

Pre-Renovation Hazardous Building Materials Inspection Report

Residential Building
718 Orange Avenue East
St. Paul, Minnesota

Prepared for

Ramsey County



March 22, 2018

Project B1801954

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

Re: Pre-Renovation Hazardous Building Materials Inspection Report
Residential Building
718 Orange Avenue East
St. Paul, Minnesota

Dear Mr. Scharf:

The enclosed report provides the results of the pre-renovation hazardous building materials inspection conducted on March 6, 2018, at the residential building located at 718 Orange Avenue East 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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- D: Bulk Asbestos Analysis Report
- E: Sample Location Sketch
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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 718 Orange Avenue East in St. Paul, Minnesota. The house is a two-story wood structure with a basement. It was constructed in 1907 and encompasses approximately 1,800 square feet. The house is constructed of wood, concrete and concrete block foundation walls. The typical interior finishes included plaster, sheetrock/joint compound, floor tile, ceiling texture and vinyl sheet flooring. The exterior of the house has transite siding with an asphalt shingle roof. A detached garage that it is on the property is constructed of wood and has an asphalt shingle roof. The buildings were vacant and unoccupied at the time of the inspection.

C. Results

C.1. Asbestos

Thirty-two (32) bulk samples were collected on March 6, 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 25 percent (%) chrysotile (asbestos).
- Fibrous duct wrap paper (white) located on vents behind walls contains 60% chrysotile.
- 12-inch by 12-inch floor tile (gray stone look) located in the second floor north bedroom contains 5% chrysotile.
- 9-inch by 9-inch floor tile (gray w/gray streaks) located in the second floor north bedroom contains 5% chrysotile.
- 9-inch by 9-inch floor tile (white/gray) located in the second floor south bedroom contains 3% chrysotile.
- Caulk (black) on exterior porch window frame contains 5% chrysotile.
- Transite siding on exterior contains 10% 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).

- Plaster
- Vinyl sheet flooring (off-white, 4"x4" double square pattern) w/ backing (gray)
- Vinyl sheet flooring (brown, designed) w/ backing (gray)
- 6-inch by 6-inch ceramic wall tile w/ grout and thin set
- Ceiling and wall texture (popcorn)
- Sheetrock/joint compound
- 12-inch by 12-inch ceramic floor and wall tile (tan) w/ grout
- Floor vent cover board (tan)
- Vinyl sheet flooring (white/gray/tan 12" square pattern)
- Tan adhesive on 12-inch by 12-inch floor tile (gray stone look)
- Mastic (black) on 9-inch by 9-inch floor tile (gray w/gray streaks)
- Residual black mastic
- Tarpaper beneath 9-inch by 9-inch floor tile (white/gray)
- Vinyl baseboard (gray) w/ adhesive (tan)

- Blown-in insulation (brown)
- Tarpaper (black)
- Caulk (brown) - metal window frame
- Caulk (white) - window frame and metal seams
- Shingles (brown) with 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.

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.

- Chimney brick (white) - basement
- Wood door frame (white) - basement
- Wood wall (white) - basement
- Wood window frame (white) - basement
- Wood window sill (white) - basement
- Wood door (white) - kitchen
- Wood wall (white) – main floor, pantry
- Wood siding (white) – main floor, pantry
- Wood window sill (white) – second floor
- Wood door (white) – second floor, crawl space
- Wood floor (gray) – exterior, porch
- Wood siding (gray) – exterior, porch
- Wood soffit (white) – exterior, porch
- Wood window frame (gray) – exterior porch
- Wood siding (white) – exterior, porch

- Transite siding (white) – exterior
- Wood window frame (gray) – exterior

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, thermostats.
- Lighting – fluorescent lamps.

C.3.b. Chlorofluorocarbons (CFCs) and Hydrochlorofluorocarbons (HCFCs)

- Refrigerants – air-conditioning unit.

C.3.c. Miscellaneous

- Water heater
- Central air conditioners

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):

- Chimney breaching (fibrous).
- Fibrous duct wrap paper (white)

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):

- 12-inch by 12-inch floor tile (gray stone look)
- 9-inch by 9-inch floor tile (gray w/gray streaks)
- 9-inch by 9-inch floor tile (white/gray)

The above Category I 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 I non-friable ACMs are not considered a hazard unless cut, drilled, sanded, or otherwise abraded. However, any Category I material that may become friable during demolition must be removed prior to that activity. Secondly, if left in place, the crushing or recycling of demolition debris is strictly prohibited. In addition, all demolition debris containing Category I materials must be disposed of at a landfill specifically permitted to accept this type of waste.

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:

- Caulk (black) on exterior porch window frame
- Transite siding

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.

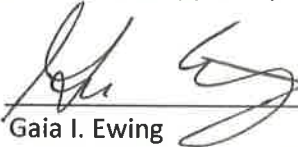
In performing its services, Braun Intertec used that degree of care and skill ordinarily exercised under similar circumstances by reputable members of its profession currently practicing in the same locality. No warranty, express or implied, is made.

