

#### CITY OF BATTLE CREEK

#### ADDENDUM # 1 IFB# 2018-054B

**TITLE: Clearing & Demolition of BCU Properties** 

ADDENDUM ISSUED: February 16, 2018

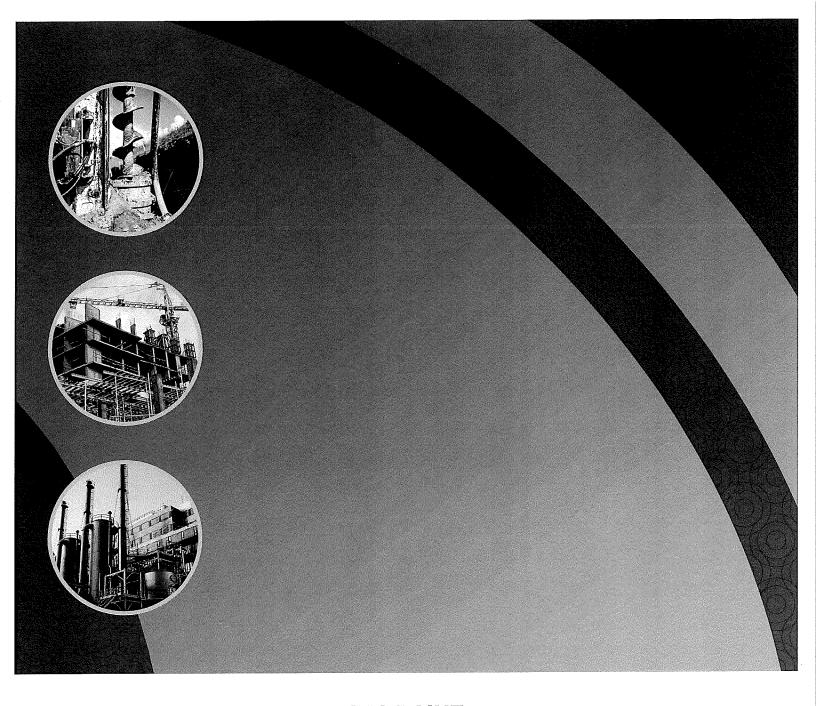
<u>NOTE!</u> City Hall now has Security on the 1<sup>st</sup> floor. Please allow extra time to get through Security when dropping off your bid.

The following changes, additions and deletions have been provided:

Add ~ Attached Asbestos Survey to ATTACHMENT A – DEMOLITION SPECIFICATIONS

Due date and time remain the same.

This addendum must be acknowledged or your bid may be deemed non-responsive.



# ASBESTOS AND LEAD-BEARING PAINT ASSESSMENT REPORT

COMMERCIAL BUILDING 145 NEW TOWN AVENUE BATTLE CREEK, MICHIGAN

SME Project Number 075290.00 October 18, 2016





3301 Tech Circle Drive Kalamazoo, MI 49008-5611

T (269) 323-3555

www.sme-usa.com

October 18, 2016

Mr. Joe Sobieralski Battle Creek TIFA 4950 W. Dickman Road Battle Creek, Michigan 49016

RE: Asbestos and Lead-Bearing Paint Assessment Report

Commercial Building 145 New Town Avenue Battle Creek, Michigan SME Project No. 075290.00

Dear Mr. Sobieralski:

We have completed the Asbestos and Lead-Bearing Paint Assessment of the commercial building located at 145 New Town Avenue, Battle Creek, Michigan, prior to the scheduled demolition of the building.

We appreciate the opportunity to provide these services to Battle Creek TIFA during this phase of the project. Should you have questions concerning this report or require additional services, please contact us.

Sincerely,

SME

Anthony J. Hosbein Engineering Technician

Sara Bala for cosign

Davin K. Ojala Senior Project Consultant

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#### **EXECUTIVE SUMMARY**

We completed an Asbestos Assessment of the residential building located at 145 New Town Avenue, Battle Creek, Michigan, to assist with identification of asbestos-containing materials (ACMs) prior to demolition. The building consisted of a one-story structure with no basement. The building was vacant at the time of our assessment. The findings from our Asbestos Assessment are summarized below.

#### FINDINGS AND CONCLUSIONS

#### **ASBESTOS**

The analytical results for the samples collected indicated that one type of red 9"x9" floor tile and two types of white window glazing contained greater than 1% asbestos and are considered asbestos-containing materials (ACMs).

We observed approximately 75 square feet of the floor tile within the 150 square foot main entrance of the building. At the time of the assessment, the asbestos-containing floor tile (HA2) was damaged and friable, and pieces of the floor tile were scattered throughout the main entrance. We observed approximately 160 square feet of window glazing material (HA7 and HA16) distributed between 29 metal frame windows throughout the building, 4 dissembled windows that were staged in the southern portion of the building, and the perimeter of 6 glass-block window sets located on the east side of the building. At the time of the assessment, the asbestos-containing window glazing materials were weathered and in a friable condition.

Due to their damaged and friable condition, according to the United States Environmental Protection Agency's (USEPA's) National Emission Standards for Hazardous Air Pollutants asbestos regulation (NESHAP, 40 CFR 61 M), the asbestos-containing floor tile, floor tile debris, and window glazing materials are considered regulated asbestos-containing materials (RACMs) that must be removed from the building prior to demolition.

According to the Occupational Safety and Health Administration (OSHA) Asbestos Construction Standard (29 CFR 1926.1101), work involving the asbestos-containing floor tile, floor tile debris, and window glazing materials is considered Class II asbestos work.

