Good
Coit-5	Fire doors and frames	**Yes**	MM	NF-II	Boiler room and other tagged fire doors	Good
Coit-6	Decorative block mortar	Assumed	MM	NF-II	Exterior decorative block	Good
Coit-7	Glass block mortar	Assumed	MM	NF-II	Glass block areas	Good
Coit-8	Blue cove base w/mastic	Assumed	MM	NF-II	Hallways and stairways	Good
Coit-9	Cream 12"x12" Floor tile w/mastic	Assumed	MM	NF-I	Hallways and stairways	Good
Coit-10	Wood floor underlayment	Assumed	MM	NF-I	Under wood floors- Gym	Good
Coit-11	Cream cove base w/mastic	Assumed	MM	NF-II	Gym storage, receiving, storage and mechanical	Good
Coit-12	Ceramic grout	Assumed	MM	NF-I	Bathrooms and Locker rooms	Good
Coit-13	2'x4' drop ceiling tile smooth	Assumed	MM	NF-II	Locker rooms	Good
Coit-14	2'x2' drop ceiling tile w/holes	Assumed	MM	NF-II	Classrooms, hallways and kitchen	Good
Coit-15	Wall plaster	No	SM	F	Boiler room	Good
Coit-16	Textured drywall	No	SM	F	Boiler room	Good

FRIABILITY:
F: Friable
NF-I: Non-friable Category I
NF-II: Non-friable Category II

MATERIAL TYPE:
TSI: Thermal System Insulation
SM: Surfacing Material
MM: Miscellaneous Material

CONDITION:
Good: Little or no damage
Damaged: Less than 10% damage of total surface area, or less than 25% damage in a localized area
Significantly Damaged: Greater than 10% damage of total surface area, or greater than 25% damage in a localized area

SF: Square feet LF: Linear feet FT: Fittings NQ: Not Quantified

APPENDIX A- 3 YEAR REINSPECTION
TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS
COIT ARTS ACADEMY
INSPECTION DATE: OCTOBER 18th, 2019

HSA NO.	HSA MATERIAL DESCRIPTION	ASBESTOS?	MATERIAL TYPE	F/NF	FUNCTIONAL AREA	CONDITION
Coit-17	Ceiling plaster	No	SM	F	Boiler room	Good
Coit-18	Drywall, tape and mud	No	SM	F	Interior walls and tunnels	Good
Coit-19	Black cove base w/mastic	Assumed	MM	NF-II	Stairways	Good
Coit-20	Smooth wall plaster	No	SM	F	Interior walls main floor	Good
Coit-21	Sink undercoating	Assumed	MM	NF-II	Tunnels	Good
Coit-22	Divider wall	Assumed	MM	NF-II	Top floor and gym stage	Good
Coit-23	Gray 12"x12" Floor tile w/mastic	Assumed	MM	NF-I	Kitchen and office area	Good
Coit-24	Drywall, tape and mud	No	SM	F	Downstairs kitchen	Good
Coit-25	Drywall, tape and mud	No	SM	F	Main floor	Good

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November 12th, 2019
Project Number: MA-117-19

Mr. Marc Bennett
Grand Rapids Public Schools
900 Union, NE
Grand Rapids, MI 49503

119 West Cass Street
P.O. Box 908 Greenville,
MI 48838 Phone: 616-302-0819
Email: microairconsulting@gmail.com

Re: AHERA 3 Year Reinspection Report
Grand Rapids Public Schools – Ottawa Hills High School

Dear Mr. Bennett:

MicroAir Consulting, LLC (MicroAir) was retained by Grand Rapids Public Schools (GRPS), to conduct an AHERA 3-year reinspection of Ottawa Hills High School (OHHS) located at 2055 Rosewood SE in Grand Rapids, Michigan. The inspection was conducted according to the protocol described in the U.S. Environmental Protection Agency Asbestos Hazard Emergency Response Act of 1986 (40 CFR 763).

CERTIFICATION

The building inspection was conducted on November 29th, 2019 by Mr. Grant Edgerly, a State of Michigan accredited Asbestos Building Inspector. Mr. Edgerly's, Accreditation Number is A41792.

REGULATORY BACKGROUND

As a public school and/or a commercial building, Ottawa Hills is governed by 29 CFR 1910.1001, Occupational Health Standards for Asbestos in Construction/General Industry and the EPA's NESHAP and AHERA for the normal course of business activities by GRPS employees.

There are three state agencies in Michigan that regulate asbestos: the Michigan Department of Environmental Quality (DEQ), the Michigan Department of Licensing and Regulatory Affairs (DLARA) and the Michigan Department of State Police (MSP). The DEQ is concerned about the release of asbestos fibers to the outer air and proper waste disposal, while DLARA focuses on worker protection during renovation and demolition activities, contractor licensing, and worker training.

During construction or renovation activities, the persons performing those activities would be governed by 29 CFR 1926.1101, Occupational Health Standards for Asbestos in Construction. The Asbestos Hazard Emergency Response Act (AHERA), 40 CFR 763, (partial) and/or its associated requirements. However, there are some portions of AHERA that are used as guidelines for compliance with 29 CFR 1910.1001. In particular, 29 CFR 1910.1001(j)(1) requires owners of buildings constructed prior to 1980 to presume that certain types of building materials are asbestos-containing materials (ACM), unless the owner demonstrates that those materials are not ACM.

40 CFR Part 61, Subpart M (NESHAP) requires that a thorough inspection be conducted prior to all renovations and all demolitions. A thorough inspection for asbestos is required no matter the age of the facility because all uses of asbestos are not banned. The inspection must be completed before the commencement of a subject renovation and/or demolition activity.

