

HAZARDOUS / REGULATED MATERIALS SURVEY REPORT

13992 Alma Detroit, Michigan

April 26, 2019



City of Detroit Housing & Revitalization Department (HRD)

	Detroit, MI 48226					
INSPECTOR:	Edmind W	1. Boson				
	Eddie Bosas, Accreditation Number A50538					
REVIEWED AND APPROVED BY:	Kenée	Whitlood				
	Renee Whitlock	Accreditation Number A46539				
REVIEWED AND APPROVED BY:	Ryan Egan	Contrai				
	Ryan Montri	Accreditation Number A41444				

Demolition Division 2 Woodward Ave Suite 908

PREPARED FOR:

Hazardous/Regulated Materials Survey Executive Summary¹

Survey Information							
Project Name:	13992 Alma						
Project Number:	2018 PSC 1.14.2019F						
Parcel ID:	21014701.						
Site Address:	13992 Alma St, Detroit, Michigan, 48205						
Date of Survey/Inspection:	03/20/2019						
Report Date:	04/26/2019						
Company Name:	The Mannik & Smith Group, Inc.						
Inspector Name:	Eddie Bosas						
Inspector ID#:	A50538						
Inspector Email:	EBosas@manniksmithgroup.com						
Inspector Phone:	(734)-397-3100						
Date of Re-Inspection:	NA						



Building Information							
No.of Building(s):	2						
No.of stories:	2						
Year Built:	1941						
Construction Type:	Wooden Frame with Brick/Asphalt Exterior						
Square footage:	1616 SF						
Foundation:	Basement						
Basement Square footage:	1100 SF						
Garage Present :	Yes - Detached						
Garage Square footage:	400 SF						
Building Exterior:	Wooden Frame with Wood Exterior						
Roof:	Intact						

¹ The Executive Summary articulates selective findings and is provided solely for the purposes of overview, and should not be counted upon to provide details in its entirety for the parcel and results.

ASBESTOS CONTAINING MATERIALS RESULTS

Material Number & Sample Number*	Material Description	Adhesive	Material Location	Estimated Quantity
HM 4, AS 4-1	Exterior Caulk	NA	Exterior	550 LF
HM 6, AS 6-1	Expansion Joint	NA	Exterior	30 LF
HM 20, AS 20-1	Aircell	NA	RM-5, Basement	40 LF

ASSUMED ASBESTOS CONTAINING MATERIALS

Material Description	Material Location	Estimated Quantity	
Phone Junction Heat Shield	Basement	1 Each	
Window Glaze	Exterior	12 Each	

SUSPECTED HAZMATS SUMMARY

Inspection item	Constituent of Concern	Size/Quantity	Notes/Location
Mercury Thermostat	Mercury	1	RM-15
Smoke Detector	Mercury/Radioactive	1	RM-8
Car Tires	Disposal	2	Exterior
Gas Regulator	Mercury	1	Basement
Light Ballast	PCB	1	RM-7

SUBJECT PROPERTY OBSERVATIONS

Access Issues	Basement / Crawlspace – (FS 0)	1st floor – (FS 1)	2nd floor - (FS 2)	Attic – (FS 3)	Roof – (EA 4)
Areas of collapse and or unsafe to access*:	-	-	-	-	-
Areas filled with debris greater than 50%:		-	-	-	-
Flooding within the building	☐ Yes ☑No				
Fire damage materials present	☐ Yes ☑ No				
Debris within the building	☐ Yes ☑ No				

 $^{^{\}star}$ Inaccessible areas are presumed to have asbestos containing materials.

⁻ Denotes materials or conditions were not identified.

x Denotes areas with observed conditions present.



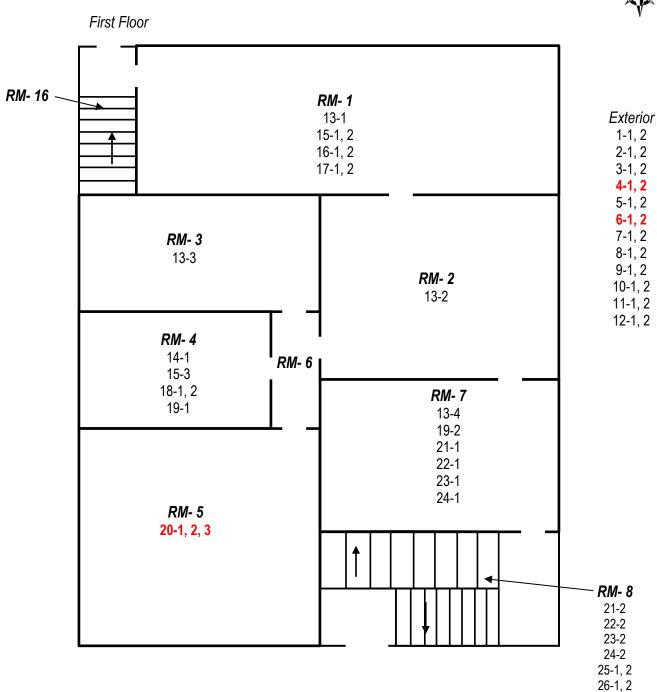
2365 Haggerty Rd South, Canton, MI 48188 Tel: 734.397.3100 Fax: 734.397.3131 www.MannikSmithGroup.com

Address: 13992 Alma **Date**: 03/20/2019

Drawing not to scale

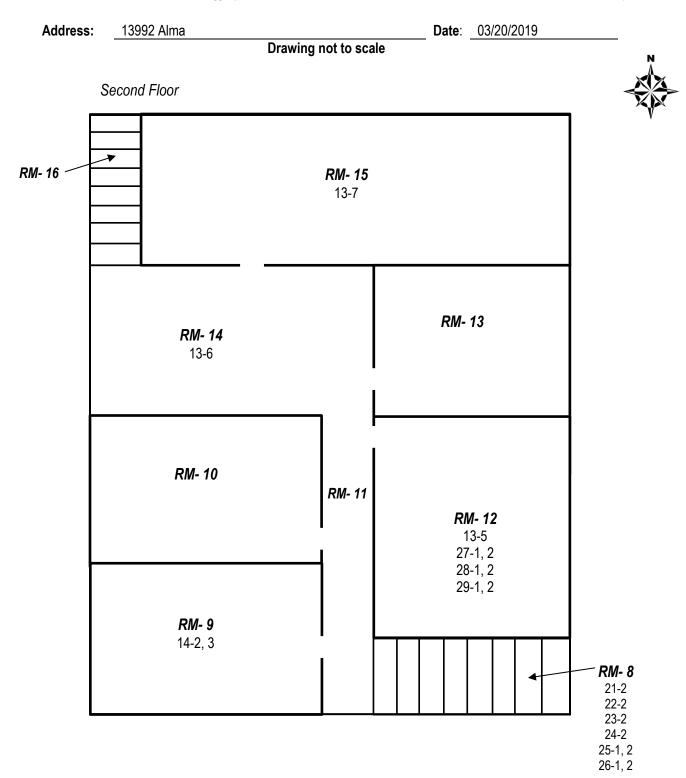
Loose Windows with Glaze Observed (Interior and Exterior) and Presumed as an Asbestos Containing Material







2365 Haggerty Rd South, Canton, MI 48188 Tel: 734.397.3100 Fax: 734.397.3131 www.MannikSmithGroup.com





TECHNICAL SKILL.

2365 Haggerty Rd South, Canton, MI 48188 Tel: 734.397.3100 Fax: 734.397.3131 www.MannikSmithGroup.com

Address: 13992 Alma **Date**: 03/20/2019 Drawing not to scale Basement 30-1, 2 31-1, 2 **Phone Junction with Heat** Shield Observed in **Basement and Presumed** as an Asbestos **Containing Material** RM-8 21-2 22-2 23-2 24-2 25-1, 2 26-1, 2 Garage

