

Pre-Renovation Hazardous Building Materials Inspection Report

Residential Building
2070 Manitou Avenue
St. Paul, Minnesota

Prepared for

Ramsey County



April 30, 2018

Project B1801954-Revised

Mr. Paul Scharf
Ramsey County
90 West Plato Boulevard
St. Paul, MN 55107

Re: Pre-Renovation Hazardous Building Materials Inspection Report
Residential Building
2070 Manitou Avenue
St. Paul, Minnesota

Dear Mr. Scharf:

The enclosed report provides the results of the pre-renovation hazardous building materials inspection conducted on March 5 and April 24 2018, at the residential building located at 2070 Manitou Avenue in St. Paul, Minnesota (Site). Braun Intertec Corporation was authorized to conduct this inspection in accordance with our Proposal QTB074064 dated March 1, 2018 and the Braun Intertec General Conditions.

The following outline provides the structure of the report.

- Scope of Services
- Site Description
- Results
- Discussion
- Limitations

If you have any questions or need further assistance, please call Gaia Ewing at 612.751.4018 or Stephen Luth at 952.995.2668.

Sincerely,

BRAUN INTERTEC CORPORATION


Gaia I. Ewing
Environmental Technician


Stephen A. Luth
Project Scientist

Attachments:

Pre-Renovation Hazardous Building Materials Inspection Report

AA/EOE

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- E: Sample Location Sketches
- F: Asbestos Inspector Certificate

A. Scope of Services

The scope of our services was limited to:

- Visually examine accessible areas and identify locations of suspect asbestos-containing material (ACM), lead, poly-chlorinated biphenyls (PCB), mercury, and other miscellaneous hazardous material.
- Collect and analyze representative bulk samples of materials suspected of containing asbestos.
- Conduct limited lead-based paint testing (LBP) of various building components that may be impacted by the future renovation project. The various painted surfaces suspected of containing lead will be tested using a Niton X-ray fluorescence (XRF) spectrum analyzer. The Niton is a portable, non-destructive, in-situ test and measurement instrument. The scope of the limited lead-based testing is intended to be used to aid the Contractor in developing the project budget and worker safety requirements for OSHA and US EPA Renovation, Repair and Painting Program Rule (RRP) compliance.

Note: *The limited lead-based paint testing is not intended to represent a comprehensive lead-based paint inspection, lead risk assessment or fulfill the testing protocols required by the Department of Housing and Urban Development (HUD) Lead Safe Housing Rule, 24 CFR 35, subparts B through R, et al., June 21, 2004. Additional LBP testing may be required.*

- Assign a hazard rating based on asbestos content with respect to the materials condition, friability, accessibility, and hazard potential.
- Document the various materials' current conditions and ACM quantities.
- Generate a final report documenting the sample locations, analysis results, conditions, ACM quantities.

B. Site Description

The subject of the inspection is the residential building located at 2070 Manitou Avenue in St. Paul, Minnesota. The house is a single level wood structure with a basement. It was constructed in 1924 and encompasses approximately 1,000 square feet. The house is constructed of wood, concrete and concrete block foundation walls. The typical interior finishes included sheetrock/joint compound, plaster and vinyl sheet flooring. The exterior of the house stucco with an asphalt roof shingle roof system. A detached garage that it is on the property is constructed of wood and has an asphalt roofing system. The buildings were vacant and unoccupied at the time of the inspection.

C. Results

C.1. Asbestos

Twenty-five (25) bulk samples were collected on March 5 and April 24, 2018 and submitted to EMSL Analytical, Inc. a microscopy laboratory that is fully accredited for bulk analysis.

C.1.a. Asbestos-Containing Materials

The following is a summary of building materials found or assumed to contain greater than one percent asbestos (asbestos-containing materials by regulatory definition).

- Chimney breaching in the basement contains 12 percent (%) chrysotile (asbestos).
- Linoleum (beneath floor tile) in the kitchen contains 25% chrysotile, and floor tile beneath linoleum contains 7% chrysotile.
- Stucco (gray/tan) contains 2% chrysotile.
- Duct wrap contains 70% chrysotile

C.1.b. Non-Asbestos-Containing Materials

The following is a summary of building materials found to contain no asbestos or materials that contain one percent or less asbestos (non-asbestos-containing materials by regulatory definition).

- Vinyl sheet flooring (off-white/gray)
- Tarpaper (black)
- Sheetrock/joint compound
- Window glazing (white)
- Plaster materials
- Floor tile (top layer) in kitchen
- Tarpaper beneath flooring system in the kitchen
- 4-inch vinyl baseboard (white) and adhesive (tan)
- 12-inch by 12-inch ceiling tile, splined (white, smooth)
- Ceramic floor tile (white, octagon shape) w/ grout and thin-set
- 4-inch by 4-inch ceramic wall tile (white) w/ grout and adhesive (tan)
- Blown-in insulation (brown)
- Stucco (white layer)
- Tarpaper (black) beneath stucco
- Caulking, exterior (white)
- Shingles and tarpaper

Refer to Table I in Appendix A, which lists individual functional spaces of the building, the suspect materials identified in that functional space, whether the suspect material was identified by analysis to be an asbestos-containing material, an estimated amount of each suspect material for the functional space, and includes condition, assessment categories and hazard ratings based on subjective observations made by our representatives.

Refer to Table II in Appendix B, which lists the homogenous material sample numbers, sample locations, suspect material descriptions, and the analysis results for each sample. This table summarizes the results from the Bulk Asbestos Laboratory Report, which is attached in Appendix D. A sample location map is included as Appendix E.