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: _____



Gaia I. Ewing

Environmental Technician

Date: _____

3/22/18

Minnesota Department of Health Asbestos Inspector No: AI13299

Appendix A

Table I. Asbestos Building Inspection Results

Client: Ramsey County

Location: 718 Orange Avenue East; St. Paul, MN

Date of Inspection: March 6, 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
Basement	Chimney breaching (gray)	Yes	1	2 ft. ²	ND	1
Basement	Plaster	No	2A-E	630 ft. ²	D	0
Basement	Fibrous paper duct wrap (white)	Yes	10	15 ft. ² vis.	D	5
Main Floor	Vinyl sheet flooring (off-white, 4 inch x 4 inch double square pattern) w/ backing (gray)	No	3	192 ft. ²	ND	0
Main Floor - Pantry	Vinyl sheet flooring (brown, designed) w/ backing (gray)	No	4	30 ft. ²	ND	0
Main Floor - Kitchen	6 inch by 6 inch ceramic wall tile w/ grout and thin set	No	5	150 ft. ²	ND	0
Main Floor	Ceiling and wall texture (popcorn)	No	6A-E	500 ft. ²	ND	0
Main Floor	Sheetrock/joint compound	No	7	2,000 ft. ²	D	0
Main Floor	Plaster	No	2A-E	900 ft. ²	ND	0
Main Floor - Front Entrance	12 inch by 12 inch ceramic floor and wall tile (tan) w/ grout	No	8	30 ft. ²	ND	0
Main Floor	Adhesive (tan) between sheetrock and plaster walls	No	9	20 lin. ft. vis.	ND	0
Main Floor	Fibrous paper duct wrap (white)	Yes	10	20 ft. ²	D	5
Main Floor	Floor vent cover board (tan)	No	11	3 ft. ²	ND	0
Second Floor	Vinyl sheet flooring (white/gray/tan 12 inch square pattern)	No	12	100 ft. ²	D	0

Table I. Asbestos Building Inspection Results

718 Orange Avenue East; St. Paul, MN

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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
Second Floor - North Bedroom Closet	12 inch by 12 inch floor tile (gray stone look)	Yes -Floor Tile Only	13	16 ft. ²	ND	1
Second Floor - North Bedroom Closet	9 inch by 9 inch floor tile (gray w/gray streaks)	Yes -Floor Tile Only	14	16 ft. ²	ND	1
Second Floor - North Bedroom	Residual black mastic	No	15	120 ft. ²	ND	0
Second Floor - South Bedroom	9 inch by 9 inch floor tile (white/gray)	Yes -Floor Tile Only	16	150 ft. ²	SD	3
Second Floor - Bathroom	Vinyl baseboard (gray) w/ adhesive (tan)	No	17	12 lin. ft.	ND	0
Second Floor	Ceiling and wall texture (popcorn)	No	6A-E	1,200 ft. ²	ND	0
Second Floor	Plaster	No	2A-E	2,500 ft. ²	ND	0
Second Floor	Sheetrock/joint compound	No	7	200 ft. ²	D	0
Second Floor - Bathroom	12-inch by 12-inch ceramic floor and wall tile (tan) w/ grout	No	8	60 ft. ²	ND	0
Second Floor - SW Crawl Space	Vinyl sheet flooring (off-white, 4 inch x 4 inch double square pattern) w/ backing (gray)	No	3	25 ft. ²	ND	0
Second Floor	Fibrous paper duct wrap (white)	Yes	10	6 ft. ²	ND	1
Attic	Blown-in insulation (brown)	No	18	500 ft. ²	ND	0
Exterior	Tarpaper (black)	No	19	1,800 ft. ²	ND	0
Exterior - Front Door	Caulk (black) - window frame	Yes	20	16 lin. ft.	ND	1
Exterior	Caulk (brown) - metal window frame	No	21	80 lin. ft.	ND	0
Exterior - Back Addition	Caulk (white) - window frame and metal seams	No	22	15 lin. ft.	ND	0
Exterior	Vinyl sheet flooring (white/gray/tan 12 inch square pattern)	No	12	30 ft. ²	ND	0

Table I. Asbestos Building Inspection Results

718 Orange Avenue East; St. Paul, MN

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
Exterior	Transite siding	Yes	23	1,800 ft. ²	ND	1
Roof	Shingles (brown) with tarpaper	No	24	1,875 ft. ²	ND	0
Detached Garage - Roof	Shingles (brown) with tarpaper	No	24	600 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: 718 Orange Avenue East; St. Paul, MN