Property Photos



13992 Alma, Front of House



Back of House



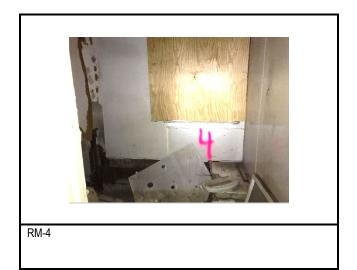
Left Side of House



Right Side of House

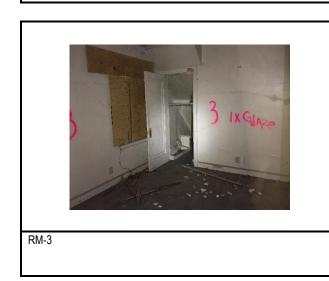
Functional Spaces













Functional Spaces



RM-7



RM-10



RM-8



RM-11



RM-9



RM-12

Functional Spaces



RM-13



RM-16



RM-14



Basement



RM-15





Sample ID: AS 1-1 Notes: Gray Brick Mortar



Sample ID: AS 2-2 Notes: Red Brick Mortar



Sample ID: AS 1-2 Notes: Gray Brick Mortar



Sample ID: AS 3-1 Notes: Porch Concrete



Sample ID: AS 2-1 Notes: Red Brick Mortar



Sample ID: AS 3-2 Notes: Porch Concrete



Sample ID: AS 4-1 Notes: Exterior Caulk



Sample ID: AS 5-2 Notes: House Window Glaze



Sample ID: AS 4-2 Notes: Exterior Caulk



Sample ID: AS 6-1 Notes: Expansion Joint



Sample ID: AS 5-1 Notes: House Window Glaze



Sample ID: AS 6-2 Notes: Expansion Joint



Sample ID: AS 7-1 Notes: Red Roof Shingle



Sample ID: AS 8-2 Notes: Green Roof Shingle



Sample ID: AS 7-2 Notes: Red Roof Shingle



Sample ID: AS 9-1 Notes: Roof Tar



Sample ID: AS 8-1 Notes: Green Roof Shingle



Sample ID: AS 9-2 Notes: Roof Tar

Samples



Sample ID: AS 10-1

Notes: Red Octagonal Asphalt Siding



Sample ID: AS 11-2

Notes: Black Siding Underlayment



Sample ID: AS 10-2

Notes: Red Octagonal Asphalt Siding



Sample ID: AS 12-1

Notes: Red Square Asphalt Siding



Sample ID: AS 11-1

Notes: Black Siding Underlayment



Sample ID: AS 12-2

Notes: Red Square Asphalt Siding



Sample ID: AS 13-1 Notes: Plaster



Sample ID: AS 13-4 Notes: Plaster



Sample ID: AS 13-2 Notes: Plaster



Sample ID: AS 13-5 Notes: Plaster



Sample ID: AS 13-3 Notes: Plaster



Sample ID: AS 13-6 Notes: Plaster



Sample ID: AS 13-7 Notes: Plaster



Sample ID: AS 14-3 Notes: Drywall with Joint Compound



Sample ID: AS 14-1 Notes: Drywall with Joint Compound



Sample ID: AS 15-1 Notes: Plaster on Backerboard



Sample ID: AS 14-2 Notes: Drywall with Joint Compound



Sample ID: AS 15-2 Notes: Plaster on Backerboard



Sample ID: AS 15-3 Notes: Plaster on Backerboard



Sample ID: AS 17-1 Notes: Ceramic Tile Floor Mortar



Sample ID: AS 16-1 Notes: Fire Brick



Sample ID: AS 17-2 Notes: Ceramic Tile Floor Mortar



Sample ID: AS 16-2 Notes: Fire Brick



Sample ID: AS 18-1 Notes: Ceramic Tile Wall Mortar

Samples



Sample ID: AS 18-2

Notes: Ceramic Tile Wall Mortar



Sample ID: AS 20-1

Notes: Aircell



Sample ID: AS 19-1 Notes: Brown Glue



Sample ID: AS 20-2

Notes: Aircell



Sample ID: AS 19-2 Notes: Brown Glue



Sample ID: AS 20-3

Notes: Aircell



Sample ID: AS 21-1 Notes: Stone 12" Floor Tile



Sample ID: AS 22-2 Notes: Yellow 12" Floor Tile



Sample ID: AS 21-2 Notes: Stone 12" Floor Tile



Sample ID: AS 23-1 Notes: Yellow Linoleum



Sample ID: AS 22-1 Notes: Yellow 12" Floor Tile



Sample ID: AS 23-2 Notes: Yellow Linoleum



Sample ID: AS 24-1 Notes: Swirl Linoleum



Sample ID: AS 25-2 Notes: Stair Tread



Sample ID: AS 24-2 Notes: Swirl Linoleum



Sample ID: AS 26-1 Notes: Brown Linoleum



Sample ID: AS 25-1 Notes: Stair Tread



Sample ID: AS 26-2 Notes: Brown Linoleum



Sample ID: AS 27-1 Notes: Black 12" Floor Tile



Sample ID: AS 28-2 Notes: Mud Board



Sample ID: AS 27-2 Notes: Black 12" Floor Tile



Sample ID: AS 29-1 Notes: Window Rope



Sample ID: AS 28-1 Notes: Mud Board



Sample ID: AS 29-2 Notes: Window Rope



Sample ID: AS 30-1 Notes: Foundation Concrete



Sample ID: AS 31-2 Notes: Stack Cement



Sample ID: AS 30-2 Notes: Foundation Concrete



Sample ID: AS 31-1 Notes: Stack Cement

Universal Waste and Hazardous Materials











Additional Photos - Garage



13992 Alma, Front of Garage



Back of Garage



Left Side of Garage



Right Side of Garage



Garage Roof



Garage Interior

Additional Photos



Aircell in Basement Running Up to RM-5

Additional Photos - Presumed ACM



Phone Junction Heat Shield Basement 1 Each



Loose Windows with Glaze Interior and Exterior 12 Each

TABLE 1
Asbestos Sampling Results

Client	City of Detro								
Survey Location	13992 Alma,	,	MI						
Survey Date Functional Area	March 20, 20 Sample ID	HM #	Homogeneous Material Group	Friable/Non Friable	Condition	EPA Classification	RACM	Asbestos	Quantity
Exterior	AS 1-1	1	Gray Brick Mortar	non-friable	fair	Miscellaneous	No	None Detected	3500 SF
Exterior	AS 1-2	1	Gray Brick Mortar	non-friable	fair	Miscellaneous	No	None Detected	3500 51
Exterior	AS 2-1	2	Red Brick Mortar	non-friable	fair	Miscellaneous	No	None Detected	4500 S
Exterior	AS 2-2	2	Red Brick Mortar	non-friable	fair	Miscellaneous	No	None Detected	4500 51
Exterior	AS 3-1	3	Porch Concrete	non-friable	fair	Miscellaneous	No	None Detected	500 SF
Exterior	AS 3-2	3	Porch Concrete	non-friable	fair	Miscellaneous	No	None Detected	500 SF
Exterior	AS 4-1	4	Exterior Caulk	non-friable	fair	Miscellaneous	Yes	10% Chrysotile	550 LF
Exterior	AS 4-2	4	Exterior Caulk	non-friable	fair	Miscellaneous	Yes	Not Analyzed	
Exterior	AS 5-1	5	House Window Glaze	non-friable	fair	Miscellaneous	No	None Detected	25 each
Exterior	AS 5-2	5	House Window Glaze	non-friable	fair	Miscellaneous	No	None Detected	25 eaci
Exterior	AS 6-1	6	Expansion Joint	non-friable	fair	Miscellaneous	Yes	5% Chrysotile	30 LF
Exterior	AS 6-2	6	Expansion Joint	non-friable	fair	Miscellaneous	Yes	Not Analyzed	30 LF
Roof	AS 7-1	7	Red Roof Shingle	non-friable	fair	Miscellaneous	No	None Detected	3000 S
Roof	AS 7-2	7	Red Roof Shingle	non-friable	fair	Miscellaneous	No	None Detected	3000 3
Roof	AS 8-1	8	Green Roof Shingle	non-friable	fair	Miscellaneous	No	None Detected	3000 S
Roof	AS 8-2	8	Green Roof Shingle	non-friable	fair	Miscellaneous	No	None Detected	3000 3
Roof	AS 9-1	9	Roof Tar	non-friable	fair	Miscellaneous	No	None Detected	300 LF
Roof	AS 9-2	9	Roof Tar	non-friable	fair	Miscellaneous	No	None Detected	300 LF

TABLE 1
Asbestos Sampling Results

Client	City of Detro								
Survey Location	13992 Alma,		MI						
Survey Date Functional Area	March 20, 20 Sample ID	HM #	Homogeneous Material Group	Friable/Non Friable	Condition	EPA Classification	RACM	Asbestos	Quantity
Exterior	AS 10-1	10	Red Octagonal Asphalt Siding	non-friable	fair	Miscellaneous	No	None Detected	3000 SF
Exterior	AS 10-2	10	Red Octagonal Asphalt Siding	non-friable	fair	Miscellaneous	No	None Detected	3000 SF
Exterior	AS 11-1	11	Black Siding Underlayment	non-friable	fair	Miscellaneous	No	None Detected	4000 SF
Exterior	AS 11-2	11	Black Siding Underlayment	non-friable	fair	Miscellaneous	No	None Detected	4000 31
Exterior	AS 12-1	12	Red Square Asphalt Siding	non-friable	fair	Miscellaneous	No	None Detected	1800 SF
Exterior	AS 12-2	12	Red Square Asphalt Siding	non-friable	fair	Miscellaneous	No	None Detected	1000 51
RM-1	AS 13-1	13	Plaster	non-friable	fair	Surfacing	No	None Detected	
RM-2	AS 13-2	13	Plaster	non-friable	fair	Surfacing	No	None Detected	
RM-3	AS 13-3	13	Plaster	non-friable	fair	Surfacing	No	None Detected	
RM-7	AS 13-4	13	Plaster	non-friable	fair	Surfacing	No	None Detected	6900 SI
RM-12	AS 13-5	13	Plaster	non-friable	fair	Surfacing	No	None Detected	
RM-14	AS 13-6	13	Plaster	non-friable	fair	Surfacing	No	None Detected	
RM-15	AS 13-7	13	Plaster	non-friable	fair	Surfacing	No	None Detected	
RM-4	AS 14-1	14	Drywall with Joint Compound	non-friable	fair	Surfacing	No	None Detected	
RM-9	AS 14-2	14	Drywall with Joint Compound	non-friable	fair	Surfacing	No	None Detected	900 SF
RM-9	AS 14-3	14	Drywall with Joint Compound	non-friable	fair	Surfacing	No	None Detected	