BUILDING DESCRIPTION

The Ottawa Hills High School building was constructed in 1960 with an addition added to the school in 1972. Some building renovations have occurred throughout OHHS over the years.

PREVIOUS INSPECTION

The most recent inspection was conducted by MicroAir in 2018. MicroAir reviewed this report and incorporated the findings of the previous inspection and historical information into the current reinspection data.

In the previous inspection report suspect ACM materials were given a unique identification number (homogeneous material number), MicroAir has changed numbering from previous reports. The reinspection did include the collection of bulk samples. Results of the sampling can be found in Appendix A along with locations and estimated quantities of remaining ACM in the building.

REINSPECTION PROCEDURES

With the assistance of GRPS maintenance staff, MicroAir re-inspected known and previously identified areas of the building including above suspended ceilings, pipe chases, and inside the tunnels.

The reinspection was performed based on the requirements outlined in AHERA, NESHAP, and the Occupational Safety and Administration (OSHA) Asbestos in Construction Standard 29 CFR 1926.1101.

The reinspection was conducted in a room-by-room fashion. Homogeneous material/areas (HSA) numbers were arbitrarily selected depending on when they were first identified. The number of samples collected from each homogeneous material was determined depending on the type of material. Samples were collected from discrete locations.

It should be noted that it was beyond the scope of this inspection to locate, identify, or quantify suspect ACM in concealed and/or inaccessible areas, such as within walls, ceilings, or equipment (e.g., boiler, motors, etc.). However, areas above most suspended ceilings were observed where access was feasible. MicroAir did not test roofing materials due to the destructive nature of testing. MicroAir will sample the roofing materials at the request of GRPS.

Samples collected by MicroAir were taken in locations randomly selected by the inspector at the time of the inspection. All layers of the submitted sample were analyzed, and the lab was not instructed to discontinue analyzing the homogeneous material when asbestos was found in a sample.

Bulk samples were analyzed by Polarized Light Microscopy (PLM) using EPA Method 600/R-93/116 with gravimetric reduction (if required).

2019 REINSPECTION FINDINGS

At the time of the ACM reinspection, MicroAir identified the following 32 known or suspect ACM homogeneous materials remaining in Ottawa Hills High School. Materials in **bold** were found to be greater than 1% ACM.

- Tan 12″x12″ floor tile with associated mastic
- **9″x9″ floor tile and associated mastic**
- Smooth Ceiling Plaster
- Ceiling decorative plaster (fireproofing)
- **Mudded fittings on fiberglass pipe insulation including roof drains**
- **Aircell pipe insulation**
- Textured ceiling plaster
- **Wall boards and glue pods**
- Wood floor underlayment and mastic
- Stucco panels
- Vinyl stair treads
- White suspended ceiling tile
- Vinyl cove base
- **Sink undercoating**
- Rolled-on flooring
- **Transite**
- Stage curtains/ropes
- **Window glazing**
- Vibration dampener
- **Duct insulation**
- Drywall, tape and mud
- **Fire doors and frames**
- Boiler room ceiling
- 1″x1″ Splined-on ceiling tile pins and fissures
- 2′x2′ Ceiling tile
- **Flooring under carpet**
- 12″x12″ Olive floor tile w/mastic
- Brick mortar
- Ceramic grout
- Block mortar
- 2′x4′ Ceiling tile
- **Pipe gasket**

Some of the materials listed above are assumed to contain asbestos until bulk samples can be collected and analyzed.

The AHERA Priority Assessment ranking is Category 1 (damaged or significantly damaged thermal systems insulation or TSI) for the Aircell pipe insulation in rooms 274. The AHERA Priority Assessment ranking for the mudded pipe fittings in rooms 274B, 269E and 266 are a Category 1 (damaged or significantly damaged thermal systems insulation or TSI). It should be a priority to cleanup and patch these areas.

Appendix A of this report is a table that identifies the confirmed and suspect ACM homogeneous materials in OHHS, their corresponding identification number, estimated quantities and locations, and the general condition of ACMs identified during the reinspection.

CONCLUSIONS AND RECOMMENDATIONS

MicroAir was retained by Grand Rapids Public Schools to conduct a 3-year asbestos-containing material (ACM) reinspection of Ottawa Hills High School located at 2055 Rosewood SE in Grand Rapids, Michigan. MicroAir completed the reinspection on November 29th, 2019. The inspection was conducted by a State of Michigan accredited Asbestos Building Inspector.

During the reinspection, MicroAir identified and assessed 32 homogeneous materials remaining in Ottawa Hills High School. Various areas of damaged ACM were noted during the reinspection.

These areas where ACM should be cleaned, repaired or removed include:

- Aircell pipe insulation in Room 274
- Mudded pipe fittings on fiberglass pipe insulation in 274B (5), 269E (20) and 266 (20)

The AHERA Priority Assessment ranking is category 1 (damaged or significantly damaged thermal systems insulation or TSI) for the Aircell pipe insulation in rooms 274. The AHERA Priority Assessment ranking for the Mudded pipe fittings in rooms 274B, 269E and 266 are a category 1 (damaged or significantly damaged thermal systems insulation or TSI). It should be a priority to cleanup and patch these areas.

Any personnel entering the tunnel or chase areas must be notified of ACM locations and explained the requirement to wear personal protective equipment.

If GRPS plans to conduct any renovation or demolition, the identified ACMs should be removed by a licensed asbestos abatement contractor, as required by current federal, state, and local laws and regulations, should perform any necessary removal and disposal of the identified ACM. MicroAir notes that if suspect ACM other than those identified during this reinspection are encountered during any renovation or demolition, such materials should be sampled and analyzed using PLM to verify presence of asbestos.