Date of Inspection: March 6, 2018

Project: B1801954

Sample No.	Sample Location			Material	Asbestos Content (%) ¹		
					Insulation	Chrysotile	25
1	Basement	Chimney	North Face	Chimney breaching	Cement	N.D. ²	
2A	Basement	North	Wall	Plaster		N.D.	
2B	Basement	West	Wall	Plaster		N.D.	
2C	Main Floor	Living Room	Chimney	Plaster		N.D.	
2D	Second Floor	South Hall	Wall	Plaster		N.D.	
2E	Second Floor	Bedroom	North Wall	Plaster		N.D.	
3	Main Floor	Kitchen	Floor Vent	Vinyl sheet flooring (off-white, 4 inch x 4 inch double square pattern) w/ backing (gray)		N.D.	
4	Main Floor	Pantry	Central	Vinyl sheet flooring (brown, designed) w/ backing (gray)		N.D.	
5	Main Floor	Kitchen	East	6 inch by 6 inch ceramic wall tile w/ grout and thin set		N.D.	
6A	Main Floor	Kitchen	Ceiling	Ceiling and wall texture (popcorn)		N.D.	
6B	Main Floor	Living Room	Ceiling	Ceiling and wall texture (popcorn)		N.D.	
6C	Main Floor	Living Room	Ceiling	Ceiling and wall texture (popcorn)		N.D.	
6D	Second Floor	Hall	South Wall	Ceiling and wall texture (popcorn)		N.D.	
6E	Second Floor	North Bedroom	South Wall	Ceiling and wall texture (popcorn)		N.D.	
7	Main Floor	Kitchen	South Wall	Sheetrock/joint compound		N.D.	
8	Main Floor	Front Entrance	-	12-inch by 12-inch ceramic floor and wall tile (tan) w/ grout		N.D.	
9	Main Floor	Living Room	Chimney	Adhesive (tan) between sheetrock and plaster walls		N.D.	
10	Main Floor	Living Room	Near Chimney	Fibrous paper duct wrap (white)	Chrysotile	60	
11	Main Floor	Front Entrance	-	Floor vent cover board (tan)		N.D.	
12	Second Floor	Hall	North Edge	Vinyl sheet flooring (white/gray/tan 12" square pattern)		N.D.	

Sample No.	Sample Location			Material	Asbestos Content (%) ¹		
13	Second Floor	North Bedroom	-	12 inch by 12 inch floor tile (gray stone look) w/ adhesive (tan)	Floor tile	Chrysotile	5
					Adhesive	N.D.	
14	Second Floor	North Bedroom	-	9 inch by 9 inch floor tile (gray w/gray streaks) and mastic (black)	Floor tile	Chrysotile	5
					Mastic	N.D.	
15	Second Floor	North Bedroom	Floor	Residual black mastic	N.D.		
16	Second Floor	South Bedroom	-	9 inch by 9 inch floor tile (white/gray) and tarpaper	Floor tile	Chrysotile	3
					Tarpaper	N.D.	
17	Second Floor	Bathroom	South Wall	Vinyl baseboard (gray) w/ adhesive (tan)	N.D.		
18	Attic	Hatch in Bathroom	-	Blown-in insulation (brown)	N.D.		
19	Exterior	North Face	Porch	Tarpaper (black)	N.D.		
20	Exterior	West Face	Porch	Caulk (black)	Chrysotile	5	
21	Exterior	West	Kitchen Window	Caulk (brown) - metal window frame	N.D.		
22	Exterior	South	Pantry	Caulk (white) - window frame and metal seams	N.D.		
23	Exterior	West	-	Transite siding	Chrysotile	10	
24	Detached Garage	NW corner	-	Shingles (brown) with tarpaper	N.D.		

* 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

Client: Ramsey County

Location: 718 Orange Avenue East; St. Paul, MN

Date of Inspection: March 6, 2018

Project: B1801954

Table III. Lead-Based Paint Testing

Sample I.D. No.	Room/Area		Component Description			Results in mg/cm2	Paint Condition G = Good P = Poor
1	Calibration		Surface			1.1	---
2	Calibration		Buried			1.1	---
3	Calibration		Surface			1.1	---
4	Basement		Chimney	Brick	White	4.30	G
5	Basement		Beam	Wood	White	0.16	G
6	Basement		Door Frame	Wood	White	3.60	G
7	Basement		Wall	Plaster	Gray	0.00	G
8	Basement	Stair	Wall	Wood	White	13.80	G
9	Basement	Stair	Window Frame	Wood	White	10.20	G
10	Basement	Stair	Window sill	Wood	White	6.50	G
11	Main Floor	Kitchen	Door	Wood	White	11.30	G
12	Main Floor	Kitchen	Wall	Sheetrock	White	0.00	G
13	Main Floor	Pantry	Wall	Wood	White	7.80	G
14	Main Floor	Pantry	Siding	Wood	White	8.70	G
15	Main Floor	Living Room	Chimney	Plaster	Gray	0.00	G
16	Main Floor	Living Room	Wall	Plaster	Tan	0.00	G
17	Main Floor	Stairs	Stair Stringer	Wood	Cream	4.60	G
18	Second Floor		Window frame	Wood	White	4.20	G
19	Second Floor		Window Sill	Wood	White	5.50	G
20	Second Floor		Wall	Sheetrock	White	0.00	G
21	Second Floor	Crawl space	Door	Wood	white	16.90	G

Sample I.D. No.	Room/Area		Component Description			Results in mg/cm ²	Paint Condition G = Good P = Poor
22	Second Floor		Baseboard	Wood	White	0.24	G
23	Exterior	Porch	Floor	Wood	Gray	1.60	P
24	Exterior	Porch	Siding	Wood	Gray	8.10	P
25	Exterior	Porch	Soffit	Wood	White	3.70	P
26	Exterior	Porch	Window Frame	Wood	Gray	5.00	P
27	Exterior	Porch	Siding	Wood	White	6.30	G
28	Exterior		Siding	Transite	White	1.40	G
29	Detached Garage		Siding	Wood	White	0.00	G
30	Exterior		Window Frame	Wood	Gray	15.90	P
31	Exterior	Deck	Deck	Wood	Gray	0.00	G
32	Post Calibration		Surface			1.1	---
33	Post Calibration		Buried			1.1	---
34	Post Calibration		Surface			1.0	---