TABLE 1
Asbestos Sampling Results

Client	City of Detro								
Survey Location Survey Date	13992 Alma, March 20, 20	,	MI						
Functional Area	Sample ID	HM #	Homogeneous Material Group	Friable/Non Friable	Condition	EPA Classification	RACM	Asbestos	Quantity
RM-2	AS 15-1	15	Plaster on Backerboard	non-friable	fair	Surfacing	No	None Detected	
RM-2	AS 15-2	15	Plaster on Backerboard	non-friable	fair	Surfacing	No	None Detected	400 SF
RM-4	AS 15-3	15	Plaster on Backerboard	non-friable	fair	Surfacing	No	None Detected	
RM-1	AS 16-1	16	Fire Brick	non-friable	fair	Miscellaneous	No	None Detected	60 SF
RM-1	AS 16-2	16	Fire Brick	non-friable	fair	Miscellaneous	No	None Detected	- 00 SF
RM-1	AS 17-1	17	Ceramic Tile Floor Mortar	non-friable	fair	Miscellaneous	No	None Detected	450 SF
RM-1	AS 17-2	17	Ceramic Tile Floor Mortar	non-friable	fair	Miscellaneous	No	None Detected	
RM-4	AS 18-1	18	Ceramic Tile Wall Mortar	non-friable	fair	Miscellaneous	No	None Detected	E0.05
RM-4	AS 18-2	18	Ceramic Tile Wall Mortar	non-friable	fair	Miscellaneous	No	None Detected	50 SF
RM-4	AS 19-1	19	Brown Glue	non-friable	fair	Miscellaneous	No	None Detected	1100 S
RM-7	AS 19-2	19	Brown Glue	non-friable	fair	Miscellaneous	No	None Detected	1100 S
RM-5	AS 20-1	20	Aircell	friable	fair	TSI	Yes	60% Chrysotile	
RM-5	AS 20-2	20	Aircell	friable	fair	TSI	Yes	Not Analyzed	40 LF
RM-5	AS 20-3	20	Aircell	friable	fair	TSI	Yes	Not Analyzed	
RM-7	AS 21-1	21	Stone 12" Floor Tile	non-friable	fair	Miscellaneous	No	None Detected	150.01
RM-8	AS 21-2	21	Stone 12" Floor Tile	non-friable	fair	Miscellaneous	No	None Detected	150 SI
RM-7	AS 22-1	22	Yellow 12" Floor Tile	non-friable	fair	Miscellaneous	No	None Detected	150.0
RM-8	AS 22-2	22	Yellow 12" Floor Tile	non-friable	fair	Miscellaneous	No	None Detected	150 SI

TABLE 1
Asbestos Sampling Results

Client	City of Detro								
Survey Location	13992 Alma,		MI						
Survey Date	March 20, 20	019			1				
Functional Area	Sample ID	HM#	Homogeneous Material Group	Friable/Non Friable	Condition	EPA Classification	RACM	Asbestos	Quantity
RM-7	AS 23-1	23	Yellow Linoleum	non-friable	fair	Miscellaneous	No	None Detected	150 SF
RM-8	AS 23-2	23	Yellow Linoleum	non-friable	fair	Miscellaneous	No	None Detected	130 31
RM-7	AS 24-1	24	Swirl Linoleum	non-friable	fair	Miscellaneous	No	None Detected	150 SF
RM-8	AS 24-2	24	Swirl Linoleum	non-friable	fair	Miscellaneous	No	None Detected	150 5F
RM-8	AS 25-1	25	Stair Tread	non-friable	fair	Miscellaneous	No	None Detected	40 SF
RM-8	AS 25-2	25	Stair Tread	non-friable	fair	Miscellaneous	No	None Detected	40 31
RM-8	AS 26-1	26	Brown Linoleum	non-friable	fair	Miscellaneous	No	None Detected	90 SF
RM-8	AS 26-2	26	Brown Linoleum	non-friable	fair	Miscellaneous	No	None Detected	90 31
RM-12	AS 27-1	27	Black 12" Floor Tile	non-friable	fair	Miscellaneous	No	None Detected	160 SF
RM-12	AS 27-2	27	Black 12" Floor Tile	non-friable	fair	Miscellaneous	No	None Detected	100 5F
RM-12	AS 28-1	28	Mud Board	non-friable	fair	Miscellaneous	No	None Detected	160 SF
RM-12	AS 28-2	28	Mud Board	non-friable	fair	Miscellaneous	No	None Detected	100 5F
RM-12	AS 29-1	29	Window Rope	non-friable	fair	Miscellaneous	No	None Detected	250 LF
RM-12	AS 29-2	29	Window Rope	non-friable	fair	Miscellaneous	No	None Detected	250 LF
Basement	AS 30-1	30	Foundation Concrete	non-friable	fair	Miscellaneous	No	None Detected	1100 SF
Basement	AS 30-2	30	Foundation Concrete	non-friable	fair	Miscellaneous	No	None Detected	1100 51
Basement	AS 31-1	31	Stack Cement	non-friable	fair	Miscellaneous	No	None Detected	4 SF
Basement	AS 31-2	31	Stack Cement	non-friable	fair	Miscellaneous	No	None Detected	4 51
Basement			Phone Junction Heat Shield		Presi	ımed Asbestos C	Containing M	aterial	1 Each
nterior and Exterior			Loose Windows with Glaze		Presi	ımed Asbestos C	Containing M	aterial	12 Each

Table 2 Universal Waste, Hazardous Materials, and Other Regulated Materials Inventory 13992 Alma

Detroit, Wayne County, Michigan

Inspection Item	Constituent of Concern	Size/Quantity	Notes/Location
Mercury Thermostat	Mercury	1	RM-15
Smoke Detector	Mercury/Radioactive	1	RM-8
Car Tires	Disposal	2	Exterior
Gas Regulator	Mercury	1	Basement
Light Ballast	PCB	1	RM-7

PURPOSE AND SCOPE OF WORK

The purpose of the Hazardous and Regulated Materials Survey (HMS) was to identify, quantify and document the location of regulated materials that may be encountered during demolition of the on-site structure. To accomplish this purpose, MSG performed the following scope of work:

- 1. Pre-demolition asbestos-containing material (ACM) survey.
- 2. Universal wastes, hazardous materials, and other regulated wastes survey.

METHODOLOGIES

The HMS was conducted on March 20, 2019. Methodologies employed during the completion of each task of the HMS are detailed below.

ACM Survey Procedures

The ACM survey is performed in general accordance with guidelines set forth in the Environmental Protection Agency (EPA) 40 Code of Federal Regulations (CFR) 763. The National Emission Standards for Hazardous Air Pollutants (NESHAP) regulations govern demolition and renovation activities in which asbestos is present. The NESHAP rule distinguishes between Regulated Asbestos-Containing Materials (RACM) that would readily release asbestos fibers when damaged or disturbed and those materials that are unlikely to result in significant fiber release during demolition activities. The purpose of this survey is to determine if ACM within the Site building are RACM and thus, subject to the NESHAP, and to comply with the Michigan Occupational Safety and Health Administration (MIOSHA) and guidelines set forth in the Occupational Safety and Health Administration (OSHA) Regulations Standards 29 CFR 1910.1101.

RACM, as defined by NESHAP, is classified into four parts, (1) friable asbestos material, (2) Category I non-friable ACM (packing, gaskets, floor tile and roofing products) that has become friable, (3) Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting or abrading, or (4) Category II non-friable ACM (all other ACM products) that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations.

The suspect ACM identified during this survey was grouped into homogeneous materials (i.e. similar materials which are uniform in color and texture) and:

- Described and quantified it in linear feet (LF) or square feet (SF);
- Identified and classified as friable or non-friable:
- Assessed as being in good, fair or poor condition;
- Assigned an EPA classification type (surfacing material, thermal system insulation or miscellaneous);
- Classified as RACM or non-RACM; and
- Sampled, or identified as presumed ACM (PACM).

MSG performed services associated with this ACM survey in conformance with the care and skill ordinarily used by other reputable environmental consulting firms practicing under similar conditions, at the same time, and in the same or similar locality. ACM surveys are conducted by a systematic visual inspection of all safely accessible areas of the Site building. Destructive sampling methods are used to inspect and collect samples from hidden areas (behind plaster walls, sub-layers of flooring/mastic, ceiling tiles, etc.) Suspect ACM samples are identified and collected by State of Michigan Accredited Asbestos Inspectors (Eddie Bosas, Accreditation Number A50538, assisted by Wiley Davenport, Accreditation Number A46970). Based on the quantity of each classification of suspect ACM, the MSG Inspector collects samples in accordance with EPA guidelines.

Universal Wastes and Hazardous Material Survey Procedures

MSG Environmental Professional pursuant to 40 CFR 312.10 identifies and takes inventory of universal wastes and hazardous materials by a visual reconnaissance of the Site. Materials are identified, described, and quantified to the extent possible; however, no equipment or containers are opened and/or sampled as part of this survey.