We also recommend that visual observations, verification of removal and cleanup, and air monitoring or clearance air monitoring for asbestos fibers be performed by a third party retained by GRPS to demonstrate compliance with applicable regulations, and to confirm the suitability or the area for re-entry. MicroAir can perform these services.

Warning labels should be affixed in all non-public areas where ACM or assumed ACM is present. After completion of repairs or removal of the ACM, fill out an O&M Activities Form and file it in the management plan.

As required by AHERA, GRPS should continue to send the annual notifications including information on planned response actions and reinspections. Copies of the notifications should be kept in the Management Plan.

LIMITATIONS

The conclusions drawn from the observations and sample results are only valid for the time the observations occurred. In the process of gathering the field data included in this report, procedures were followed that represent reasonable and acceptable industrial hygiene practices and procedures in a manner consistent with the level of care and skill ordinarily exercised by other members of this profession currently practicing under similar conditions. However, the information and opinions provided in this report are not to be construed as a warranty of the conditions of this site in any way, implied or explicit. MicroAir accepts no responsibility for the use, interpretation, or reliance by other parties on the information contained herein, nor does this report represent an instrument of regulatory compliance or an asbestos abatement specification.

In conducting the reinspection there are a number of obstacles and limitations that can affect the final outcome of the report. These limitations include but are not limited to the following factors: access concerns, materials that cannot be intrusively sampled or damaged, materials that have been replaced by renovation activities, materials with conflicting laboratory results, and materials that are located in inaccessible and/or concealed areas which limits its quantification. Due to these limitations, the results of this investigation cannot be construed as a certification of the presence or absence of ACM, beyond the materials identified, but rather a diligent and prudent review of available data within an established work scope, and time and budgetary constraints.

If you have any questions or require additional information, please contact me at 616-302-0819 or microairconsulting@gmail.com.

Sincerely,

MicroAir Consulting, LLC

Christian T. Decker

Christian T. Decker
Accredited Building Inspector and Management Planner

Enclosures

APPENDIX A

TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS

APPENDIX A
TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS
OTTAWA HILLS HIGH SCHOOL
INSPECTION DATE: NOVEMBER 29th, 2019

HSA NO.	HSA MATERIAL DESCRIPTION	ASBESTOS?	MATERIAL TYPE	F/NF	FUNCTIONAL AREA / (ESTIMATED QUANTITY)	CONDITION
OHHS-1	Tan 12"x12" floor tile with associated mastic	Tile – No Mastic –No	MM	--	Cafeteria, 274, 268, 257, 251, 238, 237, 237A, 237B, 244, Skywalk to south house, 167, 169J, 164, 137, 202, 201A, Auditorium orchestra pit, stage stairway to music room, 203, 233, 236, North House - 110 **(>10K square feet)**	--
OHHS-2	9"x9" floor tile and associated mastic	Tile – **Yes** Mastic – No	MM	NF-I	141 **(40 square feet)**, Stage stairway to music room **(25 square feet),** Pool Balcony Landing **(150 square feet),** Skywalk **(120 square feet)**	Good
OHHS-3	Smooth Ceiling Plaster	Skim Coat – No Base Coat – No	SM	--	276, 276A, 275, 273, 262, 270, Boiler room adjacent to 274, 146A, 268, Girls and Boys bath near 256, 258, 259B-D, 251, 238, 239, 240, 244, Small gym upper fan room, 157, 154, Tunnel under Pool, 159, Boys and Girls locker room, 164, 143, 137, Weight room stairway, 202, 200, Auditorium, Stage, 208, 233, 234 **(>10K square feet)**	--
OHHS-4	Ceiling decorative plaster (fireproofing)	No	SM	--	273, Café serving, 269E, 260, 257, 259A, Hallway near 251 **(6K square feet)**	--
OHHS-5	Mudded fittings on fiberglass pipe insulation including roof drains	**Yes**	TSI	F	274B **(5),** 269E**, (20),** 266 **(20),** 269 (34), 256 (4), 260 (20), Girls and Boys bath near 256 (30), 257, (10), 269B (15), 258 (5), 259A (30), Hallway near 251 (200), 249G (20), 238 (15), 299o near office (12), 240 (10), 237 (16), 242 (10), 245 (15), 248 (25), 246 (10), 244 (10), 253 (6), 255 (40), Skywalk (10), Gym boiler/fan room (100), 157 (10), Tunnel under pool (45), Pool heater room (21), 159 (20), 167 (10), 160 (20), Lower gym (12), 164 (gym) (28), 147 (small gym) (12), Boys and Girls locker room (40), Tunnel under athletic areas (20), 164 A-B (20), 137 (30), 134 (13), 136 (20), 133 (5), 137 (10), Auditorium loft (74), 203 (20), 208 (125), 233 (30), 236 (15), 236A (10), 234 (20), Tunnel around North and South Houses, South and North House 3rd Floor above ceilings	Damage-Tunnel
OHHS-6	Aircell pipe insulation	**Yes**	TSI	F	274 (12), 27B (15), Boiler Room adjacent to 274 (100), 146A (15), 266 (20), Boys and Girls bathrooms near 256 (40), 258 (25), 239 (350), 240 (50), Small gym upper fan room (120), Tunnel under athletic areas (100), Tunnel under boiler room 144 (200), 137 (50)	Damage in 274, 258

FRIABILITY:
F: Friable
NF-I: Non-friable Category I
NF-II: Non-friable Category II

MATERIAL TYPE:
TSI: Thermal System Insulation
SM: Surfacing Material
MM: Miscellaneous Material