Bulk asbestos analysis was conducted in accordance with the Environmental Protection Agency's (EPA) Method 40 CFR, Chapter 1, Part 763, Subpart F, and Appendix A (7/1/87 Edition).

C.2. Lead-Based Paint

Testing of limited building components for lead-based paint was accomplished utilizing a Niton XL X-Ray Fluorescence (XRF) field portable analyzer, Model No. XLP303A - Serial No. 22287, equipped with a 40-milocurie CD-109 source - Serial No. TR3277, installed on March 17, 2015.

Analysis decision-making protocols were based on compliance with the United States (US) EPA and Minnesota Department of Health (MDH), which consider any x-ray fluorescence (XRF) result of 1.0 milligram per square centimeter (mg/cm²) or greater to be "lead-based paint." The following is a list of lead-based paints that were found on the limited building components tested.

- Plaster wall (yellow) – kitchen
- Plaster wall (white) – stairwell
- Wood doorframe (white) – front porch
- Wood floor (red) – front porch
- Wood column (white) – front porch
- Wood soffit (white) – front porch
- Wood window (white) – front porch
- Wood siding (white) - garage

Refer to Table III in Appendix C, which lists the sample numbers, sample locations, component descriptions, XRF field results, and the paint condition for each sample.

C.3. Miscellaneous Regulated Waste

A visual inspection for miscellaneous regulated waste materials that require separate handling and disposal prior to disturbance during building demolition was also performed as part of this assessment. The following is a list of items documented at the site:

C.3.a. Mercury

- Batteries – smoke detectors.
- Electrical Systems – electrical panels.
- Heating – Furnace.

C.3.b. Miscellaneous

- Water heater

D. Discussion

D.1. Asbestos-Containing Materials

D.1.a. Friable ACM

The following asbestos-containing materials are classified as friable materials according to EPA 40 CFR Part 61 National Emission Standard for Hazardous Air Pollutants (NESHAPs):

- Duct wrap around the wall duct in the northwest bedroom.
- Linoleum (beneath floor tile) in the kitchen, and floor tile beneath linoleum.

The above friable ACMs were observed to be in good condition at the time of our inspection. These materials should be maintained in good condition to prevent potential exposure to asbestos. Friable ACMs are to be removed prior to disturbance by demolition in accordance with applicable state and federal regulations.

D.1.b. Category I Non-Friable ACM

The following asbestos-containing materials are classified as Category I non-friable materials according to EPA 40 CFR Part 61 National Emission Standard for Hazardous Air Pollutants (NESHAPs):

- **No Category I Non-Friable ACM**

D.1.c. Category II Non-Friable ACM

The following asbestos-containing materials are classified as Category II non-friable materials according to EPA NESHAPs:

- Chimney breaching in the basement
- Stucco (gray/tan)

The above Category II non-friable ACMs were observed to be in good condition at the time of our inspection. These materials should be maintained in good condition to prevent potential exposure to asbestos. Category II non-friable ACMs are not considered a hazard unless cut, drilled, sanded, or otherwise abraded. However, Category II non-friable ACMs that may become friable during demolition must be removed prior to that activity. In accordance with applicable state and federal regulations.

D.2. Lead-Based Paint

Building components with lead-based paint should be maintained in good condition. If lead-based paint is to be disturbed during renovation, contractors should follow “Lead Safe Work Practices” and the OSHA Lead in Construction Standard. If the building were to be demolished in its entirety, building components with lead paint are not required to be removed or disposed of as lead or hazardous waste. Any lead-based paint-containing demolition waste and/or debris generated during building renovation or demolition should be subject to proper handling and disposal, consistent with applicable regulations and requirements.

The U.S. OSHA Lead in Construction Standard 29 Code of Federal Regulations (CFR) 1926.62 applies to all situations where employees are engaged in the disturbance of lead-containing coatings, regardless of the

quantity of lead involved. Therefore, any XRF result above 0.0 mg/cm² is considered "lead-containing coatings" in order to be in compliance with the OSHA standard. Demolition of the building may involve disturbing lead-containing coatings. Contractors should be informed of the presence of lead coatings and that they will be required to comply with the OSHA lead standard.

D.3. Miscellaneous Regulated Waste

In the case of building renovation/demolition, any of the miscellaneous regulated waste items listed in Section C.3 that will be disturbed, must be removed prior to disturbance and must be recycled or disposed of in accordance with state and federal guidelines.

E. Limitations

This inspection was limited to areas available for observation via non-destructive means. In any building, the potential exists for hazardous building materials to be located inside walls, above ceilings, under floors, and other inaccessible areas. Braun Intertec cannot be held responsible for the presence of any such hidden materials. In the case of building renovation/demolition, contractors involved in the project should be made aware of this potential. If previously unidentified suspect hazardous building materials are exposed during their activities they should be sampled and analyzed for content prior to any disturbance.

In performing its services, Braun Intertec used that degree of care and skill ordinarily exercised under similar circumstances by reputable members of its profession currently practicing in the same locality. No warranty, express or implied, is made.

- **Note:** The limited lead-based paint testing is not intended to represent a comprehensive lead-based paint inspection, lead risk assessment or fulfill the testing protocols required by the Department of Housing and Urban Development (HUD) 24 CFR part 35, et al., "Requirements for Notification, Evaluation and Reduction of Lead-Based Paint hazards in Federally Owned Residential Property and Housing Receiving Federal Assistance, Final Rule," June 21, 2004. Additional LBP testing may be required.