According to the USEPA NESHAP asbestos regulation, ACMs that could be expected to be disturbed and become friable must be removed prior to renovation or demolition activities that could be expected to disturb the ACMs. A 10 calendar day notification to the Michigan Department of Licensing and Regulatory Affairs (MDLRA) Asbestos Program is required when greater than 10 linear feet or 15 square feet of ACMs will be removed during a renovation or demolition. If greater than 160 square feet, 260 linear feet, or 35 cubic feet of ACMs will be removed, a 10 working day (14 calendar days) notification to the Michigan Department of Environmental Quality-Air Quality Division (MDEQ-AQD) is required. The *Notification of Intent to Renovate/Demolish* form required by the USEPA NESHAP regulations must be prepared and submitted to the MDEQ-AQD at least 10 working days prior to demolition of a building, regardless of whether or not ACMs are present in the building. The demolition contractor is responsible for submitting the notification prior to demolition.

#### **LEAD-BEARING PAINTS**

Lead was measured at concentrations above laboratory reporting limit in 8 (PS1, PS2, PS4, PS6, PS9, PS10, PS11, and PS13) of the 13 samples collected from the building. The OSHA Lead Exposure in Construction Standard (29 CFR Part 1926.62) is applicable to construction activities when lead is

present regardless of the lead concentrations in the paints. If lead-bearing paints are subjected to demolition forces that may cause paint particles to become airborne, unacceptable levels of lead exposure to on-site personnel and environmental contamination could result. These paints could pose inhalation or ingestion hazards if subjected to torch cutting, welding, and burning or if pulverized and converted to dust.

#### RECOMMENDATIONS

#### **ASBESTOS**

We recommend the asbestos-containing floor tile, floor tile debris, and window glazing materials be removed by a licensed asbestos contractor prior to demolition of the building and in accordance with the OSHA Asbestos Construction Standard. Due the potential friability of the asbestos-containing floor tile, floor tile debris, and window glazing materials, we recommend removal within a negative pressure environment. As an option, the asbestos-containing window glazing material on the metal frame windows could be removed intact utilizing wet methods and without disturbing the glazing, wrapping the window assemblies in polyethylene sheeting and sealing with duct tape, and disposing of entire window assemblies as ACM waste. The intact removal method does not require the construction of a negative pressure enclosure.

We also recommend proper notification to MDLRA and MDEQ-AQD prior to removal of the ACMs and demolition of the building.

#### **LEAD-BEARING PAINTS**

We recommend conducting demolition activities involving painted surfaces in accordance with the requirements of OSHA Lead Exposure in Construction Standard. We also recommend contractor personnel receive a minimum of two hours lead awareness training prior to working at the site.

#### 1. INTRODUCTION

We completed the Asbestos and Lead-Bearing Paint Assessment of the commercial building located at 145 New Town Avenue, Battle Creek, Michigan. We conducted the assessment activities to assist with identification of asbestos-containing materials (ACMs) and lead-bearing paints, prior to demolition of the building. The building consisted of a one-story structure with no basement. The building was vacant at the time of our assessment.

The assessment services provide information to assist in complying with the United States Environmental Protection Agency (USEPA) requirements for inspection of buildings prior to renovation or demolition under the National Emission Standards for Hazardous Air Pollutants (NESHAP 40 CFR Part 61). The assessment services also provide information to assist in complying with the Occupational Safety and Health Administration (OSHA) Asbestos Construction Standard (29 CFR Part 1926.1101), and the OSHA Lead Exposure in Construction Standard (29 CFR Part 1926.62), regarding communication of hazards. The Michigan Occupational Safety and Health Administration (MIOSHA) adopted each of these OSHA standards by reference.

SME staff member Mr. Anthony Hosbein (Accreditation No. A37250), trained in accordance with the USEPA regulations and accredited under the requirements of Michigan Act 440 as an Inspector, conducted the field activities.

#### 2. VISUAL ASSESSMENT AND SAMPLING

Mr. Hosbein conducted a visual assessment to identify suspect ACMs and the potential lead-bearing paints within the building on October 3, 2016.

#### 2.1 SUSPECT ACMs

During the visual assessment, we assessed and estimated quantities of the suspect ACMs within the building prior to sampling. We observed the following 17 types of suspected ACMs:

- One type of asphalt roof shingles
- Two types of floor tiles and associated mastics
- Two types of cove base and associated mastics
- Two types of wallboard systems
- · Two types of ceiling tile
- · Two types of wall mastics
- · Three types of window glazing
- One type of block mortar
- One type of brick mortar
- · One type of glass block mortar

We assigned a unique homogeneous area number to each type of suspect ACM observed during the assessment. A homogeneous area, as defined by the USEPA's Asbestos Hazard Emergency Response Act (AHERA, 40 CFR Part 763), is an area of thermal system insulation (TSI), surfacing material, or miscellaneous material that appears uniform in color and texture. According to USEPA and OSHA regulations, building materials that contain greater than 1% asbestos are considered ACMs.

Following the visual assessment, Mr. Hosbein collected 28 samples from 17 homogenous areas of suspect ACMs in accordance with the USEPA's assessment protocol in the AHERA regulation (40 CFR Part 763), which is also referenced by the OSHA regulations. A summary of descriptions, ACM or non-ACM categorizations, estimated quantities, friability assessments, and locations of the materials sampled is presented in Table 1. A hand-drawn, not-to-scale, field sampling location sketch is included in Appendix A.