CONDITION:
Good: Little or no damage
Damaged: Less than 10% damage of total surface area, or less than 25% damage in a localized area
Significantly Damaged: Greater than 10% damage of total surface area, or greater than 25% damage in a localized area

SF: Square feet LF: Linear feet FT: Fittings NQ: Not Quantified

APPENDIX A
TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS
OTTAWA HILLS HIGH SCHOOL
INSPECTION DATE: NOVEMBER 29th, 2019

HSA NO.	HSA MATERIAL DESCRIPTION	ASBESTOS?	MATERIAL TYPE	F/NF	FUNCTIONAL AREA / (ESTIMATED QUANTITY)	CONDITION
OHHS-7	Textured ceiling plaster	No	SM	--	Auditorium **(9,000 SF)**	--
OHHS-8	Glue pods associated with wall boards	**Yes**	MM	NF-II	Classrooms, offices, hallways and associated rooms **(25)**	Good
OHHS-9	Wood floor underlayment and mastic	No	MM	--	209A-C **(2K SF)**, Auditorium stage **(2K SF),** Under Gym floor **(13,000 SF)**	--
OHHS-10	Stucco panels	No	SM	--	Auditorium walls **(>10K SF)**	--
OHHS-11	Vinyl stair treads	No	MM	--	Large gym **(400 SF)**, 201A **(10 SF)**	--
OHHS-12	White suspended ceiling tile	No	MM	--	273, 269A-E, 256, 266, 265, 260, 257, 259A, 249A-G, 238, 242, 248, 253 and 154 (pool area). **(>10K SF)**	--
OHHS-13	Vinyl cove base	No	MM	--	269A-E, 266, 265, 269, 256, 260, 257, 269B, 252A, 259A, 251, 249A-E, 238, 237A-B, 242, 244, 254, 159, 160, 167, locker rooms, 164A-B, 141, 137, 202, 201A, 203, 233, 236 and 234. **(>2K LF)**	--
OHHS-14	Sink undercoating	**Yes**	MM	NF-II	269, 269D, 269E, 260, 257, 249G, 248, 164 and 164B. **(9 total)**	Good
OHHS-15	Rolled-on flooring	**Yes**	MM	NF-II	234 Bookstore (removed in 2019)	--
OHHS-16	Transite	**Yes**	MM	NF-I	249A-E, 203 and 233. **(1000 SF)**	Good
OHHS-17	Stage curtains/ropes	No	MM	--	Auditorium **(>1000 LF)**	--
OHHS-18	Window glazing	**Yes**	MM	NF-II	237A-B.	Good
OHHS-19	Vibration dampener	No	MM	--	274, 239, 147 upper room and 208. **(200 LF)**	--

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APPENDIX A
TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS
OTTAWA HILLS HIGH SCHOOL
INSPECTION DATE: NOVEMBER 29th, 2019

HSA NO.	HSA MATERIAL DESCRIPTION	ASBESTOS?	MATERIAL TYPE	F/NF	FUNCTIONAL AREA / (ESTIMATED QUANTITY)	CONDITION
OHHS-20	Duct insulation	**Yes**	TSI	F	147 upper room and Boiler room. **(900 SF)**	Good
OHHS-21	Boiler insulation and components	**Yes**	TSI	--	Removed in 2018	--
OHHS-22	Drywall, tape and mud	No	MM	--	Classrooms, offices, hallways and associated rooms. **(>10,000 SF)**	--
OHHS-23	Fire doors and frames	**Yes**	MM	NF-II	276, 276A, 275, 273, Boiler room, 146A (3), 257, 239, 248, 253, 254, 147 upper room, 132, 133, 134, 136, 137, tunnel doors, 267, 269, 260, 252A, 252B, 249E, 249C, 237, 242, 243, 245, 247, 209, 205, 232, 214A, 299X, 322, 301B, 325, 102, 103, 103A, 191, 195, 130C, 130E, 182A, 277, 278B, 299G, 330, 331B, 359, 157 and 156. **(<100 total)**	Good
OHHS-24	Roofing	Assumed	MM	NF-I	Roofing	Good
OHHS-24A	Boiler door gasket	**Yes**	TSI	--	Removed in 2018	--
OHHS-25	Boiler blower gasket	**Yes**	TSI	--	Removed in 2018	--
OHHS-26	Boiler inner glazing	No	TSI	--	Removed in 2018	--
OHHS-27	Boiler cement	No	TSI	--	Removed in 2018	--
OHHS-28	Boiler door mud	No	TSI	--	Removed in 2018	--
OHHS-29	Boiler port hole mud	No	TSI	--	Removed in 2018	--
OHHS-30	Boiler jacket lag cloth	No	TSI	--	Removed in 2018	--
OHHS-31	Inner boiler – red mud	No	TSI	--	Removed in 2018	--
OHHS-32	Inner boiler - white brick	No	TSI	--	Removed in 2018	--
OHHS-33	Upper tank insulation	No	TSI	--	Removed in 2018	--
OHHS-34	Outer boiler insulation	No	TSI	--	Removed in 2018	--
OHHS-35	Lower boiler insulation	No	TSI	--	Removed in 2018	--
OHHS-36	Boiler door gasket	No	TSI	--	Removed in 2018	--
OHHS-37	Boiler end insulation	No	TSI	--	Removed in 2018	--
OHHS-38	Inner boiler troweled insulation	No	TSI	--	Removed in 2018	--
OHHS-39	Boiler concrete liner	No	TSI	--	Removed in 2018	--