F. Asbestos Inspector Certification

I, the undersigned, do hereby certify that I am an accredited Asbestos Inspector in the State of Minnesota. A photocopy of my current asbestos inspector certificate is attached in Appendix F.

Signature: _____

FOR:

Gaia I. Ewing

Environmental Technician

Minnesota of Health Asbestos Inspector No: AI13299

Date: _____

4/30/2018

Appendix A

Table I. Asbestos Building Inspection Results

Client: Ramsey County

Location: 2070 Manitou Avenue; St. Paul, Minnesota

Date of Inspection: March 5 and April 24, 2018

Project: B1801954

Table I. Asbestos Building Inspection Results

Functional Space	Homogeneous Material Description	Contains Asbestos (Yes/No)	Ref. Client Sample No. (See Table II)	Estimated Quantity Units	Material Condition ¹	Hazard Category ²
5-Mar-18						
Basement	Vinyl sheet flooring (off-white/gray)	No	1	40 ft. ²	ND	0
Basement	Chimney breaching (gray)	Yes	2	2 ft.²	ND	1
Basement	Tarpaper (black)	No	3	625 ft. ²	ND	0
Basement	Sheetrock/joint compound	No	4	30 ft. ²	ND	0
Basement	Window glazing (white)	No	5	32 lin. ft.	D	0
Main Floor	Plaster Materials	No	6A-E	2,500 ft. ²	D	0
Main Floor - Kitchen	floor system - three layers, floor tile (off-white) over linoleum (second layer), floor tile and tarpaper (third layer)	Yes (layers 2 & 3)	7	100 ft.²	ND	1
Main Floor - Kitchen	4-inch vinyl baseboard (white) and adhesive (tan)	No	8	20 lin. ft.	D	0
Main Floor - Living Room	12-inch by 12-inch ceiling tile, splined (white, smooth)	No	9	168 ft. ²	ND	0
Main Floor - Bath	Ceramic floor tile (white, octagon shape) w/ grout and thin-set	No	10	30 ft. ²	ND	0
Main Floor - Bath	4-inch by 4-inch ceramic wall tile (white) w/ grout and adhesive (tan)	No	11	32 ft. ²	ND	0

Table I. Asbestos Building Inspection Results

2070 Manitou Avenue; St. Paul, Minnesota

Project B1801954

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Functional Space	Homogeneous Material Description	Contains Asbestos (Yes/No)	Ref. Client Sample No. (See Table II)	Estimated Quantity Units	Material Condition ¹	Hazard Category ²
Main Floor - NW Bedroom	Duct Wrap	Yes	DW-A/C	2 ft. ²	D	3
Attic	Blown-in insulation (brown)	No	12	625 ft. ²	ND	0
Exterior	Stucco	Yes	13A-C	1,000 ft. ²	ND	1
Exterior	Window glazing (white)	No	5	216 lin. ft.	ND	0
Exterior	Tarpaper (black)	No	14	1,000 ft. ²	ND	0
Exterior	Caulk (white)	No	15	266 lin. ft.	ND	0
Exterior	Shingles and tarpaper	No	16	950 ft. ²	ND	0
Detached Garage	Shingles and tarpaper	No	16	600 ft. ²	ND	0
Detached Garage	Sheetrock/joint compound	No	4	500 ft. ²	ND	0

1. Condition of ACM:

ND = Not Damaged

D = Damaged

SD = Significantly Damaged

2. Hazard Category:

0 = No hazard - material does not contain asbestos

1 = ACM with potential for damage

2 = ACM with potential for significant damage

3 = Damaged or significantly damaged asbestos-containing miscellaneous material

4 = Damaged or significantly damaged friable asbestos-containing thermal system insulation

5 = Damaged or significantly damaged friable asbestos-containing surfacing material

Appendix B

Table II. Bulk Asbestos Analytical Results

Table II. Bulk Asbestos Analytical Results

Client: Ramsey County
Location: 2070 Manitou Avenue; St. Paul, Minnesota
Date of Inspection: March 5 and April 24, 2018
Project: B1801954

Sample No.	Sample Location			Material	Asbestos Content (%) ¹
1	Basement	NW Area	-	Vinyl sheet flooring (off-white/gray)	N.D. ²
2	Basement	Chimney	-	Chimney breaching (gray)	Chrysotile 12
3	Basement	Ceiling	-	Tarpaper (black)	N.D.
4	Basement	West wall	-	Sheetrock/joint compound	N.D.
5	Basement	SE window	-	Window glazing (white)	N.D.
6A	Main Floor	Stairs	-	Plaster materials	N.D.
6B	Main Floor	Kitchen	-	Plaster materials	N.D.
6C	Main Floor	Living Room	-	Plaster materials	N.D.
6D	Main Floor	NW Bedroom	-	Plaster materials	N.D.
6E	Main Floor	NE Bedroom	-	Plaster materials	N.D.
7	Main Floor	Kitchen	-	floor system - three layers, floor tile (off-white) over linoleum (second layer), floor tile and tarpaper (third layer)	Floor tile (top layer) N.D.
					Adhesive (yellow) N.D.
					Linoleum (second layer) Chrysotile 25
					Floor tile (third layer) Chrysotile 7
					Tar paper N.D.
8	Main Floor	Kitchen	-	4-inch vinyl baseboard (white) and adhesive (tan)	N.D.
9	Main Floor	Living Room	-	12-inch by 12-inch ceiling tile, splined (white, smooth)	N.D.
10	Main Floor	Bathroom	-	Ceramic floor tile (white, octagon shape) w/ grout and thin-set	N.D.
11	Main Floor	Bathroom	-	4-inch by 4-inch ceramic wall tile (white) w/ grout and adhesive (tan)	N.D.
12	Attic	Hatch in Hall	-	Blown-in insulation (brown)	N.D.
13A	Exterior	East Face	-	Stucco	Stucco (white) N.D.
					Stucco (gray/tan) Chrysotile 2
13B	Exterior	South Face	-	Stucco	N.D.