We submitted the suspect ACM bulk samples collected during the assessment to International Asbestos Testing Laboratories (IATL), a laboratory accredited by the National Institute of Standards and Technology (NIST) under the requirements of the National Voluntary Laboratory Accreditation Program (NVLAP), for asbestos analysis of the bulk samples via Polarized Light Microscopy (PLM). Samples found to contain less than 10% asbestos via the visual estimation method of PLM were further verified via the "Point Count Method" as defined by the USEPA AHERA regulation (40 CFR Part 763). The Chain-of-Custody forms and certificates of analysis for the suspect asbestos samples are included in Appendix B of this report.

#### 2.2 LEAD-BEARING PAINTS

We identified the painted interior and exterior surfaces of the building and collected 13 chip samples of paints suspected to be lead-bearing coatings. We submitted the paint-chip samples to IATL, which is accredited by the American Industrial Hygiene Association (AIHA) Environmental Lead Laboratory Accreditation Program (ELLAP), for lead and analysis of the paint chip samples via atomic absorption spectrophotometry (AAS). A summary of the descriptions of lead-bearing paints, sample locations, as well as lead content of the paint chip samples are presented in Table 2. The Chain-of-Custody forms and analytical data for the paint chip samples are included in Appendix B of this report.

#### 3. ANALYTICAL RESULTS AND RECOMMENDATIONS

#### 3.1 ASBESTOS

As inventoried, the following ACMs were identified in the building:

- One type of red, 9"x9" floor (HA2)
- Two types of window glazing material (HA7 and HA16)

#### 3.1.1 FLOOR TILE

The PLM analytical data reported by IATL indicated samples collected from the red, 9"x9" floor tile (HA2) contained greater than 1% asbestos and, as such, the floor tile is considered an ACM. No asbestos was detected in the samples of the black mastic associated with the asbestos-containing floor tile. We observed approximately 75 square feet of the asbestos-containing floor tile intact and adhered to the concrete floor adjacent the main entrance of the building. We noted that the intact areas of the asbestos-containing floor tile were brittle, and approximately an additional 75 square feet of damaged floor tile debris was located in the main entrance area.

According to the USEPA NESHAP asbestos regulation (NESHAP, 40 CFR Part 61), friable and nonfriable ACMs that are likely to become friable when subjected to demolition forces, must be removed from a building prior to demolition. Due to the brittle, damaged, and friable condition of the floor tile, according to the USEPA NESHAP asbestos regulation, the floor tile is considered a Regulated Asbestos Containing Material (RACM) that must be removed prior to demolition of the building.

According to the OSHA Asbestos Construction Standard (29 CFR 1926.1101), Class II asbestos work is defined as activities involving removal of ACM that is not thermal system insulation or surfacing material. This includes, but is not limited to, removal of asbestos-containing flooring materials, construction mastics, caulks, glazing materials, wallboard systems, and roofing materials. According to the Michigan Department of Licensing and Regulatory Affairs (MDLRA) Asbestos Program, the regulatory agency that administers the OSHA asbestos program in Michigan, asbestos-containing vinyl sheet flooring and other ACMs governed by Class II asbestos work requirements that are removed non-intact by mechanical methods must be removed within a negative pressure environment.

We recommend the asbestos-containing floor tile and floor tile debris be removed by a licensed asbestos contractor in accordance with the OSHA Class II asbestos work requirements prior to demolition of the building. Due to the damaged and friable condition of the floor tile, we recommend removal within a negative pressure environment.

#### 3.1.2 WINDOW GLAZING

IATL indicated samples collected from both types of the window glazing (HA7 and HA16) also contained greater than 1% asbestos and, as such, are considered ACMs. We observed a total of approximately 160 square feet of asbestos-containing window glazing. We noted approximately 125 square feet of 1 type of asbestos-containing window glazing material (HA7) on 29 metal frame windows located throughout the building and approximately 30 square feet on four metal pane windows that had been removed and staged in the southern portion of the building. We also observed approximately 5 square feet of a second type of window glazing material (HA16) around the perimeter of 6 glass-block window sections located on the east wall of the building.

At the time of the assessment, both types of the asbestos-containing window glazing were weathered and in a friable condition, and as such, are also considered RACMs according to the USEPA's NESHAP asbestos regulation and must be removed from the building prior to demolition. Similar to the asbestos-containing floor tile, removal of the asbestos-containing window glazing materials is considered Class II asbestos work.

We recommend removal of the asbestos-containing window glazing materials by a licensed asbestos contractor, and in accordance with the OSHA Asbestos Construction Standard, prior to demolition of the building. Due to the damaged and friable condition of the window glazing materials present on the building, we recommend removal within a negative pressure environment. As an option, the asbestos-containing window glazing material on the metal frame windows could be removed intact utilizing wet methods and without disturbing the glazing, wrapping the window assemblies in polyethylene sheeting and sealing with duct tape, and disposing of entire window assemblies as ACM waste. The intact removal method does not require the construction of a negative pressure enclosure.

# 3.2 REGULATORY INFORMATION REGARDING ASBESTOS REMOVAL AND DEMOLITION

According to the MDLRA Asbestos Program, ACMs governed by Class II asbestos work requirements need not be removed from a building prior to demolition unless they are friable or likely to become friable. However, if a building contains one or more of these ACMs during demolition, the demolition workers are required to have eight hours of asbestos training with specific instruction for each asbestos material present during demolition. An individual who has completed a 40-hour asbestos supervisor training course must also supervise the work. Specific work practices, including the use of respirators and personal protective equipment, and restrictions related to the material(s) would apply. Personal exposure monitoring of the personnel on site would be required during demolition. In addition, hazard communication requirements contained in the OSHA asbestos standard related to multiple employer work sites would apply.