A hazardous material, as defined in OSHA 29 CFR 1910.1200, is any item or chemical which is a "health hazard" or "physical hazard", including the following:

- Chemicals that are carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, hepatotoxins, nephrotoxins, neurotoxins, agents that act on the hematopoietic system, and agents that damage the lungs, skin, eyes, or mucous membranes;
- Chemicals that are combustible liquids, compressed gases, explosives, flammable liquids, flammable solids, organic peroxides, oxidizers, pyrophorics, unstable (reactive) or water-reactive;
- Chemicals that, in the course of normal handling, use or storage, may produce or release dusts, gases, fumes, vapors, mists or smoke which have any of the above characteristics; and
- Any item or chemical which, when being transported or moved, is a risk to public safety or an environmental hazard, and is regulated as such by one or more of the following:
 - DOT Department of Transportation: Hazardous Materials Regulations (49 CFR 100-180):
 - o IMO International Maritime Organization; International Maritime Dangerous Goods (IMDG) Code;
 - o IATA International Air Transport Association; Dangerous Goods Regulations;
 - o ICAO International Civil Aviation Organization; Technical Instructions; and
 - AF Air Force "INTERSERVICE" Manual, Preparing Hazmat for Military Air Shipments (AFMAN 24-204).

Hazardous materials may also include:

- Any item or chemical listed in the United States Environmental Protection Agency (USEPA) List of Hazardous Substances and Reportable Quantities, dated September 1992.
- Noticeable as inventory under the reporting requirements of the Hazardous Chemical Reporting (40 CFR Part 302).
- An environmental release under the reporting requirements of the Toxic Chemical Release Reporting: Community Right To Know (40 CFR Part 372) or under Part 201, Environmental Remediation of the Michigan Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Part 201) and Part 213, Leaking Underground Storage Tanks (Part 213).

Universal wastes are waste that comes primarily from consumer products containing mercury, lead, cadmium or other substances that are hazardous to human health and the environment. These items cannot be discarded in household trash nor disposed of in landfills but have less stringent handling and disposal requirements than hazardous waste streams. In Michigan, universal wastes are regulated by the Michigan Department of Environment, Great Lakes, and Energy (EGLE) - Office of Waste Management and Radiological Protection under Part 111 of Act 451 and the federal Resource Conservation and Recovery Act (RCRA) of 1976 under 40 CFR Part 273. Universal waste is also regulated by the US Department of Transportation (US DOT) under 49 CFR Parts 171 through 180. Most of the universal waste requirements overseen by EGLE are addressed by R 299.9228 of Part 111 of 1994 P.A. 451, as amended and 40 CFR Part 273. These regulations are designed to encourage proper collection, recycling, treatment, or disposal of these wastes.

Examples of universal waste are mercury-containing equipment (e.g. thermostats, barometers, manometers, temperature and pressure gauges, and mercury switches), nickel-cadmium and spent lead-acid batteries, lamps (e.g. incandescent, fluorescent, high intensity discharge, neon, mercury vapor, and high pressure sodium and metal halide), pesticides, polychlorinated biphenyl (PCB) containing transformers and light ballasts, stored chemical and/or

petroleum products, etc. In Michigan, Part 111 also includes pharmaceutical and consumer electronics as additional types of universal wastes.

Other Regulated Materials

This HMS also included identifying and inventorying other regulated materials which may pose physical or chemical concerns during demolition of the Site building(s) including, whole motor vehicle scrap tires (which are illegal to dispose of in a landfill), chlorofluorocarbon (CFC) containing devices, tanks, vessels, equipment, and building materials that may contain or become contaminated with hazardous materials.

These would include chemicals with special characteristics which, in the opinion of the manufacturer, can cause harm to people, plants, or animals when released by spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandonment or discarding of barrels, containers, and other receptacles).

Specifically, CFC containing devices are regulated Under Title VI of the Clean Air Act (CAA). The Stratospheric Protection Division of the EPA manages programs protecting the stratospheric ozone layer. Title 40, Part 82 of the Code of Federal Regulations contains the EPA regulations protecting the ozone layer. The survey of the premises identified and quantified any CFC containers and CFC containing equipment, which could include the following:

- Drinking fountains, air conditioners, refrigerators
- Air conditioners in control panels and other process equipment
- Water and air chillers
- Roof top and stand-alone air conditioners
- Cafeteria equipment: freezers, walk-in coolers/freezers
- CFC canisters and cylinders

In Michigan, underground storage tanks are regulated under the authority of Part 211, Underground Storage Tank Regulations, of Act 451 of 1994, as amended, and the Michigan Underground Storage Tank Rules (MUSTR). Therefore, this survey included whether any evidence of underground storage tanks and related piping and dispensers were present at the Site.

MSG also surveyed for the presence of equipment, other storage tanks, and materials that may contain or be contaminated by regulated chemicals. These include, but may not be comprehensive of:

- Above ground storage tanks
- Oil-containing equipment (hydraulic equipment, blowers, fans, motors, elevators, compressors, etc.)
- Fire brick
- Contaminated building materials (concrete, block walls, wood, plaster, etc.) with staining, odor or other signs
 of a hazardous chemical release

The scrap tire management program regulates transportation, storage and disposal of scrap tires under Part 169 of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. A scrap tire means a tire that is no longer being used for its original intended purpose including, but not limited to, a used tire, a reusable tire casing, or portions of tires. Scrap tire does not include a vehicle support stand.

Based on the construction age of the building(s), lead-based paint (LBP) should be assumed to be present. LBP is considered as a hazardous substance and therefore, its condition, handling, and disposal are regulated by federal, state, and local agencies. Contractors and their employers that will be disturbing the building during demolition shall follow all applicable requirements, including but not limited to, the OSHA Lead in Construction Standard.

SURVEY RESULTS

The following subsections include a discussion of the HMS results. Photographs of the building are located in the Photo Log. The results of this report are valid as of the report date, subject to the limitations which are attached.

ACM Survey Results

MSG identified 31 suspect homogenous materials during the survey. Seventy (70) bulk samples were collected from these suspect homogeneous materials and were submitted to Mannik & Smith Group Analytical Laboratories (MSGAL) for laboratory analysis of Bulk Materials by Polarized Light Microscopy using USEPA Method 600/R-93/116. MSGAL is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) to analyze bulk samples for asbestos content. Of the aforementioned suspect homogenous materials identified during this survey, laboratory analysis found three (3) samples containing greater than 1% asbestos (AS 4-1, AS 6-1, AS 20-1). The EPA defines ACM as materials containing greater than 1% asbestos. In addition, a phone junction with heat shield, and loos windows with glaze were observed in the basement and the interior and exterior. These materials were presumed as asbestos containing.

A point-count quantification procedure (PCQM) allows for lower detection limits than calibrated visual estimation (CVES), which is the quantification method widely used in asbestos analysis via Polarized Light Microscopy (PLM). If the asbestos content is found to contain less than 1% asbestos as determined by a method other than point counting by PLM, it can only be treated as non-ACM if verified to contain less than 1% by the PCQM. If not point-counted, the sample must be assumed to be greater than 1% and thus considered and treated as ACM. As part of this survey, zero (0) samples were analyzed using point count quantification. Asbestos was not detected in suspect materials collected from the garage.

Suspect ACM sample locations are depicted on the attached figure. The locations for ACM are listed in the executive summary. See *Table 1*, *Asbestos Sampling Results* for a listing of homogeneous materials identified by MSG during this survey. Functional areas on Table 1 list the locations where the sample(s) were taken. Table 1 quantities reflect the total amount of suspect ACM in all locations that it is observed. A copy of the analytical reports including chains of custody is attached at the end of this report.

Universal Wastes, Hazardous Materials, and Other Regulated Materials Survey Results

Universal wastes, hazardous materials, and/or other regulated materials wastes were identified within the Site building. Waste type, locations and quantities identified are provided in *Table 2, Universal Waste, Hazardous Materials, and Other Regulated Materials Inventory.*

CONCLUSIONS AND RECOMMENDATIONS

Asbestos Containing Materials

Of the 31 suspect homogenous materials collected as part of this survey, three (3) contained greater than 1% asbestos (AS 4-1, AS 6-1, AS 20-1) with these materials classified as RACM. In addition, a phone junction with heat shield, and loos windows with glaze were observed in the basement and the interior and exterior. These materials were presumed as asbestos containing.

Prior to demolition, a notification of intent to demolish shall be made to the EGLE-Air Quality Division (EGLE-AQD) and Licensing and Regulatory Affairs (LARA), Asbestos Program. Notification, according to the procedure described by the NESHAP, Title 40 of the Code of Federal Regulations, Part 61, Subpart M, Notification, for renovation and demolition projects should be followed.

Category I and Category II Non-Friable ACM may often be left in place during demolition activities if the ACM is not subjected to sanding, grinding, cutting, or abrading or has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material during the course of demolition.

However, this assertion should only be made by the demolition contractor when the demolition methods have been accepted by the regulatory authority to not release asbestos fibers. Debris should be presumed as ACM and disposed of accordingly. All materials containing ACM must be disposed of in a licensed landfill.