Sample No.	Sample Location			Material	Asbestos Content (%) ¹
13C	Exterior	North Face	-	Stucco	N.D.
14	Exterior	East Face	Near Door	Tarpaper (black)	N.D.
15	Exterior	East Face	-	Caulk (white)	N.D.
16	Detached Garage	Roof	-	Shingles and tarpaper	N.D.
DW-A/C	1st floor	NW Bedroom	-	Duct wrap	Duct wrap Chrysotile 70

* Materials containing 1 percent of asbestos or less are not considered to be asbestos-containing materials by the U.S.EPA.

1. Asbestos content is indicated as an approximate percent by area.
2. N.D. = None Detected

Appendix C

Table III. Lead-Based Paint Testing Results

Table III. Lead-Based Paint Testing

Client: Ramsey County
Location: 2070 Manitou Avenue; St. Paul, Minnesota
Date of Inspection: March 5, 2018
Project: B1801954

Sample I.D. No.	Room/Area		Component Description			Results	Paint Condition G = Good P = Peeling
1	Calibration		Surface			1.1	---
2	Calibration		Buried			1.3	---
3	Calibration		Surface			1.2	---
4	Main Floor	Kitchen	Wall	Plaster	Yellow	1.70	G
5	Main Floor	Stairs	Wall	Plaster	White	1.40	G
6	Main Floor	Kitchen	Door Frame	Wood	White	0.00	G
7	Main Floor	Kitchen	Cabinet	Wood	White	0.00	G
8	Main Floor	Living Room	Wall	Plaster	Tan	0.24	G
9	Main Floor	Living Room	Baseboard	Wood	White	0.00	G
10	Main Floor	Living Room	Window Frame	Wood	White	0.00	G
11	Main Floor	Bathroom	Wall	Sheetrock	White	0.00	G
12	Basement	-	Wall	Block	White	0.00	G
13	Basement	-	Wall	Wood	White	0.00	G
14	Basement	-	Beam	Wood	White	0.00	G
15	Basement	Chimney	Chimney	Brick	White	0.00	G
16	Basement	-	Floor	Concrete	Gray	0.00	G
17	Basement	-	Beam	Wood	Red	0.00	G

Sample I.D. No.	Room/Area		Component Description			Results	Paint Condition G = Good P = Peeling
18	Basement	-	Stairs	Wood	Gray	0.00	G
19	Exterior	-	Wall	Stucco	Tan	0.00	G
20	Exterior	-	Foundation	Block	Gray	0.50	G
21	Exterior	Front Porch	Door Frame	Wood	White	1.70	P
22	Exterior	Front Porch	Floor	Wood	Red	2.30	P
23	Exterior	Front Porch	Column	Wood	White	22.00	P
24	Exterior	Front Porch	Soffit	Wood	White	21.30	P
25	Exterior	Front Porch	Window	Wood	White	4.30	P
26	Detached Garage	-	Siding	Wood	White	0.90	P
27	Post Calibration		Surface			1.1	---
28	Post Calibration		Buried			1.1	---
29	Post Calibration		Surface			1.0	---

mg/cm² = milligrams of lead per square centimeter of paint

Appendix D

Bulk Asbestos Analysis Reports



EMSL Analytical, Inc.

1830 Elm St. S.E. Minneapolis, MN 55414

Tel/Fax: (612) 607-6457 / (952) 852-7131

<http://www.EMSL.com / minneapolislabih@EMSL.com>

EMSL Order: 101800508

Customer ID: BRAU50

Customer PO:

Project ID:

Attention: Eric Bieniek
Braun Intertec
11001 Hampshire Avenue South
Bloomington, MN 55438