OHHS-40	Boiler inner brick	No	TSI	--	Removed in 2018	--
OHHS-41	Inner boiler gasket	No	TSI	--	Removed in 2018	--
OHHS-42	Inner boiler caulk	No	TSI	--	Removed in 2018	--
OHHS-43	Active boiler pad	No	TSI	--	Removed in 2018	--
OHHS-44	Underground transite pipe	**Yes**	TSI	--	Removed in 2018	--
OHHS-45	Boiler room ceiling	No	SM	--	Boiler Room	--
OHHS-46	Weight room mechanical duct jacketing	No	TSI	--	Removed in 2018	--
OHHS-47	1"x1" Splined-on ceiling tile pins and fissures	No	MM	--	Mall area near auditorium	--
OHHS-48	2'x2' Ceiling tile	No	MM	--	Psychologist's office	--
OHHS-49	Flooring under carpet	Flooring- **Yes** Mastic- No	MM	NF-I	Room 207	Good
OHHS-50	12"x12" Olive floor tile w/mastic	Flooring- No Mastic- No	MM	NF-I	Hallway near 247	Good
OHHS-51	Brick mortar	No	MM	--	All brick walls	--
OHHS-52	Ceramic grout	No	MM	--	Ceramic tile areas	--
OHHS-53	Block mortar	No	MM	--	All cinderblock walls	--
OHHS-54	2'x4' Ceiling tile	No	MM	--	Band Room 101	--
OHHS-55	Pipe gasket	**Yes**	MM	NF-II	Chiller room	Good

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October 25th, 2019
Project Number: MA-117-19

Mr. Marc Bennett
Grand Rapids Public Schools
900 Union, NE
Grand Rapids, MI 49503

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Greenville, MI 48838
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Web: microairconsulting.com
Email: microairconsulting@gmail.com

Re: AHERA 3 Year Reinspection Report
Grand Rapids Public Schools – **Riverside Middle School**

Dear Mr. Bennett:

MicroAir Consulting, LLC (MicroAir) was retained by Grand Rapids Public Schools (GRPS), to conduct an AHERA 3-year reinspection of Riverside Middle School located at 265 Eleanor Street, NE in Grand Rapids, Michigan. The inspection was conducted according to the protocol described in the U.S. Environmental Protection Agency Asbestos Hazard Emergency Response Act of 1986 (40 CFR 763).

CERTIFICATION

The building inspection was conducted on October 19th, 2019 by Mr. Ryan Emmons, a State of Michigan accredited Asbestos Building Inspector. Mr. Emmons, Accreditation Number is A55220. Additional bulk samples were collected during this inspection.

REGULATORY BACKGROUND

As a public and commercial building, Riverside Middle School is governed by 29 CFR 1910.1001, Occupational Health Standards for Asbestos in Construction/General Industry and the EPA's NESHAP for the normal course of business activities by GRPS employees and occupants.

There are three state agencies in Michigan that regulate asbestos in Michigan: the Michigan Department of Environmental Quality (DEQ), the Michigan Department of Licensing and Regulatory Affairs (DLARA) and the Michigan Department of State Police (MSP). The DEQ is concerned about the release of asbestos fibers to the outer air and proper waste disposal, while DLARA focuses on worker protection during renovation and demolition activities, contractor licensing, and worker training.

During construction or renovation activities, the persons performing those activities would be governed by 29 CFR 1926.1101, Occupational Health Standards for Asbestos in Construction. The Asbestos Hazard Emergency Response Act (AHERA), 40 CFR 763, (partial) and/or its associated requirements. However, there are some portions of AHERA that are used as guidelines for compliance with 29 CFR 1910.1001. In particular, 29 CFR 1910.1001(j)(1) requires owners of buildings constructed prior to 1980 to presume that certain types of building materials are asbestos-containing materials (ACM), unless the owner demonstrates that those materials are not ACM.

40 CFR Part 61, Subpart M (NESHAP) requires that a thorough inspection be conducted prior to all renovations and all demolitions. A thorough inspection for asbestos is required no matter the age of the facility because all uses of asbestos are not banned. The inspection must be completed before the commencement of a subject renovation and/or demolition activity.

BUILDING DESCRIPTION

The Riverside Middle School building was constructed in 1956. Some building renovations have occurred throughout over the years.

PREVIOUS INSPECTION

The most recent inspection was conducted by GRPS in 2019. MicroAir reviewed this report and incorporated the findings of the previous inspection and historical information into the current reinspection data.

In the previous inspection report suspect ACM materials were given a unique identification number (homogeneous material number), MicroAir has changed numbering from previous reports. The reinspection did

include the collection of bulk samples. Results of the sampling can be found in Appendix A along with locations of remaining ACM in the building.

REINSPECTION PROCEDURES

With the assistance of GRPS maintenance staff, MicroAir re-inspected known and previously identified areas of the building including above suspended ceilings, pipe chases, and inside the tunnels.

It was beyond the scope of this reinspection to locate, identify, or quantify ACM in areas that were concealed and/or inaccessible areas, such as within walls, hard ceilings, or equipment.

2019 REINSPECTION FINDINGS

The following suspect asbestos-containing materials were observed at Riverside Middle School during the asbestos inspection and the bulk sampling. Materials in **bold** were found to be greater than 1% ACM.

- Brick mortar
- Block mortar
- Concrete
- Decorative block mortar
- Decorative slab mortar
- **Exterior soffits**
- **Exterior window caulk**
- Ceramic grout
- Office plaster
- Tan cove base w/mastic
- **Fire doors and frames**
- **Mudded pipe fittings**
- 1'x1' ceiling tile – splined on
- **Interior window glaze**
- 12"X12" floor tile tan w/mastic
- Black cove base w/mastic
- 1'x1 ceiling tile w/holes w/glue pod
- Gray cove base w/mastic
- 2'x2' ceiling tiles
- 12"X12" floor tile beige w/mastic
- Older chalkboards
- Wood floor underlayment
- Vibration dampener
- Mudded roof drain
- Gray cove base w/mastic
- Vinyl stair tread w/mastic
- 12"x12" floor tile w/squares w/mastic
- Vinyl stair tread red w/mastic
- Roofing materials

Some of the materials listed above are assumed to contain asbestos until bulk samples can be collected and analyzed.