If additional suspect ACMs are discovered during demolition activities in areas that were determined during this survey to be structurally unsound and unsafe, inaccessible, concealed and/or in buried areas, shall be surveyed, tested, and abated if warranted.

Universal Wastes, Hazardous Materials, and Other Regulated Materials

The universal waste, hazardous materials, and other regulated materials (see Table 2) must be properly characterized (as necessary) and properly removed from the Site building for recycling and/or disposed of in accordance with Parts 111, 115, or 147 of Michigan Public Act 451 of 1994, as amended. If additional universal wastes, hazardous materials, and other regulated materials are discovered during demolition activities in areas that were determined during this survey to be structurally unsound and unsafe, inaccessible, concealed and/or in buried areas, these materials shall be characterized (as necessary) and properly removed in accordance with the abovementioned regulations.



REGULATED MATERIALS SURVEY LIMITATIONS

The Mannik & Smith Group, Inc. (MSG) performed its services associated with this Regulated Materials Survey (RMS) in general accordance with guidelines set forth in the Environmental Protection Agency (EPA) 40 Code of Federal Regulations (CFR) 763, Occupational Safety and Health Administration (OHSA) 29 CFR 1926.62, and in conformance with the care and skill ordinarily used by other reputable environmental consulting firms practicing under similar conditions, at the same time, and in the same or similar locality. This RMS and related documentation are site-specific, which means they pertain to the conditions of the site surveyed.

Unless otherwise noted, MSG's RMS is limited to accessible areas. Areas determined to be not structurally sound, safely reached, limited by excessive accumulated obstructions, require specialized equipment to access, in operable windows, etc., are not included in this survey. There may be areas where regulated materials, such as suspected asbestos-containing materials (SACM) and lead containing paint cannot be viewed and/or tested. MSG shall not be responsible for identifying all SACM, lead containing paint, or other hazardous materials located in inaccessible locations, including by not limited to, above a plaster ceiling, behind a wall, embedded in concrete, buried, confined spaces, unsafe areas, or otherwise not readily identifiable.

Destructive sampling will only be conducted when permission has been granted by the owner. Destructive survey locations are limited to areas where hidden SACM, lead containing paint, or other hazardous materials is reasonably thought to be present and sampling can be conducted in a safe manner. If regulated materials are found during the course of demolition and/or renovation activities that are not listed in this report, the material should be assumed as asbestos-containing, lead containing, or hazardous until it can be sampled and analyzed at an accredited laboratory and safe work practices should always be used if those areas are to be disturbed.

MSG has prepared a logical assessment program to reduce the client's risk of discovering unknown regulated materials and/or hazardous substances. The presence of subsurface regulated materials and/or hazardous substances is based solely on surface observations and/or information provided by others. Descriptions of subsurface conditions provided in this report are not warranted to be complete or accurate. This risk may be reduced by more extensive exploration on the site, but even with additional exploration, it is not possible to completely eliminate the risk of discovering regulated materials and/or hazardous conditions. It cannot and should not be assumed that samples collected and conditions observed at the time of the RMS are representative of an area that has not been sampled and/or tested.

In preparing this report, MSG may have relied on information obtained from or provided by others. MSG makes no representation or warranty regarding the accuracy or completeness of this information gathered through outside sources or subcontracted services. No warranty, guarantee, or certification of any kind, expressed or implied, at common law or created by statute, is extended, made, or intended by rendering these environmental consulting services or by furnishing this written report. Environmental conditions and regulations are subject to constant change and reinterpretation. One should not assume that any on-site conditions and/or regulatory statutes or rules will remain constant after MSG has completed the scope of work for this project. Furthermore, because the facts stated in this report are subject to professional interpretation, differing conclusions could be reached by other environmental professionals.

The report is intended to offer support to a building owner, construction manager, general contractor, abatement contractor, architect, and/or other parties authorized by the owner in generally locating asbestos-containing materials (ACM), lead containing paint, universal and hazardous wastes, and/or other regulated materials. This report does not have the required components to serve as an Asbestos Project Design document, Asbestos and/or Lead Containing Paint Abatement Work Plan, and/or a Health and Safety Plan. Therefore, this report should not be utilized as a project specification document. The results, findings, conclusions, and recommendations expressed in

TECHNICAL SKILL. CREATIVE SPIRIT.

this report are based only on conditions that were noted during this survey. This report does not warrant against future operations or conditions, nor does it warrant against operations or conditions present of a type or at a location not investigated. Quantities have been conservatively estimated and sampling locations have been described representatively; however, current site conditions should be field-verified by contractors bidding on and/or prior to abatement work.

L1209

Client The Mannik & Smith Group 2365 S. Haggerty Rd., Suite Canton, MI, 48188		03/25/19 Order #	13992 Alma, Detroit, MI L1209 DETR0039
	BULK SAMPLE AN	ALYSIS SUMMARY	
Client ID AS 1-1 Layer 1 Gray Brick Mortar Type Non Detect 0.00% Gray, Fibrous, Homogeneous 100% non-asbestos	Lab ID	L1209-1 L	Location Exterior
Client ID AS 1-2 Layer 1 Gray Brick Mortar Type Non Detect 0.00% Gray, Fibrous, Homogeneous 100% non-asbestos	Lab ID	L1209-2 L	ocation Exterior
Client ID AS 2-1 Layer 1 Red Brick Mortar Type Non Detect 0.00% Red, Fibrous, Homogeneous 100% non-asbestos	Lab ID	L1209-3 L	ocation Exterior
Client ID AS 2-2 Layer 1 Red Brick Mortar Type Non Detect 0.00% Red, Fibrous, Homogeneous 100% non-asbestos	Lab ID	L1209-4 L	ocation Exterior
Client ID AS 3-1 Layer 1 Porch Concrete Type Non Detect 0.00% Gray, Fibrous, Homogeneous 100% non-asbestos	Lab ID	L1209-5 L	ocation Exterior
Analyst: Joshua P L	0/R-93/116 by Polarized Light Mic ucchesi Quality Manager er A Claes Laboratory Director	roscopy	Accreditations NIST-NVLAP No. 600212-0

L1209

Client	The Mannik & Smith Group, 2365 S. Haggerty Rd., Suite 1 Canton, MI, 48188	• •	Project 13992 Alma, Detroit, MI Order # L1209 Project # DETR0039
		BULK SAMPLE ANALYSIS SUMN	MARY
	Client ID AS 3-2 Layer 1 Porch Concrete Non Detect 0.00% Fibrous, Homogeneous 100% non-asbestos	Lab ID L1209-6	Location Exterior
	Client ID AS 4-1 Layer 1 Exterior Caulk Chrysotile 10.00% Fibrous, Homogeneous 90% non-asbestos	Lab ID L1209-7	Location Exterior
Type Tan,	Client ID AS 4-2 Layer 1 Exterior Caulk Not Analyzed - Fibrous, Homogeneous	Lab ID L1209-8	Location Exterior
Type Cream	Client ID AS 5-1 Layer 1 louse Window Glaze Non Detect 0.00% n, Fibrous, Homogeneous 100% non-asbestos	Lab ID L1209-9	Location Exterior
Type Cream	Client ID AS 5-2 Layer 1 louse Window Glaze Non Detect 0.00% n, Fibrous, Homogeneous 100% non-asbestos	Lab ID L1209-10	Location Exterior
Analytic Analyst: Reviewe	Joshua P Lu	/R-93/116 by Polarized Light Microscopy cchesi Quality Manager · A Claes Laboratory Director	Accreditations NIST-NVLAP No. 600212-0

L1209

Client	The Mannik & Smith Group, 2365 S. Haggerty Rd., Suite Canton, MI, 48188		03/25/19 Order #	13992 Alma, Detroit, MI L1209 DETR0039
		BULK SAMPLE AN	IALYSIS SUMMARY	
	Client ID AS 6-1 Layer 1 Expansion Joint Chrysotile 5.00% Fibrous, Homogeneous 95% non-asbestos	Lab ID	L1209-11	Location Exterior
Type Black,	Client ID AS 6-2 Layer 1 Expansion Joint Not Analyzed - Fibrous, Homogeneous	Lab ID	L1209-12	Location Exterior
Type Red, F	Client ID AS 7-1 Layer 1 Red Roof Shingle Non Detect 0.00% Fibrous, Homogeneous 00% non-asbestos	Lab ID	L1209-13	Location Roof
Type Red, F	Client ID AS 7-2 Layer 1 Red Roof Shingle Non Detect 0.00% Fibrous, Homogeneous 00% non-asbestos	Lab ID	L1209-14	Location Roof
Type Green,	Client ID AS 8-1 Layer 1 Green Roof Shingle Non Detect 0.00% Fibrous, Homogeneous 00% non-asbestos	Lab ID	L1209-15	Location Roof
Analytica Analyst: Reviewe	Joshua P L	D/R-93/116 by Polarized Light Mic ucchesi Quality Manager er A Claes Laboratory Director	roscopy	Accreditations NIST-NVLAP No. 600212-0