Phone: (952) 995-2000

Fax: (952) 995-2020

Received Date: 03/05/2018 2:15 PM

Analysis Date: 03/07/2018 - 03/08/2018

Collected Date: 03/05/2018

Project: 2070 Manitou Ave

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
1 101800508-0001	BASEMENT NW AREA, VINYL SHEET FLOORING (OFF WHITE/GRAY)	Tan Fibrous Heterogeneous	3% Glass	97% Non-fibrous (Other)	None Detected
2 101800508-0002	BASEMENT @ CHIMNEY, CHIMNEY BREACHING (GRAY)	Gray Fibrous Homogeneous	5% Glass	83% Non-fibrous (Other)	12% Chrysotile
3 101800508-0003	BAEMENT @ CEILING, TARPAPER (BLK)	Black Fibrous Homogeneous	60% Cellulose <1% Synthetic	40% Non-fibrous (Other)	None Detected
4-Joint Compound 101800508-0004	BASEMENT W INT. WALL, SR/JC	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
4-Sheetrock 101800508-0004A	BASEMENT W INT. WALL, SR/JC	Brown/White Fibrous Heterogeneous	16% Cellulose <1% Glass	84% Non-fibrous (Other)	None Detected
5 101800508-0005	BASEMENT SE WIND., GLAZE (WHITE) - WOOD WINDOW	Tan/Blue Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
6A 101800508-0006	MAIN FLOOR STAIRS, PLASTER	Gray Fibrous Homogeneous	<1% Hair	100% Non-fibrous (Other)	None Detected
6B 101800508-0007	MAIN FLOOR KITCH., PLASTER	Gray/White Non-Fibrous Homogeneous	<1% Hair	100% Non-fibrous (Other)	None Detected
6C 101800508-0008	MAIN FLOOR LVG RM, PLASTER	Gray/White Non-Fibrous Homogeneous	<1% Hair	100% Non-fibrous (Other)	None Detected
6D 101800508-0009	MAIN FLOOR NW BED, PLASTER	Gray/White Fibrous Homogeneous	<1% Cellulose <1% Hair	100% Non-fibrous (Other)	None Detected
6E 101800508-0010	MAIN FLOOR NE BED, PLASTER	Gray/White Fibrous Homogeneous	<1% Hair	100% Non-fibrous (Other)	None Detected
7-Floor Tile 1 101800508-0011	MAIN FLOOR KITCH., FLOOR SYSTEM (OFF WHITE F.T. OVER VINYL SHEET FL. OVER FT./LEVELER W/ BLK. MASTIC)	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
7-Adhesive 101800508-0011A	MAIN FLOOR KITCH., FLOOR SYSTEM (OFF WHITE F.T. OVER VINYL SHEET FL. OVER FT./LEVELER W/ BLK. MASTIC)	Yellow Non-Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected

Initial report from: 03/08/2018 10:04:03



EMSL Analytical, Inc.

1830 Elm St. S.E. Minneapolis, MN 55414

Tel/Fax: (612) 607-6457 / (952) 852-7131

<http://www.EMSL.com / minneapolislabih@EMSL.com>

EMSL Order: 101800508

Customer ID: BRAU50

Customer PO:

Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
7-Linoleum 101800508-0011B	MAIN FLOOR KITCH., FLOOR SYSTEM (OFF WHITE F.T. OVER VINYL SHEET FL. OVER FT./LEVELER W/ BLK. MASTIC)	Gray/Tan Fibrous Heterogeneous	2% Cellulose	73% Non-fibrous (Other)	25% Chrysotile
7-Floor Tile 2 101800508-0011C	MAIN FLOOR KITCH., FLOOR SYSTEM (OFF WHITE F.T. OVER VINYL SHEET FL. OVER FT./LEVELER W/ BLK. MASTIC)	Tan Non-Fibrous Homogeneous		93% Non-fibrous (Other)	7% Chrysotile
7-Tar Paper 101800508-0011D	MAIN FLOOR KITCH., FLOOR SYSTEM (OFF WHITE F.T. OVER VINYL SHEET FL. OVER FT./LEVELER W/ BLK. MASTIC)	Black Fibrous Homogeneous	65% Cellulose	35% Non-fibrous (Other)	None Detected
8-Baseboard 101800508-0012	MAIN FLOOR KITCH., 4" VINYL BASEBOARD (WHITE) W/ ADH. (TAN)	Tan/White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
8-Adhesive 101800508-0012A	MAIN FLOOR KITCH., 4" VINYL BASEBOARD (WHITE) W/ ADH. (TAN)	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
9 101800508-0013	MAIN FLOOR LVG RM, 12x12" SPLINED CT. (WHITE, SMOOTH)	Brown/White Fibrous Homogeneous	95% Cellulose	5% Non-fibrous (Other)	None Detected
10-Ceramic Tile 101800508-0014	MAIN FLOOR BATH., CERAMIC FT (WHITE, OCTAGON SHAPE) W/ GROUT & THIN-SET	Gray/White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
10-Grout 101800508-0014A	MAIN FLOOR BATH., CERAMIC FT (WHITE, OCTAGON SHAPE) W/ GROUT & THIN-SET	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
11-Ceramic Tile 101800508-0015	MAIN FLOOR BATH., 4x4" CERAMIC W.T. (WHITE) W/ GROUT & ADH. (TAN)	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
11-Adhesive 101800508-0015A	MAIN FLOOR BATH., 4x4" CERAMIC W.T. (WHITE) W/ GROUT & ADH. (TAN)	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
12 101800508-0016	ATTIC @ HATCH (HALL), BLOWN-IN INSULATION (BROWN)	Brown Fibrous Homogeneous	95% Cellulose	5% Non-fibrous (Other)	None Detected
13A-Stucco 1 101800508-0017	EXT. E. FACE, STUCCO	White Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile

Initial report from: 03/08/2018 10:04:03



EMSL Analytical, Inc.

1830 Elm St. S.E. Minneapolis, MN 55414

Tel/Fax: (612) 607-6457 / (952) 852-7131

<http://www.EMSL.com / minneapolislabih@EMSL.com>

EMSL Order: 101800508

Customer ID: BRAU50

Customer PO:

Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
13A-Stucco 2 <i>101800508-0017A</i>	EXT. E. FACE, STUCCO	Gray/Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
13B <i>101800508-0018</i>	EXT. S. FACE, STUCCO	Gray/White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
13C <i>101800508-0019</i>	EXT. N. FACE, STUCCO	Gray/White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
14 <i>101800508-0020</i>	EXT. E. FACE AD DOOR, TARPAPER (BLACK)	Black Fibrous Homogeneous	65% Cellulose 1% Synthetic	34% Non-fibrous (Other)	None Detected
15 <i>101800508-0021</i>	EXT. E. FACE BED. WIND., CAULK (WHITE) - WINDOW PANES	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
16 <i>101800508-0022</i>	DETACHED GARAGE ROOF SM CR., SHINGLES W/ TARPAPER	Black Fibrous Homogeneous	10% Glass	90% Non-fibrous (Other)	None Detected