Appendix A of this report is a table that identifies the confirmed and suspect ACM homogeneous materials in Riverside Middle School, their corresponding identification number and locations, and the general condition of ACMs identified during the reinspection.

CONCLUSIONS AND RECOMMENDATIONS

MicroAir was retained by Grand Rapids Public Schools to conduct a 3-year asbestos-containing material (ACM) reinspection of Riverside Middle School located at 265 Eleanor Street, NE in Grand Rapids, Michigan. MicroAir completed the reinspection on October 19th, 2019. The inspection was conducted by a State of Michigan accredited Asbestos Building Inspector.

If GRPS plans to conduct any renovation or demolition, the identified ACMs should be removed by a licensed asbestos abatement contractor, as required by current federal, state, and local laws and regulations, should perform any necessary removal and disposal of the identified ACM.

MicroAir notes that if suspect ACM other than those identified during this reinspection are encountered during any renovation or demolition, such materials should be sampled and analyzed using PLM to verify presence of asbestos.

We also recommend that visual observations, verification of removal and cleanup, and air monitoring or clearance air monitoring for asbestos fibers be performed by a third party retained by GRPS to demonstrate compliance with applicable regulations, and to confirm the suitability or the area for re-entry. MicroAir can perform these services.

Warning labels should be affixed in all non-public areas where ACM or assumed ACM is present. After completion of repairs or removal of the ACM, fill out an O&M Activities Form and file it in the management plan.

As required by AHERA, GRPS should continue to send the annual notifications including information on planned response actions and reinspections. Copies of the notifications should be kept in the Management Plan.

LIMITATIONS

The conclusions drawn from the observations and sample results are only valid for the time the observations occurred. In the process of gathering the field data included in this report, procedures were followed that represent reasonable and acceptable industrial hygiene practices and procedures in a manner consistent with the level of care and skill ordinarily exercised by other members of this profession currently practicing under similar conditions. However, the information and opinions provided in this report are not to be construed as a warranty of the conditions of this site in any way, implied or explicit. MicroAir accepts no responsibility for the use, interpretation, or reliance by other parties on the information contained herein, nor does this report represent an instrument of regulatory compliance or an asbestos abatement specification.

In conducting the reinspection there are a number of obstacles and limitations that can affect the final outcome of the report. These limitations include but are not limited to the following factors: access concerns, materials that cannot be intrusively sampled or damaged, materials that have been replaced by renovation activities, materials with conflicting laboratory results, and materials that are located in inaccessible and/or concealed areas which limits its quantification. Due to these limitations, the results of this investigation cannot be construed as a certification of the presence or absence of ACM, beyond the materials identified, but rather a diligent and prudent review of available data within an established work scope, and time and budgetary constraints.

If you have any questions or require additional information, please contact me at 616-302-0819 or microairconsulting@gmail.com. Thank you.

Sincerely,

MicroAir Consulting, LLC

Christian T. Decker

Christian T. Decker
Accredited Building Inspector and Management Planner

APPENDIX A

TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS

APPENDIX A- 3 YEAR REINSPECTION
TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS
RIVERSIDE MIDDLE SCHOOL
INSPECTION DATE: OCTOBER 19th, 2019

HSA NO.	HSA MATERIAL DESCRIPTION	ASBESTOS?	MATERIAL TYPE	FUNCTIONAL AREA	CONDITION
RSM-1	Brick mortar	No	--	All brick walls	--
RSM-2	Block mortar	Assumed	NF-II	All block walls	Good
RSM-3	Concrete	No	--	All Concrete	--
RSM-4	Decorative block mortar	No	--	Exterior decorative blocks	--
RSM-5	Decorative slab mortar	No	--	Exterior decorative slab	--
RSM-6	Exterior soffits	**Yes**	SM	Entry and soffits	Good
RSM-7	Exterior window caulk	**Yes**	NF-II	Exterior windows	Good
RSM-8	Ceramic grout	No	--	Hallways and bathrooms	--
RSM-9	Office plaster	No	--	Walls and ceilings in the office closet	--
RSM-10	Tan cove base w/mastic	No	--	Office	--
RSM-11	Fire doors and frames	**Yes**	NF-II	All tagged doors	Good
RSM-12	Mudded pipe fittings	**Yes**	F	Tunnels	Good
RSM-13	1'x1' ceiling tile – splined on	No	--	Hallways	--
RSM-14	Interior window glaze	**Yes**	NF-II	Boiler room and classroom windows	Good
RSM-15	12"X12" floor tile tan w/mastic	Assumed	NF-I	Hallways	Good
RSM-16	Black cove base w/mastic	Assumed	NF-II	Classrooms	Good
RSM-17	1'x1 ceiling tile w/holes w/glue pod	Both- No	--	Hallways 176, 177 and 180	--
RSM-18	Gray cove base w/mastic	Assumed	NF-II	Hallway and classrooms	Good
RSM-19	2'x2' ceiling tiles	No	--	Hallways	--

FRIABILITY:
F: Friable
NF-I: Non-friable Category I
NF-II: Non-friable Category II

MATERIAL TYPE:
TSI: Thermal System Insulation
SM: Surfacing Material
MM: Miscellaneous Material