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

Appendix D

Bulk Asbestos Analysis Report



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: 101800519

Customer ID: BRAU50

Customer PO:

Project ID:

Attention: Rob Nordby
Braun Intertec
11001 Hampshire Avenue South
Bloomington, MN 55438

Phone: (952) 995-2000

Fax: (952) 995-2020

Received Date: 03/06/2018 2:30 PM

Analysis Date: 03/08/2018

Collected Date: 03/06/2018

Project: B1801954/718 Orange St E

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-Insulation 101800519-0001	BASEMENT @ CHIM. N. FACE, CHIMNEY BREACHING (GRAY)	Gray Fibrous Homogeneous	15% Glass	60% Non-fibrous (Other)	25% Chrysotile
1-Cement 101800519-0001A	BASEMENT @ CHIM. N. FACE, CHIMNEY BREACHING (GRAY)	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
2A 101800519-0002	BASEMENT N. WALL, PLASTER	Gray Non-Fibrous Homogeneous	<1% Glass	100% Non-fibrous (Other)	None Detected
2B 101800519-0003	BASEMENT W. WALL, PLASTER	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
2C 101800519-0004	MAIN FL. LVG RM CHIM., PLASTER	Gray/White Fibrous Heterogeneous	<1% Hair	100% Non-fibrous (Other)	None Detected
2D 101800519-0005	2ND FL. HALL S. WALL, PLASTER	Gray/White Fibrous Heterogeneous	<1% Hair	100% Non-fibrous (Other)	None Detected
2E 101800519-0006	2ND FL. 2. BED. N. WALL, PLASTER	Gray/White Fibrous Heterogeneous	<1% Hair	100% Non-fibrous (Other)	None Detected
3 101800519-0007	MAIN FL. - KITCH. @ FL. VENT, VINYL SHEET FLOORING (OFF-WHITE, 4x4" DOUBLE SQ. PATT.) W/ BACKING (GRAY)	Tan/White Fibrous Homogeneous	25% Cellulose 3% Synthetic <1% Glass	72% Non-fibrous (Other)	None Detected
4 101800519-0008	MAIN FL. PANTRY NE CR., VINYL SHEET FLOORING (BROWN, DESIGNED) W/ BACKING (GRAY)	Tan Fibrous Heterogeneous	50% Cellulose <1% Glass 2% Wollastonite	48% Non-fibrous (Other)	None Detected
5-Ceramic Tile 101800519-0009	MAIN FL. KITCH. E. WALL, 6x6" CERAMIC W.T. (BRN) W/ GROUT & THIN-SET	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
5-Cement 101800519-0009A	MAIN FL. KITCH. E. WALL, 6x6" CERAMIC W.T. (BRN) W/ GROUT & THIN-SET	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
6A 101800519-0010	MAIN FL. KITCH. CEIL., CEILING/WALL TEXTURE (POPCORN)	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Initial report from: 03/09/2018 17:28:57



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: 101800519

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
6B 101800519-0011	MAIN FL. LVG RM CEIL., CEILING/WALL TEXTURE (POPCORN)	White Non-Fibrous Homogeneous	<1% Fibrous (Other)	100% Non-fibrous (Other)	None Detected
6C 101800519-0012	MAIN FL. LVG RM CEIL., CEILING/WALL TEXTURE (POPCORN)	White Non-Fibrous Homogeneous	<1% Fibrous (Other)	100% Non-fibrous (Other)	None Detected
6D 101800519-0013	2ND FL. HALL S. WALL, CEILING/WALL TEXTURE (POPCORN)	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
6E 101800519-0014	2ND FL. N. BED S. WALL, CEILING/WALL TEXTURE (POPCORN)	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
7-Joint Compound 101800519-0015	MAIN FL. KITCH. S. WALL, SR/JC	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
7-Sheetrock 101800519-0015A	MAIN FL. KITCH. S. WALL, SR/JC	Brown/White Fibrous Heterogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
8-Ceramic Tile 101800519-0016	MAIN FL. FR. ENT. LL. CR., 12x12" CERAMIC F.T./W.T. (TAN) W/ GROUT	Brown/Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
8-Grout 101800519-0016A	MAIN FL. FR. ENT. LL. CR., 12x12" CERAMIC F.T./W.T. (TAN) W/ GROUT	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
9 101800519-0017	MAIN FL. LVG RM CHIM., ADHESIVE (TAN)-BETWEEN SR/PLAS. WALLS	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
10 101800519-0018	MAIN FL. LVG RM BY CHIM., FIBROUS PAPER DUCT WRAP (WHITE)	Gray Fibrous Homogeneous		40% Non-fibrous (Other)	60% Chrysotile
11 101800519-0019	MAIN FL. FR. ENT. LL., FLOOR VENT COVER BOARD (TAN)	Tan Fibrous Homogeneous	95% Cellulose	5% Non-fibrous (Other)	None Detected
12 101800519-0020	2ND FL. HALL N. EDGE, VINYL SHEET FLOORING (WHITE/GRAY/TAN) (12x12" SQ. PATT.)	Gray Fibrous Heterogeneous	15% Cellulose 1% Glass	84% Non-fibrous (Other)	None Detected
13-Floor Tile 101800519-0021	2ND FL. N. BED. LL., 12x12: FT (GRAY, STONE LOOK) W/ ADH. (TAN)	Gray Non-Fibrous Homogeneous		95% Non-fibrous (Other)	5% Chrysotile
13-Adhesive 101800519-0021A	2ND FL. N. BED. LL., 12x12: FT (GRAY, STONE LOOK) W/ ADH. (TAN)	Yellow Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected

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

EMSL Order: 101800519

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
14-Floor Tile 101800519-0022	2ND FL. N. BED LL., 9x9" FT. (GRAY W/ GRN. STREAKS) W/ BLK. MASTIC	Gray/Green Non-Fibrous Homogeneous		95% Non-fibrous (Other)	5% Chrysotile
14-Mastic 101800519-0022A	2ND FL. N. BED LL., 9x9" FT. (GRAY W/ GRN. STREAKS) W/ BLK. MASTIC	Black Non-Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected
15 101800519-0023	2ND FL. N. BED. MID., RESIDUAL BLACK MASTIC	Black Non-Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected
16-Floor Tile 101800519-0024	2ND FL. S. BED. MID., 9x9" FT (WHITE/GRAY) W/ BLK. MASTIC	Tan Non-Fibrous Homogeneous		97% Non-fibrous (Other)	3% Chrysotile
16-Tar Paper 101800519-0024A	2ND FL. S. BED. MID., 9x9" FT (WHITE/GRAY) W/ BLK. MASTIC	Black Fibrous Homogeneous	60% Cellulose	40% Non-fibrous (Other)	None Detected
17-Baseboard 101800519-0025	2ND FL. BATH. S. WALL, 4" VINTL BASEBOARD (GRAY) W/ ADH. (TAN)	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
17-Adhesive 101800519-0025A	2ND FL. BATH. S. WALL, 4" VINTL BASEBOARD (GRAY) W/ ADH. (TAN)	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
18 101800519-0026	ATTIC BATH. @ HATCH, BLOWN-IN INSULATION (BRN)	Gray Fibrous Homogeneous	99% Cellulose	1% Non-fibrous (Other)	None Detected
19 101800519-0027	EXT. N. FACE PORCH, TARPAPER (BLACK)	Black Fibrous Homogeneous	60% Cellulose 5% Synthetic	35% Non-fibrous (Other)	None Detected
20 101800519-0028	EXT. W. FACE. PORCH, CAULK (BLACK) - WOOD WIND. FRAME	Tan/Black Non-Fibrous Homogeneous		95% Non-fibrous (Other)	5% Chrysotile
21 101800519-0029	EXT. N. FACE KITCH W., CAULK (BROWN) - METAL WIND. FRAME	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
22 101800519-0030	EXT. S. FACE PANTRY W., CAULK (WHITE) - WIND, FRAME & WALL SEAMS	Gray/White Non-Fibrous Heterogeneous		100% Non-fibrous (Other)	None Detected
23 101800519-0031	EXT. W. FACE, TRANSITE SIDING	Gray/White Non-Fibrous Homogeneous		90% Non-fibrous (Other)	10% Chrysotile
24-Shingle 101800519-0032	D. GAR. NW CR., SHINGLES (BRN) W/ TARPAPER	Black Fibrous Homogeneous	10% Glass	90% Non-fibrous (Other)	None Detected
24-Tar Paper 101800519-0032A	D. GAR. NW CR., SHINGLES (BRN) W/ TARPAPER	Black Fibrous Homogeneous	60% Cellulose	40% Non-fibrous (Other)	None Detected

Initial report from: 03/09/2018 17:28:57



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

EMSL Order: 101800519

Customer ID: BRAU50

Customer PO:

Project ID:

Analyst(s)

Steve Felton (41)

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: 03/09/2018 17:28:57



EMSL ANALYTICAL, INC.
LABORATORY PRODUCTS TRAINING

Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (Lab Use Only):

101800519

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (800) 220-3675
FAX: (856) 786-5974