Analyst(s)

Steve Felton (31)

Mark Erickson, Laboratory Manager
or Other Approved Signatory

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Samples analyzed by Minneapolis IH Minneapolis, MN NVLAP Lab Code 101234-0, Colorado AL-23741

Initial report from: 03/08/2018 10:04:03



EMSL Order Number (Lab Use Only):

101800508

PHONE: (800) 220-3675
FAX: (856) 786-5974

Controlled Document – Asbestos COC – R6 – 11/29/2012

101800508

Table II. Bulk Asbestos Analytical Results

Address

Project #

Page 6

L: RAMSEY COUNTY
 L: 2070 MANITOU AVE
 D: 3/6/18
 #2

22 SAMPLES

1 of 1

Sample No.	Sample Location			Material	Asbestos Content (%) ¹
1	BASEMENT	NW AREA	—	VINYL SHEET FLOORING (OFF-WHITE/GRAY)	
2		@ CHIMNEY	—	CHIMNEY SPACER (GRAY)	
3		@ CHIMNEY	—	TARPAPER (BLACK)	
4		W. EXT. MAN.	—	SP/JC	
5		SE WIND.	—	GLAZE (WHITE) - WOOD UNKNOWN	
6A	MAIN FLOOR	OTAPS	—	PLASTER	
6B		KITCH.	—	↓	
6C		W.G. RM	—	↓	
6D		NW RM	—	↓	
6E		NE RM	—	↓	
7		KITCH.	—	FLOOR SYSTEM (OFF-WHITE RT. OVER VINYL SHEET PL. OVER FT. LINOLEUM w/ BLK. MARBL) - [5 LAYERS]	
8		↓	—	4" VINYL BATEBOARD (WHITE) w/ MDH. TAN	
9		W.G. RM	—	12X12" SPLINED CT. (WHITE, SMOOTH)	
10		BATH.	—	CERAMIC RT (WHITE, OBTAGON SHAPE) w/ GROUT - THIN-SET	
11		↓	—	4x4" CERAMIC W.T. (WHITE) w/ GROUT - MDH. TAN	
12	ATTIC	CHIMNEY (HALL)	—	BLOWN-W INSULATION (BROWN)	
13A	EXT.	E. FACE	—	STUCCO	
13B		S. ↓	—	↓	
13C		N ↓	—	↓	
14		E. ↓	RR DOOR	TARPAPER (BLACK)	
15		E ↓	REN. WIND.	CHALK (WHITE) - WINDOW PANE	
16	DETACHED GARAGE	SHED	SUN CR.	SHINGLES w/ TARPAPER	



EMSL Analytical, Inc.

1830 Elm St. S.E. Minneapolis, MN 55414

Tel/Fax: (612) 607-6457 / (952) 852-7131

<http://www.EMSL.com / minneapolislabih@EMSL.com>

EMSL Order: 101800955

Customer ID: BRAU50

Customer PO:

Project ID:

Attention: Steve Luth

Braun Intertec

11001 Hampshire Avenue South

Bloomington, MN 55438

Phone: (952) 995-2000

Fax: (952) 995-2020

Received Date: 04/24/2018 10:25 AM

Analysis Date: 04/25/2018

Collected Date: 04/24/2018

Project: 2070 Manitou/B1801954

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
DW-A <small>101800955-0001</small>	N. Bedroom, Ductwrap	Gray Fibrous Homogeneous		30% Non-fibrous (Other)	70% Chrysotile
DW-B <small>101800955-0002</small>	N. Bedroom, Ductwrap				Positive Stop (Not Analyzed)
DW-C <small>101800955-0003</small>	N. Bedroom, Ductwrap				Positive Stop (Not Analyzed)

Analyst(s)

Steve Felton (1)

Mark Erickson, Laboratory Manager
or Other Approved Signatory

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Samples analyzed by Minneapolis IH Minneapolis, MN NVLAP Lab Code 101234-0, Colorado AL-23741

Initial report from: 04/25/2018 13:56:53



ANALYTICAL



CHAIN OF CUSTODY

ASBESTOS

EMSL Representative:		EMSL Reference #:	
Your Company Name:	Braun Intertec	EMSL-Bill to:	Same
Street:	11001 Hampshire Ave. S.	Street:	
Box #:		Box #:	
City/State:	Bloomington Zip: 55438	City/State:	Zip:
Results to:	Steve Luth	Email Results to:	Sluth@Braunintertec.com
Telephone #:	952-452-3826	Or Fax Results #:	
Project Name/Number:	2070 Mac-Xon / B1801954	Purchase Order #	

MATRIX				TURNAROUND TIME			
<input type="checkbox"/> Air	<input type="checkbox"/> Floor Tile	<input type="checkbox"/> Soil	<input type="checkbox"/> Wipe	<input type="checkbox"/> RUSH	<input type="checkbox"/> 6 Hours	<input checked="" type="checkbox"/> 24 Hours	<input type="checkbox"/> 48 Hours
<input checked="" type="checkbox"/> Bulk	<input type="checkbox"/> Drinking Water	<input type="checkbox"/> Dust water	<input type="checkbox"/> Waste	<input type="checkbox"/> Contact Lab	<input type="checkbox"/> 3 Days	<input type="checkbox"/> 5 Days	<input type="checkbox"/> 6-10 days