L1209

23	e Mannik & Smith Group, Inc. 65 S. Haggerty Rd., Suite 100 inton, MI, 48188	Received Analyzed Reported	03/25/19	Project Order # Project #	13992 Alma, Detroit, MI L1209 DETR0039
		BULK SAMPLE AN	ALYSIS SUMMA	RY	
Greer Type N Green, Fibr	Client ID AS 8-2 Layer 1 n Roof Shingle lon Detect 0.00% rous, Homogeneous in non-asbestos	Lab ID	L1209-16	L	ocation Roof
Type N Black, Fibro	Roof Tar lon Detect 0.00% ous, Homogeneous onon-asbestos	Lab ID	L1209-17	L	ocation Roof
Type N Black, Fibro	Client ID AS 9-2 Layer 1 Roof Tar Ion Detect 0.00% ous, Homogeneous in non-asbestos	Lab ID	L1209-18	L	ocation Roof
Red Octago Type N Red, Fibro	Client ID AS 10-1 Layer 1 conal Asphalt Siding lon Detect 0.00% bus, Homogeneous in non-asbestos	Lab ID	L1209-19	L	ocation Exterior
Red Octago Type N Red, Fibro	Client ID AS 10-2 Layer 1 conal Asphalt Siding lon Detect 0.00% bus, Homogeneous in non-asbestos	Lab ID	L1209-20	L	ocation Exterior
Analytical Me Analyst: Reviewer:	Joshua P Lucch	93/116 by Polarized Light Mic nesi Quality Manager Claes Laboratory Director	oscopy		Accreditations NIST-NVLAP No. 600212-0

L1209

Client	The Mannik & Smith Group 2365 S. Haggerty Rd., Suite Canton, MI, 48188	100 Analyzed	03/21/19 03/25/19 03/25/19	Project Order # Project #	13992 Alma, Detroit, MI L1209 DETR0039
		BULK SAMPLE AN	IALYSIS SUMMAF	RΥ	
Type Black,	, Fibrous, Homogeneous 100% non-asbestos		L1209-21		ocation Exterior
Type Black,	Client ID AS 11-2 Layer 1 k Siding Underlayment Non Detect 0.00% , Fibrous, Homogeneous 100% non-asbestos	Lab ID	L1209-22		ocation Exterior
Type Red,	Client ID AS 12-1 Layer 1 Square Asphalt Siding Non Detect 0.00% Fibrous, Homogeneous 100% non-asbestos	Lab ID	L1209-23	L	ocation Exterior
Type Red,	Client ID AS 12-2 Layer 1 Square Asphalt Siding Non Detect 0.00% Fibrous, Homogeneous 100% non-asbestos	Lab ID	L1209-24	L	ocation Exterior
	Client ID AS 13-1 Layer 1 Plaster Non Detect 0.00% I, Fibrous, Homogeneous 100% non-asbestos		L1209-25	L	ocation RM-1
Analytic Analyst: Reviewe	Joshua P L	0/R-93/116 by Polarized Light Mic ucchesi Quality Manager er A Claes Laboratory Director	roscopy		Accreditations NIST-NVLAP No. 600212-0

L1209

Client	The Mannik & Smith Group 2365 S. Haggerty Rd., Suite Canton, MI, 48188		Received Analyzed Reported	03/25/19	Project Order # Project #	13992 Alma, Detroit, MI L1209 DETR0039
		BULK SAN	1PLE AN	IALYSIS SUMM	ARY	
	Client ID AS 13-2 Layer 1 Plaster Non Detect 0.00% Fibrous, Homogeneous 00% non-asbestos	Layer 2 Skim Coat Type Non Detect White, Fibrous, Homo 100% non-asbes	0.00% geneous	L1209-26	L	ocation RM-2
	Client ID AS 13-3 Layer 1 Plaster Non Detect 0.00% Fibrous, Homogeneous 00% non-asbestos	Layer 2 Skim Coat Type Non Detect White, Fibrous, Homo 100% non-asbes	0.00% geneous	L1209-27	L	ocation RM-3
Green,	Client ID AS 13-4 Layer 1 Plaster Non Detect 0.00% Fibrous, Homogeneous 00% non-asbestos	Layer 2 Skim Coat Type Non Detect White, Fibrous, Homo 100% non-asbes	0.00% geneous	L1209-28	L	ocation RM-7
Green,	Client ID AS 13-5 Layer 1 Plaster Non Detect 0.00% Fibrous, Homogeneous 00% non-asbestos	Layer 2 Skim Coat Type Non Detect White, Fibrous, Homo 100% non-asbes	0.00% geneous	L1209-29	L	ocation RM-12
	Client ID AS 13-6 Layer 1 Plaster Non Detect 0.00% Fibrous, Homogeneous 00% non-asbestos	Layer 2 Skim Coat Type Non Detect White, Fibrous, Homo 100% non-asbes	0.00% geneous	L1209-30	L	ocation RM-14
Analytica Analyst: Reviewer	Joshua P L	0/R-93/116 by Polarized ucchesi Quality Mana er A Claes Laboratory Di	ger	roscopy		Accreditations NIST-NVLAP No. 600212-0

L1209

Client	The Mannik & Smith Group 2365 S. Haggerty Rd., Suite Canton, MI, 48188	100 Analy	zed 0	03/21/19 03/25/19 03/25/19	Project Order # Project #	13992 Alma, Detroit, MI L1209 DETR0039
		BULK SAMPLE	ANA	ALYSIS SUMMARY		
	Client ID AS 13-7 Layer 1 Plaster Non Detect 0.00% Fibrous, Homogeneous 00% non-asbestos	Lab Layer 2 Skim Coat Type Non Detect 0.00 White, Fibrous, Homogeneo 100% non-asbestos	0%	L1209-31	l	ocation RM-15
Type White,	Client ID AS 14-1 Layer 1 Il with Joint Compound Non Detect 0.00% Fibrous, Homogeneous 00% non-asbestos	Lab Layer 2 Joint Compound Type Non Detect 0.00 White, Fibrous, Homogeneo 100% non-asbestos	0%	L1209-32	l	ocation RM-4
Type White,	Client ID AS 14-2 Layer 1 Il with Joint Compound Non Detect 0.00% Fibrous, Homogeneous 00% non-asbestos	Lab Layer 2 Joint Compound Type Non Detect 0.00 White, Fibrous, Homogeneo 100% non-asbestos	0%	L1209-33	I	ocation RM-9
Type White,	Client ID AS 14-3 Layer 1 Il with Joint Compound Non Detect 0.00% Fibrous, Homogeneous 00% non-asbestos	Lab Layer 2 Joint Compound Type Non Detect 0.00 White, Fibrous, Homogeneo 100% non-asbestos	0%	L1209-34	l	ocation RM-9
Type Gray, F	Client ID AS 15-1 Layer 1 ster on Backerboard Non Detect 0.00% Fibrous, Homogeneous 00% non-asbestos	Lab Layer 2 Skim Coat Type Non Detect 0.00 White, Fibrous, Homogeneo 100% non-asbestos	0%	L1209-35 Layer 3 Drywall Type Non Detect White, Fibrous, Homo 100% non-asbes	0.00% ogeneous	ocation RM-2
Analytica Analyst: Reviewer	Joshua P L	0/R-93/116 by Polarized Light ucchesi Quality Manager er A Claes Laboratory Director		oscopy		Accreditations NIST-NVLAP No. 600212-0

L1209

Client	The Mannik & Smith Group 2365 S. Haggerty Rd., Suite Canton, MI, 48188	100	Analyzed	03/21/19 03/25/19 03/25/19	Project Order # Project #	13992 Alma, Detroit, MI L1209 DETR0039
		BULK SAM	PLE AN	ALYSIS SUMMARY		
Type Gray,	Client ID AS 15-2 Layer 1 ster on Backerboard Non Detect 0.00% Fibrous, Homogeneous .00% non-asbestos	Layer 2 Skim Coat Type Non Detect White, Fibrous, Homog 100% non-asbesto	0.00% eneous	L1209-36 Layer 3 Drywall Type Non Detect White, Fibrous, Homo 100% non-asbes	0.00% geneous	ocation RM-2
Type Gray,	Client ID AS 15-3 Layer 1 ster on Backerboard Non Detect 0.00% Fibrous, Homogeneous .00% non-asbestos	Layer 2 Skim Coat Type Non Detect White, Fibrous, Homog 100% non-asbesto	0.00% eneous	L1209-37 Layer 3 Drywall Type Non Detect White, Fibrous, Homo 100% non-asbes	0.00% egeneous	ocation RM-4
	Client ID AS 16-1 Layer 1 Fire Brick Non Detect 0.00% Fibrous, Homogeneous .00% non-asbestos		Lab ID	L1209-38	Į.	ocation RM-1
	Client ID AS 16-2 Layer 1 Fire Brick Non Detect 0.00% Fibrous, Homogeneous .00% non-asbestos		Lab ID	L1209-39	l	ocation RM-1
Type Gray,	Client ID AS 17-1 Layer 1 mic Tile Floor Mortar Non Detect 0.00% Fibrous, Homogeneous 00% non-asbestos		Lab ID	L1209-40	l	ocation RM-1
Analytica Analyst: Reviewe	Joshua P L	0/R-93/116 by Polarized I ucchesi Quality Manag er A Claes Laboratory Dir	er	roscopy		Accreditations NIST-NVLAP No. 600212-0