Company : Braun Intertec Corp.		EMSL-Bill to: <input type="checkbox"/> Same <input checked="" type="checkbox"/> Different If Bill to is Different note instructions in Comments**	
Street: 11001 Hampshire Avenue South		Third Party Billing requires written authorization from third party	
City: Minneapolis	State/Province: MN	Zip/Postal Code: 55438	Country: USA
Report To (Name): Robert Nordby/ Gaia Ewing rnordby@braunintertec.com geewing@braunintertec.com		Telephone #: 952.995.2000	
Email Address: <u>ebienick@</u>		Fax #: 953.995.2020	Purchase Order:
Project Name/Number: <u>B1801954 718 orange st E</u>		Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email	
U.S. State Samples Taken: Minnesota		CT Samples: <input type="checkbox"/> Commercial/Taxable <input type="checkbox"/> Residential/Tax Exempt	
Turnaround Time (TAT) Options* - Please Check			
<input type="checkbox"/> 3 Hour <input type="checkbox"/> 6 Hour <input type="checkbox"/> 24 Hour <input type="checkbox"/> 48 Hour <input checked="" type="checkbox"/> 72 Hour <input type="checkbox"/> 96 Hour <input type="checkbox"/> 1 Week <input type="checkbox"/> 2 Week			
<small>*For TEM Air 3 hr through 6 hr, please call ahead to schedule. *There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.</small>			
PLM - Bulk (reporting limit)		TEM - Bulk	
<input checked="" type="checkbox"/> PLM EPA 600/R-93/116 (<1%) <input type="checkbox"/> PLM EPA NOB (<1%) Point Count <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%) Point Count w/Gravimetric <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%) <input type="checkbox"/> NIOSH 9002 (<1%) <input type="checkbox"/> NY ELAP Method 198.1 (friable in NY) <input type="checkbox"/> NY ELAP Method 198.6 NOB (non-friable-NY) <input type="checkbox"/> OSHA ID-191 Modified <input type="checkbox"/> Standard Addition Method		<input type="checkbox"/> TEM EPA NOB - EPA 600/R-93/116 Section 2.5.5.1 <input type="checkbox"/> NY ELAP Method 198.4 (TEM) <input type="checkbox"/> Chatfield Protocol (semi-quantitative) <input type="checkbox"/> TEM % by Mass - EPA 600/R-93/116 Section 2.5.5.2 <input type="checkbox"/> TEM Qualitative via Filtration Prep Technique <input type="checkbox"/> TEM Qualitative via Drop Mount Prep Technique Other <input checked="" type="checkbox"/> Point Count (400-non/grav.) if results are <1%, do not Point Count if N.D.	
<input checked="" type="checkbox"/> Check For Positive Stop - Clearly Identify Homogenous Group		Date Sampled: <u>3/6/18</u>	
Samplers Name: Gaia Ewing (MDH #AI <u>13299</u>)		Samplers Signature: <u>[Signature]</u>	
Sample #	HA #	Sample Location	Material Description
		SEE "Table II"	
Client Sample # (s): See above or see attached table <u>1 - 24</u>		Total # of Samples: <u>32</u>	
Relinquished (Client): Gaia Ewing (MDH #AI <u>13299</u>)		Date: <u>3/6/18</u>	Time: <u> </u>
Received (Lab): <u>Keynote wi</u>		Date: <u>3/6/18</u>	Time: <u>14:30</u>
Comments/Special Instructions: OK to send to other EMSL locations.		Point Count (400-non/grav.) up to 5 samples, if >5 samples call for approval. Invoice sent to: Jen Croft (jcroft@braunintertec.com) - same address.	

101800519

Table II. Bulk Asbestos Analytical Results

Address

Project #

Page 4

Olwyn St

32 SAMPLES

Sample No.	Sample Location			Material	Asbestos Content (%) ¹
1	BASEMENT	@ CHIM.	N. FACE	CHIMNEY BREACHING (GRAY)	
2A	↓	N. WALL	—	PLASTER	
2B	↓	W. WALL	—		
2C	MAIN FL.	W.C. RM	CHIM.		
2D	2ND FL.	HALL	S. WALL		
2E	↓	S. BED.	N. WALL		
3	MAIN FL.	KITCH.	@ PL. VENT	VINYL SHEET FLOORING (OFF-WHITE, 4x4" DOUBLE SQ. PAT.) w/ BACKING (GRAY)	
4		PANTRY	NT CR.	VINYL SHEET FLOORING (BROWN, DESIGNED) w/ BACKING (GRAY)	
5		KITCH.	P. WALL	6x6" CERAMIC TILE w/ (BRN.) w/ GROUT & THIN-SET	
6A		↓	CEIL.	CEILING/WALL TEXTURE (BUBBLES)	
6B		W.C. RM			
6C	↓	↓	↓		
6D	2ND FL.	HALL	S. WALL		
6E	↓	N. BED.	↓		
7	MAIN FL.	KITCH.	↓	SP/OC	
8		FR. EXT.	CL. CR.	12x12" CERAMIC FT/W.T. (TAN) w/ GROUT	
9		W.C. RM	CHIM.	ADHESIVE (TAN)-BETWEEN SP/PLAS. WANS	
10		↓	B.Y. CHIM.	FIBROUS PAPER OVER WRAP (WHITE)	
11	↓	FR. EXT.	CL.	FLOOR VENT COVER BOARD (TAN)	
12	2ND FL.	HALL	N. EDGE	VINYL SHEET FLOORING (WHITE/GRAY/TAN) (2x12" SQ. PAT.)	
13		N. BED.	CL.	12x12" FT (GRAY, STONE LOOK) w/ ADH. (TAN)	
14		↓	↓	9x9" FT. (GRAY w/ GRN. STREAKS) w/ DK. MASTIC	
15		↓	MID.	RESIDUAL BLACK MASTIC	

2/3

Change sb

$$Z^{12}Z$$
[illegible]