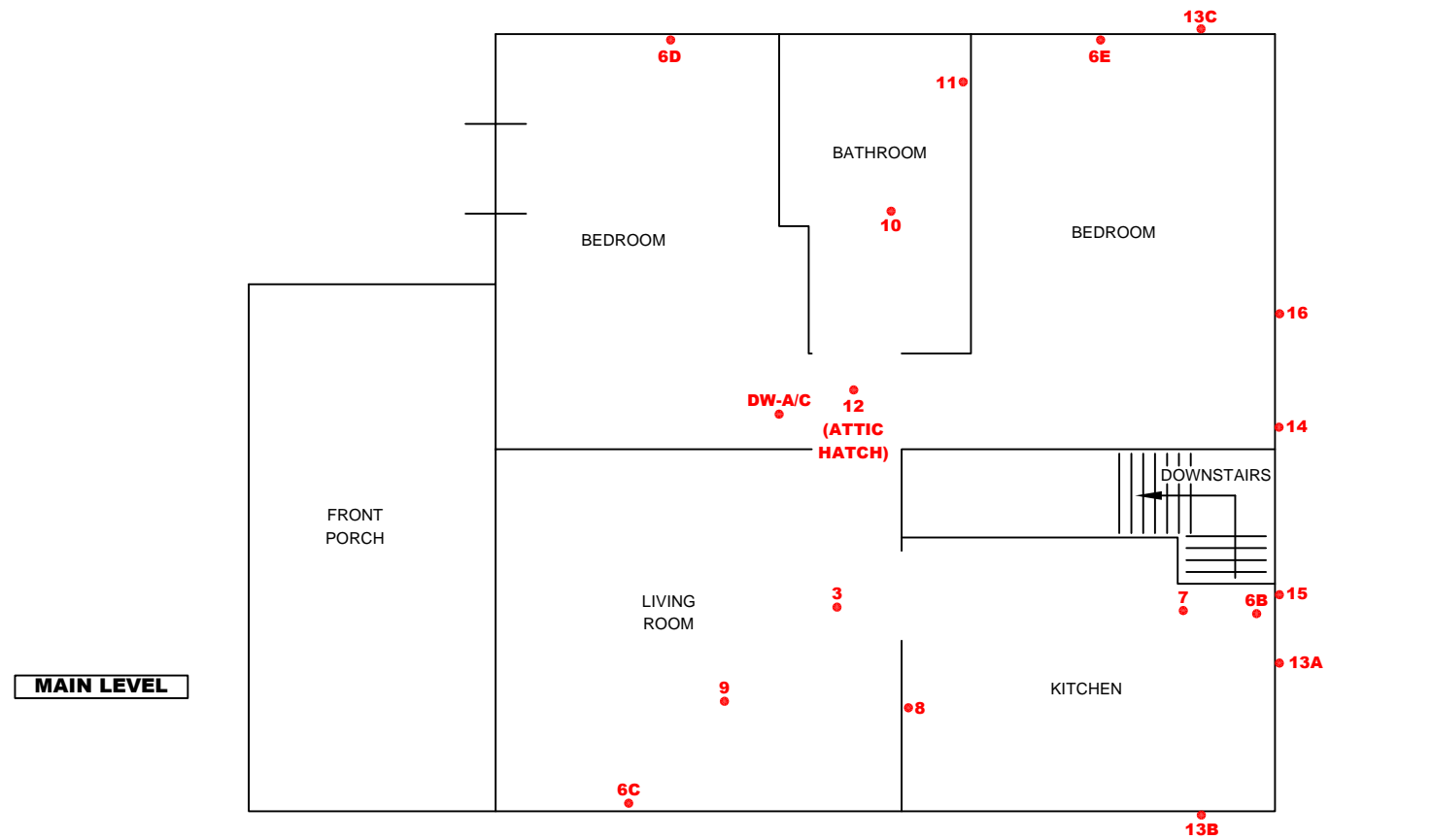
<p><u>PCM</u></p> <p><input type="checkbox"/> NIOSH 7400</p> <p><input type="checkbox"/> MN Dept of Health</p> <p><input type="checkbox"/> Other:</p> <p><u>TEM AIR</u></p> <p><input type="checkbox"/> AHERA</p> <p><input type="checkbox"/> EPA Level II</p> <p><input type="checkbox"/> NIOSH 7402</p> <p><input type="checkbox"/> MN Dept of Health</p>	<p><u>PLM</u></p> <p><input checked="" type="checkbox"/> EPA 600/R-93/116</p> <p><input type="checkbox"/> NOB</p> <p><input type="checkbox"/> Point Count (400 point)</p> <p><input type="checkbox"/> Test Until Positive</p> <p><input type="checkbox"/> Other:</p> <p><u>TEM BULK</u></p> <p><input type="checkbox"/> Chatfield</p> <p><input type="checkbox"/> NOB</p> <p><input type="checkbox"/> Micro Vac-Quantitative</p> <p><input type="checkbox"/> Micro Vac-Qualitative</p> <p><input type="checkbox"/> Drop Mount-Qualitative</p>	<p><input checked="" type="checkbox"/> Comments:</p> <p>Ok to send to other EMSL location.</p> <p>Invoice sent to : Jen Croft <i>Frens</i></p> <p>(JFRENG@braunintertec.com)</p> <p><u>TEM WATER</u></p> <p><input type="checkbox"/> EPA 100.1 (all fibers)</p> <p><input type="checkbox"/> EPA 100.2 (Long fibers >10um)</p> <p><input type="checkbox"/> NY 198.2</p>	<p>Point Count <1% (400 point)</p> <p>up to 5 sample, if >5 sample</p> <p>call for approval.</p> <p><u>TEM WIPE</u></p> <p><input type="checkbox"/> Quantitative</p> <p><input type="checkbox"/> Qualitative</p> <p><u>TEM DUST</u></p> <p><input type="checkbox"/> ASTM D-5755-95</p> <p><input type="checkbox"/> Qualitative</p>
---	---	---	--