According to 40 CFR Part 61, ACMs that could be expected to be disturbed and become friable must be removed prior to renovation or demolition activities that could be expected to disturb the ACMs. A 10 calendar day notification to the MDLRA Asbestos Program is required when greater than 10 linear feet or 15 square feet of ACMs will be removed during a renovation or demolition. If greater than 160 square feet, 260 linear feet, or 35 cubic feet of ACMs will be removed, a 10 working day (14 calendar days) notification to the Michigan Department of Environmental Quality-Air Quality Division (MDEQ-AQD) is required. The *Notification of Intent to Renovate/Demolish* form can be used for both the MDLRA and the MDEQ-AQD notifications. This form can be submitted on-line or downloaded from the MDEQ's website.<sup>1</sup>

Please note, the *Notification of Intent to Renovate/Demolish* form required by the USEPA NESHAP regulations must be prepared and submitted to the MDEQ-AQD at least 10 working days prior to demolition of a building, regardless of whether or not ACMs are present in the building. The demolition contractor is responsible for submitting the notification prior to demolition.

A licensed asbestos removal contractor must perform asbestos removal work with workers accredited under the requirements of Michigan Act 440. USEPA regulations (40 CFR 763) require asbestos abatement project design for schools, public buildings, and commercial buildings by a Project Designer trained and accredited in accordance with the USEPA requirements. We recommend asbestos abatement design by an accredited Project Designer and monitoring asbestos removal work or disturbance with air sampling, visual verification, and clearance air monitoring performed by an

Notification of Intent to Renovate/Demolish Form: http://www.michigan.gov/deg/0,1607,7-135-3310 4106-11856--,00.html

independent third party (such as SME). All ACM waste generated during abatement activities should be placed in doubled, appropriately labeled waste bags, affixed with a waste generator location label, and disposed in a Type II landfill. All ACM waste generated by asbestos abatement activities and removed from the site should be inventoried on a Waste Shipment Record that complies with NESHAP regulations, 40 CFR Part 61.

In a June 7, 2004, memorandum, the Michigan Occupational Safety and Health Administration (MIOSHA) indicated all construction companies are required to provide annual two-hour asbestos awareness training for their employees who may contact, but do not disturb, asbestos-containing materials. Because the potential exists for contractor personnel to encounter additional suspect ACMs during demolition, we recommend contractor personnel working at the site receive a minimum of two hours asbestos awareness training prior to working at the site.

Paragraph (k) of the OSHA Asbestos Construction Standard (29 CFR Part 1926.1101) and paragraph (j) of the OSHA Asbestos Standard for General Industry (29 CFR Part 1910.1001) require that building owners communicate to their employees, tenants, and building contractors information regarding the presence, quantity, and location of ACMs in a building. We recommend notification of the presence, quantity, and location of ACMs and communication of the hazards associated with them in accordance with OSHA regulations.

#### 3.3 LEAD-BEARING PAINTS

Lead was measured at concentrations above laboratory reporting limit in 8 (PS1, PS2, PS4, PS6, PS9, PS10, PS11, and PS13) of the 13 samples collected from the building. The OSHA Lead Exposure in Construction Standard (29 CFR Part 1926.62) is applicable to construction activities when lead is present regardless of the lead concentrations in the paints. If lead-bearing paints are subjected to demolition forces that may cause paint particles to become airborne, unacceptable levels of lead exposure to on-site personnel and environmental contamination could result. These paints could pose inhalation or ingestion hazards if subjected to torch cutting, welding, and burning or if pulverized and converted to dust.

If lead-bearing coatings or paints are to be removed by manual demolition of structural surfaces, manual scraping, manual sanding, heat gun applications, power tool cleaning, torch cutting, or welding, then the employees must be trained, and exposures must be assessed, in accordance with the OSHA Lead Exposure in Construction Standard. When lead is present at any concentration, employers are required to assess their workers' exposures to airborne lead dust/fumes. The employer must perform an employee exposure assessment to determine if any employee is exposed at or above the action level of 30 micrograms of lead per cubic meter (µg/m³) or 2.5 µg/m³ cadmium, of air sampled calculated as a time-weighted average (TWA). This exposure assessment is typically performed by conducting air monitoring in the workers' breathing zones during activities that would disturb surfaces containing lead or cadmium. In lieu of air monitoring, OSHA allows employers to use other objective data to assess their workers' exposures. Until an exposure assessment is completed and results demonstrate that employee exposures are consistently below the action level, the employer must provide interim protection in accordance with the standard.

We recommend conducting demolition activities involving painted surfaces in accordance with the requirements of OSHA Lead Exposure in Construction Standard. We also recommend contractor personnel receive a minimum of two hours lead awareness training prior to working at the site.

#### 4. LIMITATIONS

Please note, we performed a destructive assessment within the building; however, we did not assess every wall cavity and ceiling space within the building or demolish floor surfaces. Additional ACMs may exist in interstitial spaces that were not assessed. We recommend selective demolition to expose concealed spaces, such as these, prior to initiation of full-scale demolition activities, ideally during the abatement phase of the project, so concealed ACMs can be removed with minimal project delay.

The estimated quantities included in this report are "Order of Magnitude" estimates. The estimated quantities and other information in this report should not be used as an exclusive source of information for bid formulation or for notification to regulatory agencies. It should be noted that laboratory descriptions of materials analyzed by the PLM method for asbestos content were based upon the microscopist's perceptions of bulk samples that were pulverized and prepared with dispersion oils for PLM analysis. Due to the preparation of the sampled materials and the minute level of observation, the descriptions on the Certificates of Analysis may not match the sample descriptions recorded by SME's project team in the field. Our sample descriptions and locations should be used to identify materials that were sampled and our sample numbers should be used to correlate analytical results for the sampled materials.