L1209

	& Smith Group, Inc. erty Rd., Suite 100 88188	Received 03/21/19 Analyzed 03/25/19 Reported 03/25/19	Project 13992 Alma, Detroit, MI Order # L1209 Project # DETR0039
	BULK SAI	MPLE ANALYSIS SUMMARY	
Client ID Layer 1 Ceramic Tile Floor Type Non Detect Gray, Fibrous, Home 100% non-asbe	t 0.00% ogeneous	Lab ID L1209-41	Location RM-1
Client ID Layer 1 Ceramic Tile Wall Type Non Detect Gray, Fibrous, Home 100% non-asbe	t 0.00% ogeneous	Lab ID L1209-42	Location RM-4
Client ID Layer 1 Ceramic Tile Wall Type Non Detect Gray, Fibrous, Home 100% non-asbe	t 0.00% ogeneous	Lab ID L1209-43	Location RM-4
Client ID Layer 1 Brown Glue Type Non Detect Brown, Fibrous, Hom 100% non-asbe	t 0.00% nogeneous	Lab ID L1209-44	Location RM-4
Client ID Layer 1 Brown Glue Type Non Detect Brown, Fibrous, Hom 100% non-asbe	t 0.00% nogeneous	Lab ID L1209-45	Location RM-7
Analytical Method: Analyst: Reviewer:	US EPA 600/R-93/116 by Polarize Joshua P Lucchesi Quality Man Christopher A Claes Laboratory I	ager	Accreditations NIST-NVLAP No. 600212-0

L1209

Client	The Mannik & Smith Group, 2365 S. Haggerty Rd., Suite 2 Canton, MI, 48188		03/25/19 Order	•
		BULK SAMPLE AN	ALYSIS SUMMARY	
	Client ID AS 20-1 Layer 1 Aircell Chrysotile 60.00% Fibrous, Homogeneous 10% non-asbestos	Lab ID	L1209-46	Location RM-5
Type Gray, I	Client ID AS 20-2 Layer 1 Aircell Not Analyzed - Fibrous, Homogeneous	Lab ID	L1209-47	Location RM-5
Type Gray, I	Client ID AS 20-3 Layer 1 Aircell Not Analyzed - Fibrous, Homogeneous	Lab ID	L1209-48	Location RM-5
Type Gray, I	Client ID AS 21-1 Layer 1 tone 12" Floor Tile Non Detect 0.00% Fibrous, Homogeneous 00% non-asbestos	Lab ID	L1209-49	Location RM-7
Type Gray, I	Client ID AS 21-2 Layer 1 tone 12" Floor Tile Non Detect 0.00% Fibrous, Homogeneous 00% non-asbestos	Lab ID	L1209-50	Location RM-8
Analytica Analyst: Reviewer	Joshua P Lu	/R-93/116 by Polarized Light Mic cchesi Quality Manager · A Claes Laboratory Director	roscopy	Accreditations NIST-NVLAP No. 600212-0

L1209

Client The Mannik & Smith Group	, Inc. Received	03/21/19	Project	13992 Alma, Detroit, MI				
2365 S. Haggerty Rd., Suite	100 Analyzed	03/25/19	Order#	L1209				
Canton, MI, 48188	Reported	03/25/19	Project #	DETR0039				
BULK SAMPLE ANALYSIS SUMMARY								
Client ID AS 22-1 Layer 1	Lab ID Layer 2	L1209-51	L	ocation RM-7				
Yellow 12" Floor Tile	Mastic							
Type Non Detect 0.00% Yellow, Fibrous, Homogeneous 100% non-asbestos	Type Non Detect 0.00% Tan, Fibrous, Homogeneous 100% non-asbestos							
Client ID AS 22-2 Layer 1 Yellow 12" Floor Tile	Lab ID Layer 2 Mastic	L1209-52	L	ocation RM-8				
Type Non Detect 0.00% Yellow, Fibrous, Homogeneous 100% non-asbestos	Type Non Detect 0.00% Tan, Fibrous, Homogeneous 100% non-asbestos							
Client ID AS 23-1 Layer 1	Layer 2	L1209-53	L	ocation RM-7				
Type Non Detect 0.00% Yellow, Fibrous, Homogeneous 100% non-asbestos	Type Non Detect 0.00% Green, Fibrous, Homogeneous 100% non-asbestos							
Client ID AS 23-2 Layer 1 Yellow Linoleum Type Non Detect 0.00% Yellow, Fibrous, Homogeneous 100% non-asbestos	Lab ID Layer 2 Backing Type Non Detect 0.00% Green, Fibrous, Homogeneous 100% non-asbestos	L1209-54	L	ocation RM-8				
Client ID AS 24-1		L1209-55	L	ocation RM-7				
Layer 1 Swirl Linoleum Type Non Detect 0.00% Tan, Fibrous, Homogeneous 100% non-asbestos	Layer 2 Backing Type Non Detect 0.00% Black, Fibrous, Homogeneous 100% non-asbestos							
Analyst: Joshua P L	0/R-93/116 by Polarized Light Mic ucchesi Quality Manager er A Claes Laboratory Director	roscopy		Accreditations NIST-NVLAP No. 600212-0				

L1209

Client	The Mannik & Smith Group 2365 S. Haggerty Rd., Suite Canton, MI, 48188	100	Received Analyzed Reported	03/25/19		13992 Alma, Detroit, MI L1209 DETR0039
		BULK SAM	1PLE AN	ALYSIS SUMN	ИARY	
	Client ID AS 24-2 Layer 1 Swirl Linoleum Non Detect 0.00% Fibrous, Homogeneous 100% non-asbestos	Layer 2 Backing Type Non Detect Black, Fibrous, Homog 100% non-asbest	0.00% geneous	L1209-56	L	ocation RM-8
	Client ID AS 25-1 Layer 1 Stair Tread Non Detect 0.00% In, Fibrous, Homogeneous 100% non-asbestos		Lab ID	L1209-57	L	ocation RM-8
	Client ID AS 25-2 Layer 1 Stair Tread Non Detect 0.00% In, Fibrous, Homogeneous 100% non-asbestos		Lab ID	L1209-58	L	ocation RM-8
	Client ID AS 26-1 Layer 1 Brown Linoleum Non Detect 0.00% 1, Fibrous, Homogeneous 100% non-asbestos	Layer 2 Backing Type Non Detect Black, Fibrous, Homog 100% non-asbest	0.00% geneous	L1209-59	L	ocation RM-8
	Client ID AS 26-2 Layer 1 Brown Linoleum Non Detect 0.00% In, Fibrous, Homogeneous 100% non-asbestos	Layer 2 Backing Type Non Detect Black, Fibrous, Homog 100% non-asbest	0.00% geneous	L1209-60	L	ocation RM-8
Analytica Analyst: Reviewe	Joshua P L	0/R-93/116 by Polarized ucchesi Quality Mana er A Claes Laboratory Di	ger	roscopy		Accreditations NIST-NVLAP No. 600212-0

L1209

Client The Mannik & Smith Group, Inc. 2365 S. Haggerty Rd., Suite 100 Canton, MI, 48188	Received Analyzed Reported	03/25/19		13992 Alma, Detroit, MI L1209 DETR0039
	BULK SAMPLE AN	ALYSIS SUMMAR	Y	
Client ID AS 27-1 Layer 1 Black 12" Floor Tile Type Non Detect 0.00% Black, Fibrous, Homogeneous 100% non-asbestos	Lab ID	L1209-61	L	ocation RM-12
Client ID AS 27-2 Layer 1 Black 12" Floor Tile Type Non Detect 0.00% Black, Fibrous, Homogeneous 100% non-asbestos	Lab ID	L1209-62	L	ocation RM-12
Client ID AS 28-1 Layer 1 Mud Board Type Non Detect 0.00% Tan, Fibrous, Homogeneous 100% non-asbestos	Lab ID	L1209-63	L	ocation RM-12
Client ID AS 28-2 Layer 1 Mud Board Type Non Detect 0.00% Tan, Fibrous, Homogeneous 100% non-asbestos	Lab ID	L1209-64	L	ocation RM-12
Client ID AS 29-1 Layer 1 Window Rope Type Non Detect 0.00% Tan, Fibrous, Homogeneous 100% non-asbestos	Lab ID	L1209-65	L	ocation RM-12
Analyst: Joshua P Lucch	93/116 by Polarized Light Mic lesi Quality Manager Claes Laboratory Director	roscopy		Accreditations NIST-NVLAP No. 600212-0

L1209

	The Mannik & Smith Group, I 2365 S. Haggerty Rd., Suite 10 Canton, MI, 48188		03/25/19 Orde	
		BULK SAMPLE AN	ALYSIS SUMMARY	
Type Tan, Fil	Client ID AS 29-2 Layer 1 Window Rope Non Detect 0.00% brous, Homogeneous 0% non-asbestos	Lab ID	L1209-66	Location RM-12
Type Gray, Fi	Client ID AS 30-1 Layer 1 ndation Concrete Non Detect 0.00% brous, Homogeneous 0% non-asbestos	Lab ID	L1209-67	Location Basement
Type Gray, Fi	Client ID AS 30-2 Layer 1 Indation Concrete Non Detect 0.00% brous, Homogeneous 0% non-asbestos	Lab ID	L1209-68	Location Basement
Type Gray, Fi	Client ID AS 31-1 Layer 1 Stack Cement Non Detect 0.00% brous, Homogeneous 0% non-asbestos	Lab ID	L1209-69	Location Basement
Type Gray, Fi	Client ID AS 31-2 Layer 1 Stack Cement Non Detect 0.00% brous, Homogeneous 0% non-asbestos	Lab ID	L1209-70	Location Basement
Analytical Analyst: Reviewer:	Joshua P Luc	R-93/116 by Polarized Light Mico chesi Quality Manager A Claes Laboratory Director	roscopy	Accreditations NIST-NVLAP No. 600212-0

United States Department of Commerce National Institute of Standards and Technology



Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 600212-0

Mannik & Smith Group Analytical Laboratories

Canton, MI

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

Asbestos Fiber Analysis

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).