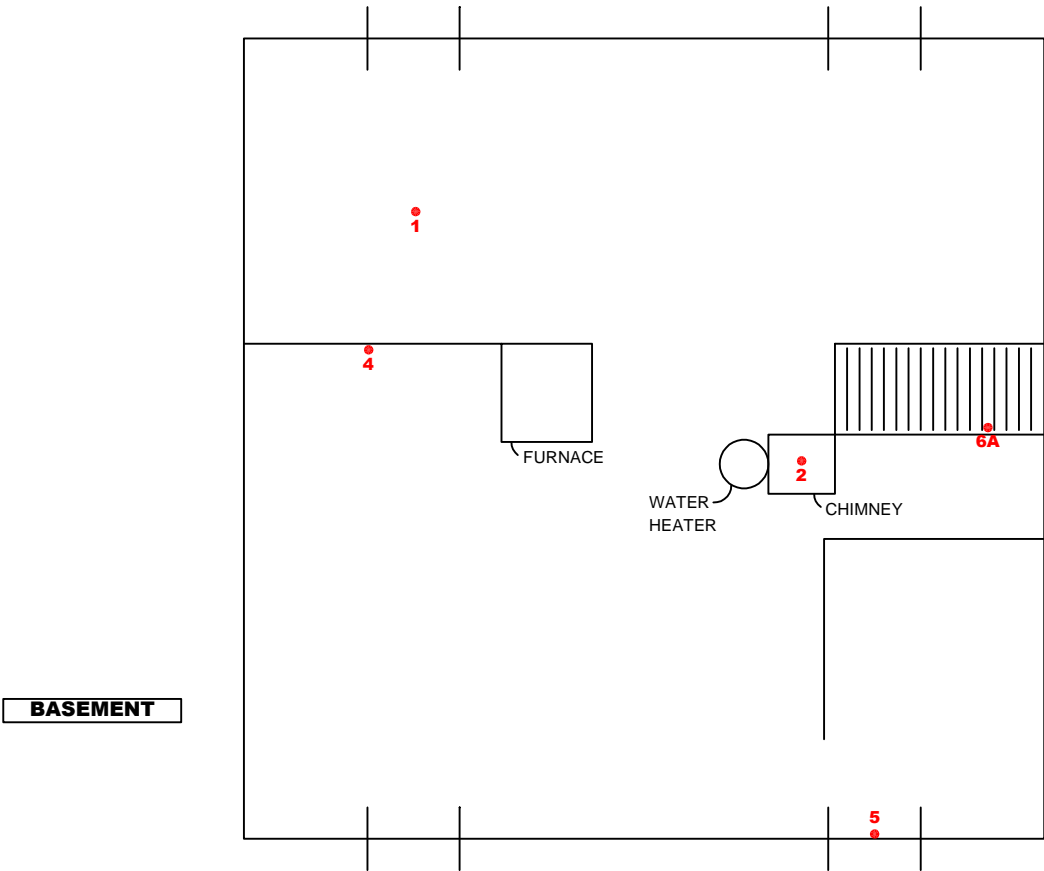
Client Sample # (s)	-	Total Samples:	3
Relinquished:		Date:	4-24
Received:	 w/	Date:	4/24/18
Received:		Date:	
		Time:	10:25

[illegible]

Appendix E

Sample Location Sketches





● ASBESTOS SAMPLE LOCATION



11001 Hampshire Avenue S
Minneapolis, MN 55438
952.995.2000
braunintertec.com

Project No:
B1801954

Drawing No:
B1801954

Drawn By: LAO
Date Drawn: 3/8/18
Checked By: EB
Last Modified: 3/9/18

Pre-Renovation Hazardous Building Material Inspections

Ramsey County

2070 Manitou Avenue

St. Paul, Minnesota

Sample Location
Sketch

Basement

Appendix F

Asbestos Inspector Certificate

Certificate No: 5LM06121702IR

Expiration Date: June 12, 2018

This is to certify that
Gaia Ewing
has attended and successfully completed an
ASBESTOS INSPECTOR
REFRESHER TRAINING COURSE

permitted by
the State of Minnesota under Minnesota Rules 4620.3702 to 4620.3722
and meets the requirements of
Section 206 of Title II of the Toxic Substances Control Act (TSCA)
conducted by

Lake States Environmental, Ltd.
in

Hudson, WI on June 12, 2017
Examination Date: June 12, 2017

Lake States Environmental, Ltd
P. O. Box 645, Rice Lake, WI 54868
(800) 254-9811

Paul W. Jewell
Training Instructor

Director, Env. Health Div.



No. AI13299 Issued: 06/15/2017

MDH ASBESTOS INSPECTOR
Certified by:
State of Minnesota
Department of Health
Expires: 06/12/2018
Gaia I. Ewing
2550 Grand St NE
Minneapolis, MN 55418