#### 5. OPINION OF PROBABLE COSTS FOR ASBESTOS REMOVAL

Based on the results of our assessment, at the request of the client, we developed the following opinion of probable costs relative to abatement of the identified ACMs in the building:

Material	Estimated Quantity	Range of Costs
Floor Tile/Debris Removal	150 square feet	\$200 - \$400
Window Glazing Removal	130 square feet (35 windows)	\$7,000 - \$14,000
Intact Window Removal	5 square feet (4 windows)	<sup>\$800 - \$1,600</sup>
Subtotal		\$8,000 - \$16,000
15% contingency for unknown materials		\$1,200 - \$3,200
Subtotal with contingency		\$9,200 - \$19,200
20% allowance for consulting		\$1,850 - \$3,800
Rounded Total		\$11,000 - \$23,000

Please note, we prepared this opinion of probable costs as a general reference for the information of Battle Creek TIFA relative to abatement of ACMs noted during our assessment of the building. It was not prepared by a cost estimator for an abatement contractor and may not accurately reflect actual costs likely to be incurred. It should not be relied upon by any other party without expressed written permission of Battle Creek TIFA and SME. For questions regarding this opinion of probable costs, please contact us.

#### **6. GENERAL COMMENTS**

We based the conclusions and recommendations submitted in this report upon the scope of services noted herein. In the process of obtaining the field information presented in this report, SME's project team followed procedures that represent reasonable and accepted industrial hygiene practices and principles, in a manner consistent with that level of care and skill ordinarily exercised by members of this profession currently practicing under similar conditions. We understand Battle Creek TIFA will rely upon the professional opinions and representations contained in this report. However, the information and opinions contained within this report are not to be construed as a warranty of the conditions of this site in any way, implied or explicit. No other party may rely upon our opinions, conclusions, or reports unless we have agreed to such reliance in writing.

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#### **TABLES**

TABLE 1: ASBESTOS BULK SAMPLING RESULTS TABLE 2: PAINT CHIP SAMPLING RESULTS TABLE

#### TABLE 1

### ASBESTOS BULK SAMPLING RESULTS 145 New Town Avenue, Battle Creek, MICHIGAN SME Project Number: 075290.00

HA#	MATERIAL DESCRIPTION	ACM/ NON-ACM	ESTIMATED QUANTITY*	FRIABLE/ NONFRIABLE	LOCATION
1	Floor Tile 12"x12", stone speckle pattern, off white	NON-ACM	190 sq. ft.	Nonfriable	Office 1 North and South Restrooms
	Black mastic		75 ou ft (into at)		
2	Floor Tile 9"x9", red	ACM	75 sq. ft. (intact) 75 sq. ft. (damaged and	Nonfriable	Main entrance
	Black mastic	NON-ACM	present as debris)		
3	Cove Base 3", brown with wood pattern Light Brown mastic	NON-ACM	2 sq. ft.	Nonfriable	South Restroom East wall
4	Cove base 4" Dark Brown Off white mastic	NON-ACM	16 sq. ft.	Nonfriable	Main entrance and North wall of South half of building
5	Mastic, Light brown	NON-ACM	115 sq. ft.	Nonfriable	South half of building, South and East Walls North half of building, East wall
6	Mastic, Black	NON- ACM	25 sq. ft.	Nonfriable	South half of building, South and East walls
7	Window Glazing, interior and exterior	ACM	125 sq. ft. (29 intact windows) 30 sq. ft. (4 removed windows)	Nonfriable	Throughout building  *The 4 removed  windows were located on the floor in the southern portion of the building
8	Ceiling Tile 2'x4', pinhole worm track, white	NON- ACM	40 sq. ft.	Friable	Damaged pile at the doorway of the South Restroom
9	Wallboard walls, unfinished	NON - ACM	450 sq. ft.	Nonfriable	Damaged piles at various location in the South half of the building

#### TABLE 1

#### ASBESTOS BULK SAMPLING RESULTS 145 New Town Avenue, Battle Creek, MICHIGAN SME Project Number: 075290.00

НА#	MATERIAL DESCRIPTION	ACM/ NON-ACM	ESTIMATED QUANTITY*	FRIABLE/ NONFRIABLE	LOCATION
10	Ceiling Tile 2'x4', pinhole, white	NON - ACM	160 sq. ft.	Friable	Unused stack in Mechanical room and damaged pile in Mechanical room
11	Wallboard walls, unfinished	NON - ACM	30 sq. ft.	Nonfriable	Doorway in Mechanical room
12	Block mortar, gray	NON - ACM	NQ	Nonfriable	Building
13	Brick mortar, gray	NON - ACM	NQ	Nonfriable	Southwest corner of Mechanical room
14	Window glazing, white	NON - ACM	1 sq. ft.	Nonfriable	Entry door, Southeast corner of building
15	Glass block mortar	NON - ACM	NQ	Nonfriable	East wall of building
16	Window glazing, white	ACM	(6) 5'x12' sections 204 linear ft. 5 sq. ft.	Nonfriable	East wall of building around glass block window sections
17	Asphalt shingle roof system	NON-ACM	45 sq. ft.	Nonfriable	Exterior roof
17	Black Fibrous Felt Roof covering	NON-ACM	40 Sq. 1t.	Hommasic	Extensi 1001

Notes:

HA = Homogenous Area.

ACM = Asbestos Containing Material.

Friable = Material that can be crumbled or reduced to powder by hand pressure.