2018-06-21 through 2019-06-30

Effective Dates



For the National Voluntary Laboratory Accreditation Program

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

Mannik & Smith Group Analytical Laboratories

2365 Haggerty Rd South Suite 100 Canton, MI 48188 Christopher A. Claes

Phone: 7343973100 Fax: 7343973131 Email: cclaes@manniksmithgroup.com http://www.manniksmithgroup.com/

ASBESTOS FIBER ANALYSIS

NVLAP LAB CODE 600212-0

Bulk Asbestos Analysis

<u>Code</u>	<u>Description</u>
18/A01	EPA 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples
18/A03	EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials

Chain of Custody

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Client	The Mannik & Smith Group, Inc.	Broup, Inc.	City, State Canton. MI	Zip	Zip Code 48188	*Bulk Samples Only*
Address	2365 S. Haggerty Rd., Suite 100	Suite 100	Contact Ryan Montri	Phone		✓ TTP Point Count
Project	13992 Alma, Detroit, MI	VII Project # DETR0039	Email rmontri@manniksmithgroup.com	hgroup.com Fax	(734) 397-3131	Date Sampled:
Turn Around	ld Hour	24 Hour 48 Hour	✓ 72 Hour	П	Report to 🗸 Email 🗌 Fax	
Lab ID	Customer ID	Material Type	Type	Mate	Material Location	Notes
11209 -1	AS 1-1	Gray Brick Mortar		Exterior		
11209 -2	AS 1-2	Gray Brick Mortar		Exterior		
L1209 -3	AS 2-1	Red Brick Mortar		Exterior		
L1209 -4	AS 2-2	Red Brick Mortar		Exterior		
L1209 -5	AS 3-1	Porch Concrete		Exterior		
11209 -6	AS 3-2	Porch Concrete		Exterior		
11209 -7	AS 4-1	Exterior Caulk		Exterior		
11209 -8	AS 4-2	Exterior Caulk		Exterior		
L1209 -9	AS 5-1	House Window Glaze		Exterior		
11209 -10	AS 5-2	House Window Glaze		Exterior		
L1209 -11	AS 6-1	Expansion Joint		Exterior		
L1209 -12	AS 6-2	Expansion Joint		Exterior		
L1209 -13	AS 7-1	Red Roof Shingle		Roof		
L1209 -14 AS 7-2	AS 7-2	Red Roof Shingle		Roof		
POSSESSION STREET, STR						

Relinquished by OVE IMSG-Date and Time 3/21/2019

Green Roof Shingle

L1209 -15 AS 8-1

Received by WPW Date and Time 3/21/19

Roof

Comments

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	Analytica	Analytical Laboratories	Order Number:	nber:	L1209	
Lab ID	Gustomer ID	Material Type	Дbe	Material Location	Notes	100
11209 -16 AS 8-2		Green Roof Shingle		Roof		
11209 -17	AS'9-1" (5'3 - 51") 5-4 5'4 5.5 5.	Roof Tar		Roof services of the services		
L1209 -18	AS 9-2	Roof Tar		Roof		
L1209 -19 AS 10-1		Red Octagonal Asphalt Siding		Exterior		
L1209 20 AS 10-2		Red Octagonal Asphalt Siding	a de misson	Exterior		
11209 -21	AS 11-1	Black Siding Underlayment		Exterior		
L1209 -22	AS 11-2	Black Siding Underlayment		Exterior		
11209 -23	AS 12-1	Red Square Asphalt Siding		Exterior		
11209 -24	AS 12-2	Red Square Asphalt Siding		Exterior		
11209 -25	AS 13-1	Plaster		RM-1		
L1209 -26 AS 13-2		Plaster		RM-2		
11209 -27	AS 13-3	Plaster		RM-3		
11209 -28	AS 13-4	Plaster	A STATE OF THE PARTY OF THE PAR	RM-7		
11209 -29	AS 13-5	Plaster		RM-12		
11209 -30	-30 AS 13-6	Plaster		RM-14		;
L1209 -31 AS 13-7		Plaster		RM-15		
11209 -32	-32 AS 14-1	Drywall with Joint Compound		RM-4		
11209 -33 AS 14-2		Drywall with Joint Compound	ti e e e e e e e e e e e e e e e e e e e	RM-9		
L1209 -34	-34 AS 14-3	Drywall with Joint Compound		RM-9		
11209 -35	-35 AS 15-1	Plaster on Backerboard		RM-2		
11209 -35	AS 15-2	Plaster on Backerboard		RM-2		
L1209 -37 AS 15-3		Plaster on Backerboard		RM-4		
11209 -38	-38 AS 16-1	Fire Brick		RM-1		
11209 -39	AS 16-2	Fire Brick		RM-1		
11209 -40 AS 17-1		Ceramic Tile Floor Mortar	THE PROPERTY OF THE PROPERTY O	RM-1		

Email: cclaes@manniksmithgroup.com

Fax: (734) 397-3131

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The Mannik & Smith Group

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Analytic	Analytical Laboratories	Order Number		L1209
Lab ID Customer ID	Material Type	De la	Material Location	Notes
L1209 -41 A5 17-2	Ceramic Tile Floor Mortar		RM-1	THE PARTY AND PROPERTY AND PROP
L1209 42 AS 18-1	Ceramic Tile Wall Mortar		RM-4	
L1209 -43 AS 18-2	Ceramic Tile Wall Mortar		RM-4	The state of the s
L1209 -44 AS 19-1	Brown Glue		RM-4	
L1209 -45 AS 19-2	Brown Glue		RM-7	
L1209 46 AS 20-1	Airceil		RM-5	
L1209 -47 AS 20-2	Aircell		RM-5	
L1209 48 AS 20-3	Aircell		RM-5	
[1209 49 AS 21-1	Stone 12" Floor Tile		RM-7	
L1209 -50 AS 21-2	Stone 12" Floor Tile		RM-8	
L12095 -51 AS 22-1	Yellow 12" Floor Tile		RM-7	
L1209 -52 AS 22-2	Yellow 12" Floor Tile		RM-8	
L1209 -53 AS 23-1	Yellow Linoleum		RM-7	THAN THE REAL PROPERTY OF THE
L1209 -54 AS 23-2	Yellow Linoleum		RM-8	
L1209 -55 AS 24-1	Swirl Linoleum		RM-7	
L1209 -56 AS 24-2	Swirl Linoleum		RM-8	
(1209 -57 AS 25-1	Stair Tread		RM-8	
L1209 -58 AS 25-2	Stair Tread		RM-8 Programmer and the second	
L1209 59 AS 26-1	Brown Linoleum		RM-8	
L1209 -60 AS 26-2	Brown Linoleum		RM-8	
L1209 -61 AS 27-1	Black 12" Floor Tile		RM-12	
L1209 -62 AS 27-2	Black 12" Floor Tile		RM-12 more and a second	
L1209 -63 AS 28-1	Mud Board		RM-12	
L1209 -64 AS 28-2	Mud Board		RM-12	
(1209 -65 AS 29-1	Window Rope		RM-12	

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	Analytica	Analytical Laboratories	Order Number:		L1209
Lab ID	Gustomer ID	Material Type	je sa	Material Location	Notes
L1209 -66 AS		Window Rope		RM-12	
11209 -67 AS 30-1		Foundation Concrete		Basement	
L1209 -68 AS	AS 30-2	Foundation Concrete		Basement	
L1209 -69 AS 31-1		Stack Cement		Basement	
L1209 .70 AS 31-2		Stack Cement		Basement	
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INDEX

The following sections are contained within this Hazardous / Regulated Materials Survey Report. Should any of these sections be missing from the printed report, and page numbers not be in sequential order, it shall be considered an incomplete, uncontrolled copy.

- 1) Cover Sheet
- 2) Executive Summary
- 3) Site Drawings
- 4) Photographic Log
- 5) Inventory Sheet #1
- 6) Inventory Sheet #2
- 7) Regulated Materials Survey Report Compendium
- 8) Regulated Materials Survey Limitations
- 9) Analytical Report
- 10) Laboratory NVLAP Certificate
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