CONDITION:
Good: Little or no damage
Damaged: Less than 10% damage of total surface area, or less than 25% damage in a localized area
Significantly Damaged: Greater than 10% damage of total surface area, or greater than 25% damage in a localized area

SF: Square feet LF: Linear feet FT: Fittings NQ: Not Quantified

APPENDIX A- 3 YEAR REINSPECTION
TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS
RIVERSIDE MIDDLE SCHOOL
INSPECTION DATE: OCTOBER 19th, 2019

HSA NO.	HSA MATERIAL DESCRIPTION	ASBESTOS?	MATERIAL TYPE	FUNCTIONAL AREA	CONDITION
RSM-20	12"X12" floor tile beige w/mastic	Assumed	NF-I	Classrooms	Good
RSM-21	Older chalkboards	Assumed	NF-II	Classrooms	Good
RSM-22	Wood floor underlayment	Assumed	NF-I	Gym	Good
RSM-23	Vibration dampener	Assumed	NF-II	HVAC ductwork	Good
RSM-24	Mudded roof drain	Assumed	F	Gym	Good
RSM-25	Gray cove base w/mastic	Assumed	NF-II	Under lockers	Good
RSM-26	Vinyl stair tread w/mastic	Assumed	NF-I	Near gym	Good
RSM-27	12"x12" floor tile w/squares w/mastic	Assumed	NF-I	Near gym	Good
RSM-28	Vinyl stair tread red w/mastic	Assumed	NF-I	Computer Lab	Good
RSM-29	Roofing materials	Assumed	NF-I	Asphalt roofing	Good

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SF: Square feet LF: Linear feet FT: Fittings NQ: Not Quantified

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February 12th, 2019
Project Number: MA-158-18

Mr. Marc Bennett
Grand Rapids Public Schools
900 Union, NE
Grand Rapids, MI 49503

119 West Cass Street
P.O. Box 908
Grand Rapids, MI 48838
Phone: 616-302-0819
Web: microairconsulting.com
Email: microairconsulting@gmail.com

Re: AHERA 3 Year Reinspection Report
Grand Rapids Public Schools – Southwest Community Campus School

Dear Mr. Bennett:

MicroAir Consulting, LLC (MicroAir) was retained by Grand Rapids Public Schools (GRPS), to conduct an AHERA 3-year reinspection of Southwest Community Campus School (SWCC) located at 801 Oakland Avenue SW in Grand Rapids, Michigan. The inspection was conducted according to the protocol described in the U.S. Environmental Protection Agency Asbestos Hazard Emergency Response Act of 1986 (40 CFR 763).

CERTIFICATION

The building inspection was conducted on February 4th, 2019 by Mr. Grant Edgerly, a State of Michigan accredited Asbestos Building Inspector. Mr. Edgerly's, Accreditation Number is A41792.

REGULATORY BACKGROUND

As a public and commercial building, SWCC is governed by 29 CFR 1910.1001, Occupational Health Standards for Asbestos in Construction/General Industry and the EPA's NESHAP for the normal course of business activities by GRPS employees and occupants.

There are three state agencies in Michigan that regulate asbestos in Michigan: the Michigan Department of Environmental Quality (DEQ), the Michigan Department of Licensing and Regulatory Affairs (DLARA) and the Michigan Department of State Police (MSP). The DEQ is concerned about the release of asbestos fibers to the outer air and proper waste disposal, while DLARA focuses on worker protection during renovation and demolition activities, contractor licensing, and worker training.

During construction or renovation activities, the persons performing those activities would be governed by 29 CFR 1926.1101, Occupational Health Standards for Asbestos in Construction. The Asbestos Hazard Emergency Response Act (AHERA), 40 CFR 763, (partial) and/or its associated requirements. However, there are some portions of AHERA that are used as guidelines for compliance with 29 CFR 1910.1001. In particular, 29 CFR 1910.1001(j)(1) requires owners of buildings constructed prior to 1980 to presume that certain types of building materials are asbestos-containing materials (ACM), unless the owner demonstrates that those materials are not ACM.

40 CFR Part 61, Subpart M (NESHAP) requires that a thorough inspection be conducted prior to all renovations and all demolitions. A thorough inspection for asbestos is required no matter the age of the facility because all uses of asbestos are not banned. The inspection must be completed before the commencement of a subject renovation and/or demolition activity.

BUILDING DESCRIPTION

The Southwest Community Campus School building was constructed in 1915. Some building renovations have occurred throughout over the years.

PREVIOUS INSPECTION

The most recent inspection was conducted by GRPS in 2018. MicroAir reviewed this report and incorporated the findings of the previous inspection and historical information into the current reinspection data.

In the previous inspection report suspect ACM materials were given a unique identification number (homogeneous material number), MicroAir has changed numbering from previous reports. The reinspection did include the collection of bulk samples. Results of the sampling can be found in Appendix A along with locations of remaining ACM in the building.

REINSPECTION PROCEDURES

With the assistance of GRPS maintenance staff, MicroAir re-inspected known and previously identified areas of the building including above suspended ceilings, pipe chases, and inside the tunnels.

It was beyond the scope of this reinspection to locate, identify, or quantify ACM in areas that were concealed and/or inaccessible areas, such as within walls, hard ceilings, or equipment.

2019 REINSPECTION FINDINGS

The following suspect asbestos-containing materials were observed at Southwest Community Campus School during the asbestos inspection and the bulk sampling. Materials in **bold** were found to be greater than 1% ACM.