NQ = Not Quantified

<sup>\*=</sup> Estimate of visible, accessible materials. Additional quantities and materials may be present in concealed spaces not assessed.

#### TABLE 2

PAINT CHIP SAMPLING RESULTS 145 New Town Avenue, Battle Creek, Michigan SME Project Number: 075290.00

HA#	MATERIAL DESCRIPTION/ LOCATION	LEAD (% by weight)
PS1	Gray (exterior): Eastern building, North half of building, concrete masonry unit (CMU) block substrate.	0.024
PS2	Green (exterior): 2 <sup>nd</sup> layer beneath gray and yellow exterior paints, CMU block substrate.	0.083
PS3	Yellow (exterior): South half of building, CMU block substrate.	<0.0064
PS4	Brown (exterior): Doors and door frames, soffit and fascia boards, metal and wooden substrate.	0.27
PS5	Beige (exterior): Pump house walls Northeast corner of building, CMU block substrate.	<0.0058
PS6	White (interior): Throughout interior of building, CMU block substrate.	0.078
PS7	Off white (interior): Throughout interior of building, CMU block substrate.	<0.0058
PS8	Light Brown (interior): Throughout interior of building, CMU block substrate.	<0.0066
PS9	Bright yellow (interior): Various individual CMU blocks along the east wall of building, CMU block substrate.	0.027
PS10	Dark Green (interior): Various individual CMU blocks along the east wall of building, CMU block substrate.	0.030
PS11	Orange (interior): Various individual CMU blocks along the east wall of building, CMU block substrate	0.030
PS12	Pink (interior): Various individual CMU blocks along the east wall of building, CMU block substrate	<0.0085
PS13	Gray (interior) Door frame in the main entrance of the building, metal substrate.	0.073

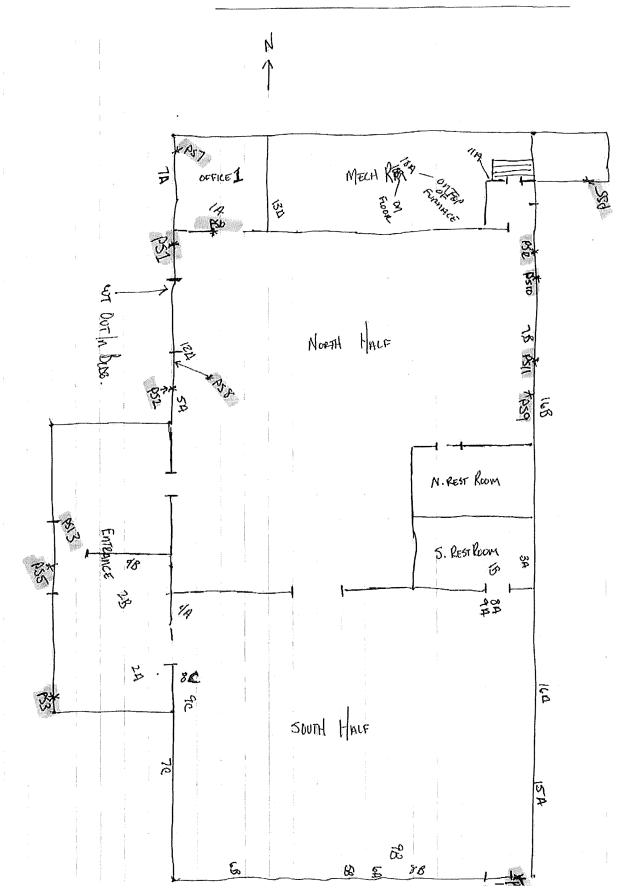
# **APPENDIX A**FIELD SAMPLING LOCATION SKETCH

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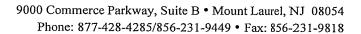


PAINT Samples 1-5 on CMV BLOCK

### **APPENDIX B**

ASBESTOS SAMPLE CHAIN OF CUSTODY FORMS AND CERTIFICATES OF ANALYSIS

075290.00+101816+ALBPAR





# **Chain of Custody**

-Bulk Asbestos -

		13003103	
Contact Informa			
Client Company:	SME	Project Number:	075290.00
Office Address:	3301 TECH CIRCLE DRIVE	Project Name:	145 NEWTOWN
City, State, Zip:	KALAMAZOO, MICHIGAN	<b>Primary Contact:</b>	DAVIN OJALA
Fax Number:	269-323-3555	Office Phone:	269-323-3555
Email Address:	OJALA@sme-usa.com	Cell Phone:	269-207-0009
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☐ Analyze and l☐ Report Comp☐ Report All La☐ Only Analyze	P 198.1 ts ts *	AUP: by I  AUP: by N  PLM: NOB vi  PLM: Fria  If <1% by  If <1% by  PLM: Non-Bu  Soil or Ve	ble via EPA 600 2.3 PLM, to TEM via 198.4 * PLM, Hold for Instructions  tilding Material*,*** (Dust, Wipe, Tape) rmiculite Analysis*
* Additional ch	narge and turnaround may be required ** Alter	rnative Method (ex: EPA 600/R-04	1/004) may be recommended by Laboratory
	quested Date: 10/10/16 3:30PM  Specific date / time  0 Day 5 Day 3 Day 2 Day Dusiness day unless otherwise specified. ** M		5 Hour** □ RUSH**
Chain of Custo Relinquished (Name/ Received (Name / iA Sample Login (Name Analysis(Name(s) / ia QA/QC Review (Nama Archived / Released:	Organization): ANTHONY HOSBEIN/SME // TL): // iATL): ///////////////// ATL): ////////////////////////////////////	Date: 10-3-16  Date: Dat	Time 5:00PM Time Time: Time: Time: Time: Time: Time: Time:



9000 Commerce Parkway, Suite B • Mount Laurel, NJ 08054 Phone: 877-428-4285/856-231-9449 • Fax: 856-231-9818

# **Chain of Custody**

-Bulk Asbestos -				
Contact Informa	ation_			
Client Company:	SME	Project Number:	075290.00	
Office Address:	3301 TECH CIRCLE DRIVE	Project Name:	145 NEW TOWN AVENUE	
City, State, Zip:	PLYMOUTH, MICHIGAN	<b>Primary Contact:</b>	DAVIN OJALA	
Fax Number:	269-323-3553	Office Phone:	269-323-3555	
Email Address:	ojala@sme-usa.com	Cell Phone:	269-207-0009	
PLM: Bulk Asbe TEM: Bulk Asbe PC: via ELAI PC: via ELAI PC: 400 Poin PC: 1600 Poin PC: 1600 Poi Report Comp Report All La Only Analyze Special Instruction PLEASE INCLUDE	stos Building Materials EPA 600 R-93/1 stos Building Materials EPA 600 M-4/82 stos Building Materials NIOSH 9002, 19 stos Building Materials NYSDOH-ELAI stos 8 store 198.1 stos 8 store 198.1 stos 8 store 198.1 stos 8 store Multi-Layered Samples Report All Separable Layers per EPA 60 sosite for Drywall Systems per NESHAP yers and Composite Where Applicable and Report Specifically Noted Layer 185; REFER TO ATTACHED SME CHEMITH SAMPLES WITH SAME JOB	2-020, 1982  P 198.1, 2002  P 198.6, 2010  P 198.4, 2009  PLM: Analyze AUP: by F AUP: by N PLM: NOB vi PLM: Fria If <1% by If <1% by CARB 433  HAIN OF CUSTODY FOR	ble via EPA 600 2.3 PLM, to TEM via 198.4 * PLM, Hold for Instructions  tilding Material*** (Dust, Wipe, Tape)  rmiculite Analysis*  ANALYSIS INSTRUCTIONS	
□ 1	quested Date: 10/10/16 3:30PM Specific date / time  O Day 5 Day 3 Day 2 Day  ousiness day unless otherwise specified. ** M		Hour** RUSH**	
Chain of Custo Relinquished (Name/ Received (Name / iA Sample Login (Name Analysis(Name(s) / i. QA/QC Review (Nama Archived / Released:	Organization): ANTHINY HOSBAN (3 TL): // iATL): ATL): ne / iATL):  Organization): ANTHINY HOSBAN (3  ON THE NOTION (5)  ORGANIZATION (5)	Date: 10//16 Date: Date: Date: 10.5.16 Date: 10.5.16 Date: 10.5.16	Time: SOMMY E Time: OCT 5 2016 Time: Time:	



3301 Tech Circle Drive Kalamazoo, MI, 49008

Phone

269-323-3555

FAX

269-323-3553

CLIENT NAME: Battle Creek TIFA

SITE ADDRESS: 145 New Town Avenue, Battle Creek, MI

BULK SAMPLE ANALYSIS REQUESTED: EPA 600R-93/116, 1993 with PLM Point Counting PC: 400 points

Note: Multiple samples of each homogeneous area may have been collected. If asbestos is detected at greater than 1% in first sample, DO NOT analyze subsequent samples from that area with exception of plaster and wallboard system samples. Please analyze all plaster and wallboard system samples, and provide individual layer analysis for each sample. If asbestos is detected in an individual layer of a wallboard system sample, please provide composite analysis. Please provide mastic analysis for floor tile samples. Treat mastic as a separate homogeneous area. For each thermal system insulation sample, please analyze the insulation portion(s) of each sample first. If asbestos is detected at 1% or greater do not analyze the insulation covering layer of the sample. Please provide the insulation covering analysis for thermal system insulation samples where asbestos is not detected in insulation layer(s) or where asbestos is detected at less than 1%.

AREA #	SAMPLE #	MATERIAL DESCRIPTION	SAMPLE LOCATION	#	et contact of the con
HA1	A	12x12 Floor Tile, Off White, Stone Speckle Pattern with associated Mastic, Black	Office #1	614	6535
HA1	В	12x12 Floor Tile, Off White, Stone Speckle Pattern with associated Mastic, Black	South Restroom	6204	6536
HA2	Α .	9x9 Floor Tile, Red with associated Mastic, Black	Main Entrance	60	46537
HA2	В	9x9 Floor Tile, Red with associated Mastic, Black	Main Entrance	60	46538
HA3	Α .	Cove Base 3", Brown wood patterned with associated mastic, Light Brown	South Restroom .	60	46539
HA4	A	Cove Base 4", Dark Brown with associated mastic, Light Brown	Northwest Corner of South Half of Building	<sup>6</sup> 6(	46540
HA4	В	Cove Base 4", Dark Brown with associated mastic, Light Brown	Northeast Corner of South Half of Entrance	76	046541
HA5	A	Mastic, Light Brown adhered to CMU block wall	West wall of North Half of Building,	8	046542
HA5	В	Mastic, Light Brown adhered to CMU block wall	East wall of South Half Building	9	6046543
HA6	A	Mastic, Black adhered to CMU block wall	South wall of South Half of Building	10	6046544
HA6	В	Mastic, Black adhered to CMU block wall	South wall of South Half of Building	11	604654
HA7	A	Window Glazing, White	Northwest Corner of Building, Exterior	12	60 <b>46546</b>
HA7	В	Window Glazing, White	East wall North half of building, Interior	13	604654
HA7	C	Window Glazing, White	Southwest corner of building	14	6946548
HA8	Α	2x4 Ceiling Tile, white, pinhole, wormtrack,	Doorway to South Restroom(Damaged)	15	6946549
HA9	A	Wallboard Walls (Unfinished)	Doorway to South Restroom (Damaged, In a Pile)	16	60 <b>46</b> 550

RELINQUISHED BY:	Anthony Hosbein	DATE:	10-3-16	TIME:	5:00pm
RECEIVED BY:		DATE:		TIME:	

Please provide 5-day turnaround, emailed to Davin Ojala at ojala@sme-usa.com.