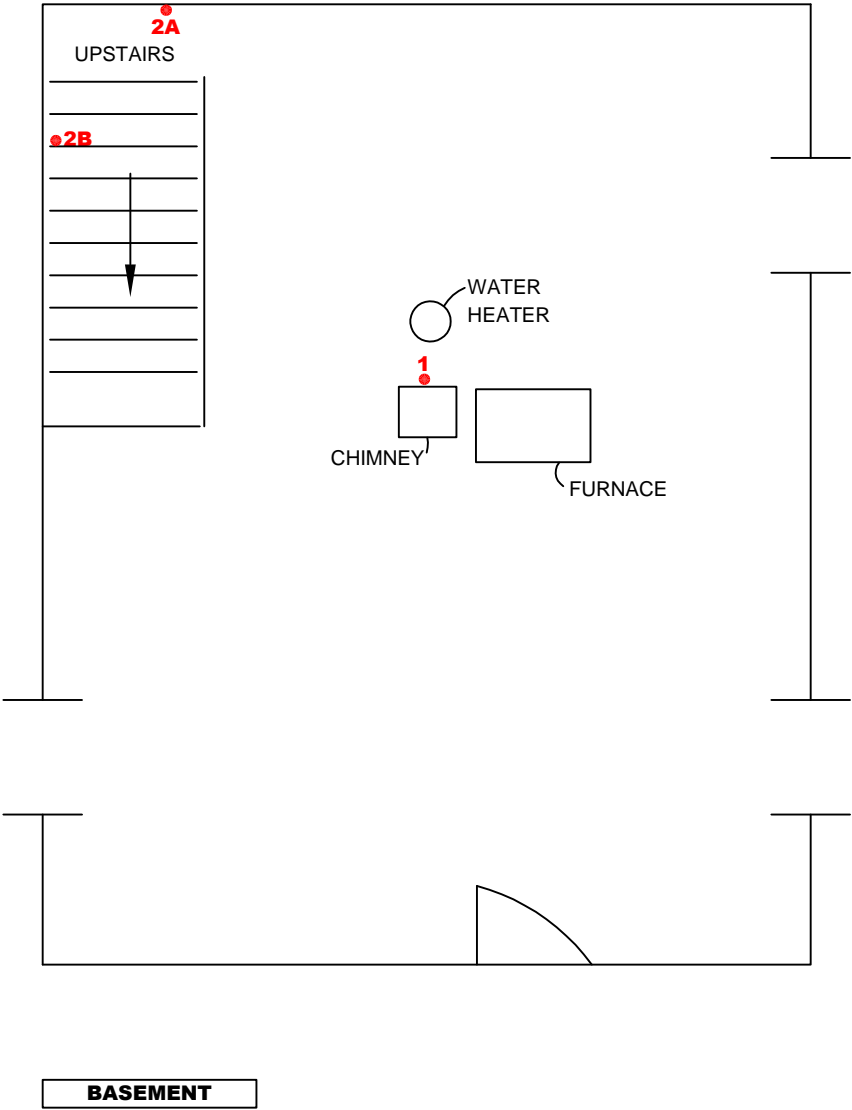
* Materials containing 1 percent of asbestos or less are not considered to be asbestos-containing materials by the U.S.EPA.