- Plaster
- Hard Plaster
- Drywall, tape and mud
- **Troweled on flooring**
- 12"x12" floor tile w/mastic
- Wood floor underlayment
- 1'x1' Ceiling tile w/glue pods
- Stack liner
- Sink undercoating
- Mortars
- Ceramic grout
- **Fire doors and window frames**
- Concrete
- Roofing

Some of the materials listed above are assumed to contain asbestos until bulk samples can be collected and analyzed.

Appendix A of this report is a table that identifies the confirmed and suspect ACM homogeneous materials in SWCC, their corresponding identification number and locations, and the general condition of ACMs identified during the reinspection.

CONCLUSIONS AND RECOMMENDATIONS

MicroAir was retained by Grand Rapids Public Schools to conduct a 3-year asbestos-containing material (ACM) reinspection of Southwest Community Campus School located at 801 Oakland Avenue, SW in Grand Rapids, Michigan. MicroAir completed the reinspection on February 4th, 2019. The inspection was conducted by a State of Michigan accredited Asbestos Building Inspector.

During the reinspection, MicroAir identified and assessed 14 homogeneous materials remaining in Southwest Community Campus School.

Any personnel entering a tunnel or chase area must be notified of ACM locations and explained the requirement to wear personal protective equipment.

If GRPS plans to conduct any renovation or demolition, the identified ACMs should be removed by a licensed asbestos abatement contractor, as required by current federal, state, and local laws and regulations, should perform any necessary removal and disposal of the identified ACM. MicroAir notes that if suspect ACM other than those identified during this reinspection are encountered during any renovation or demolition, such materials should be sampled and analyzed using PLM to verify presence of asbestos.

We also recommend that visual observations, verification of removal and cleanup, and air monitoring or clearance air monitoring for asbestos fibers be performed by a third party retained by GRPS to demonstrate compliance with applicable regulations, and to confirm the suitability or the area for re-entry. MicroAir can perform these services.

Warning labels should be affixed in all non-public areas where ACM or assumed ACM is present. After completion of repairs or removal of the ACM, fill out an O&M Activities Form and file it in the management plan.

As required by AHERA, GRPS should continue to send the annual notifications including information on planned response actions and reinspections. Copies of the notifications should be kept in the Management Plan.

LIMITATIONS

The conclusions drawn from the observations and sample results are only valid for the time the observations occurred. In the process of gathering the field data included in this report, procedures were followed that represent reasonable and acceptable industrial hygiene practices and procedures in a manner consistent with the level of care and skill ordinarily exercised by other members of this profession currently practicing under similar conditions. However, the information and opinions provided in this report are not to be construed as a warranty of the conditions of this site in any way, implied or explicit. MicroAir accepts no responsibility for the use, interpretation, or reliance by other parties on the information contained herein, nor does this report represent an instrument of regulatory compliance or an asbestos abatement specification.

In conducting the reinspection there are a number of obstacles and limitations that can affect the final outcome of the report. These limitations include but are not limited to the following factors: access concerns, materials that can not be intrusively sampled or damaged, materials that have been replaced by renovation activities, materials with conflicting laboratory results, and materials that are located in inaccessible and/or concealed areas which limits its quantification. Due to these limitations, the results of this investigation cannot be construed as a certification of the presence or absence of ACM, beyond the materials identified, but rather a diligent and prudent review of available data within an established work scope, and time and budgetary constraints.

If you have any questions or require additional information, please contact me at 616-302-0819 or microairconsulting@gmail.com. Thank you.

Sincerely,

MicroAir Consulting, LLC

Christian T. Decker

Christian T. Decker
Accredited Building Inspector and Management Planner

APPENDIX A

TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS

APPENDIX A- 3 YEAR REINSPECTION
TESTED AND SUSPECT ASBESTOS-CONTAINING MATERIALS
SOUTHWEST COMMUNITY CAMPUS SCHOOL
INSPECTION DATE: FEBRUARY 4th, 2019

HSA NO.	HSA MATERIAL DESCRIPTION	ASBESTOS?	MATERIAL TYPE	F/NF	FUNCTIONAL AREA	CONDITION
SWCC-1	Plaster	No	SM	--	Walls and ceilings	--
SWCC-2	Hard Plaster	No	SM	--	Boiler room ceiling	--
SWCC-3	Drywall, tape and mud	No	SM	--	Drywall walls over plaster	--
SWCC-4	Troweled on flooring	**Yes**	SM	NF-I	Under carpet in original hallways, Base molds in hallways, **Stairways** including stringers, Rooms **131, 133, 230-233, 330, 332**, Entry to 120 and **Boiler room floor**	**Damaged**
SWCC-5	12"x12" floor tile w/mastic	Assumed	MM	NF-I	All 12"x12" floor tile areas	Good
SWCC-6	Wood floor underlayment	Assumed	MM	NF-I	Under all hard wood floors	Good
SWCC-7	1'x1' Ceiling tile w/glue pods	Assumed	MM	NF-II	Stairways	Good
SWCC-8	Stack liner	Assumed	SM	F	Inside stack from boiler room	Good
SWCC-9	Sink undercoating	Assumed	MM	NF-II	All original caulks and sealants	Good
SWCC-10	Mortars	Assumed	MM	NF-II	All block and brick walls	Good
SWCC-11	Ceramic grout	Assumed	MM	NF-I	Ceramic tiled areas	Good
SWCC-12	Fire doors and window frames	**Yes**	MM	NF-II	Boiler room and other tagged fire doors, Stairway windows	Good
SWCC-13	Concrete	Assumed	MM	NF-II	All concrete	Good
SWCC-14	Roofing	Assumed	MM	NF-I	Exterior asphalt roofing	Good

FRIABILITY:
F: Friable
NF-I: Non-friable Category I
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MATERIAL TYPE:
TSI: Thermal System Insulation
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