1. Asbestos content is indicated as an approximate percent by area.

2. N.D. = None Detected

Appendix E

Sample Location Sketch



● 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: 3/8/18

Pre-Renovation Hazardous Building Material Inspections

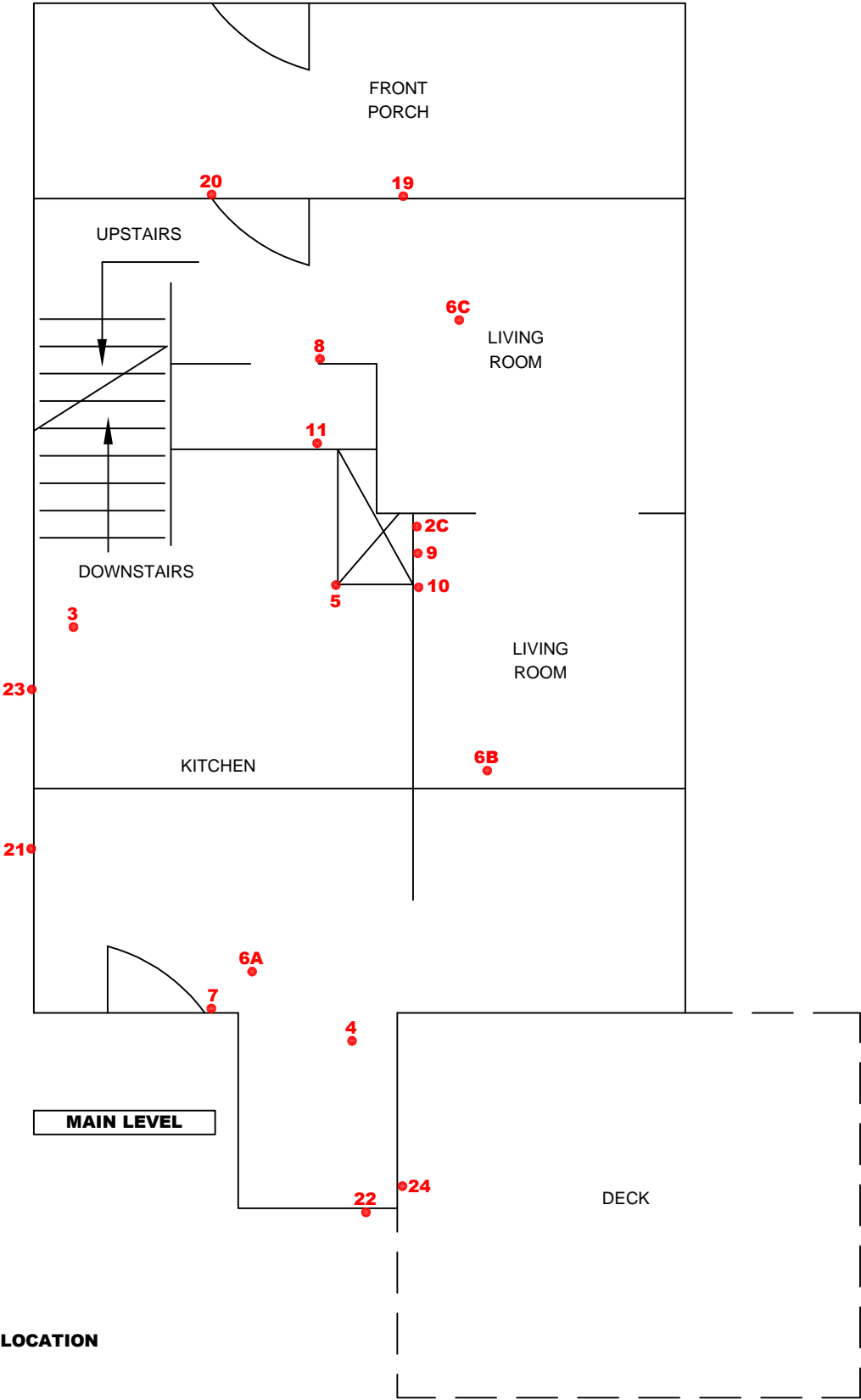
Ramsey County

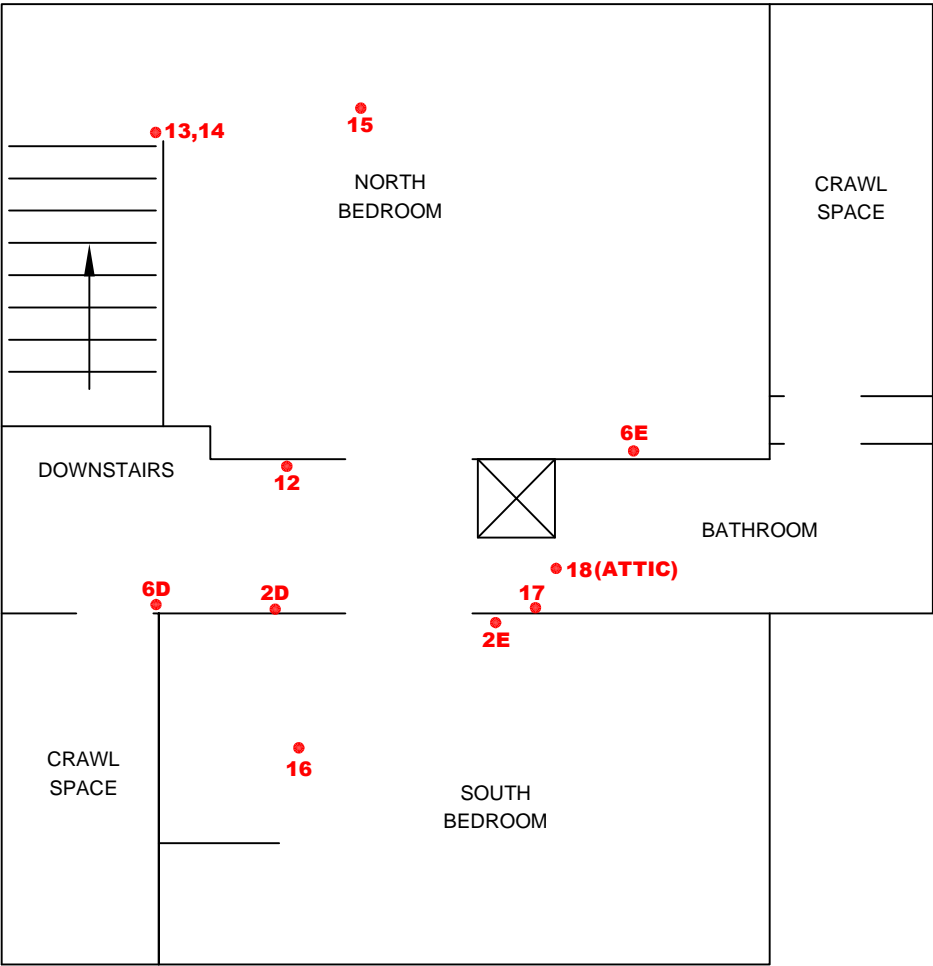
718 Orange Street E

St. Paul, Minnesota

Sample Location
Sketch

Basement





SECOND LEVEL

● 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

718 Orange Street E

St. Paul, Minnesota

Sample Location
Sketch

Second Level

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. McNeill
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