SME USE ONLY Date Sampled: 10-3-16



3301 Tech Circle Drive Kalamazoo, MI, 49008

Phone FAX

269-323-3555 269-323-3553

CLIENT NAME: Battle Creek TIFA

SITE ADDRESS: 145 New Town Avenue, Battle Creek, MI

BULK SAMPLE ANALYSIS REQUESTED: EPA 600R-93/116, 1993 with PLM Point Counting PC: 400 points

Note: Multiple samples of each homogeneous area may have been collected. If asbestos is detected at greater than 1% in first sample, DO NOT analyze subsequent samples from that area with exception of plaster and wallboard system samples. Please analyze all plaster and wallboard system samples, and provide individual layer analysis for each sample. If asbestos is detected in an individual layer of a wallboard system sample, please provide composite analysis. Please provide mastic analysis for floor tile samples. Treat mastic as a separate homogeneous area. For each thermal system insulation sample, please analyze the insulation portion(s) of each sample first. If asbestos is detected at 1% or greater do not analyze the insulation covering layer of the sample. Please provide the insulation covering analysis for thermal system insulation samples where asbestos is not detected in insulation layer(s) or where asbestos is detected at less than 1%.

AREA #	SAMPLE #	MATERIAL DESCRIPTION	SAMPLE LOCATION	#	
HA9	В	Wallboard Walls (Unfinished)	Along South wall of South Half of Building (Damaged, In a Pile)	17 {	04655
HA9	С	Wallboard Walls (Unfinished)	East Wall of South Half (Damaged, In a Pile)	18	60 <b>46</b> 55
HA10	A	2x4 Ceiling Tile, white, pinhole	Mechanical Room, Stacked on Furnace	19	60 <b>465</b> 5
HA10	В	2x4 Ceiling Tile, white, pinhole	Mechanical Room, Damaged Pile on Floor	20	60465
HA11	A	Wallboard Walls(Unfinished)	Doorway in Mechanical Room	21	1
HA12	A	Block Mortar, grey	Northwest Corner of Building	22	56 <b>88</b> 663
HA13	A	Brick Mortar, grey	Northwest Corner of Mechanical Room	23	60 <b>465</b> 5
HA14	A	Window Glazing, white	Entry Door Window, Southeast Corner of Building	24	604655
HA15	A	Glass Block Mortar, grey	East Wall of Building .	25	DARCEE
HA16	Α `	Window Glazing, white	North Half of East Wall of Building (around glass block windows)	26	604655 604650
HA16	В	Window Glazing, white	South Half of East Wall of Building (around glass block windows)	27	604656
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RELINQUISHED BY:	Anthony Hosbein	177 DATE:	10-3-16	TIME:	5:00pm
RECEIVED BY:		DATE:_		TIME:_	

Please provide 5-day turnaround, emailed to Davin Ojala at ojala@sme-usa.com.

SME USE ONLY Date Sampled: 10-3-16

SME Project #: 075290.00



3301 Tech Circle Drive Kalamazoo, MI, 49008 Phone 269-323-3555

FAX

269-323-3553

CLIENT NAME: Battle Creek TIFA

SITE ADDRESS: 145 New Town Avenue, Battle Creek, MI

BULK SAMPLE ANALYSIS REQUESTED: EPA 600R-93/116, 1993 with PLM Point Counting PC: 400 points

Note: Multiple samples of each homogeneous area may have been collected. If asbestos is detected at greater than 1% in first sample, DO NOT analyze subsequent samples from that area with exception of plaster and wallboard system samples. Please analyze all plaster and wallboard system samples, and provide individual layer analysis for each sample. If asbestos is detected in an individual layer of a wallboard system sample, please provide composite analysis. Please provide mastic analysis for floor tile samples. Treat mastic as a separate homogeneous area. For each thermal system insulation sample, please analyze the insulation portion(s) of each sample first. If asbestos is detected at 1% or greater do not analyze the insulation covering layer of the sample. Please provide the insulation covering analysis for thermal system insulation samples where asbestos is not detected in insulation layer(s) or where asbestos is detected at less than 1%.

AREĀ #	SAMPLE #		SAMPLE LOCATION	ļ.#
HA17	A	Roofing Material, Asphalt Shingle with Tar Paper, Black	Southeast Portion of Building.	1
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<u></u>				30

RELINQUISHED BY:	Anthony Hosbein	DATE:	10-4-16	TIME:	5:00pm
RECEIVED BY:		DATE:_		TIME:_	

Please provide 5-day turnaround, emailed to Davin Ojala at ojala@sme-usa.com.

SME USE ONLY Date Sampled: 10-4-16

SME Project #: 075290.00



#### CERTIFICATE OF ANALYSIS

Soil & Materials Engineers-995 Client:

3301 Tech Circle Drive

Kalamazoo MI 49008

Client: SOI995 Report Date: 10/6/2016

Report No .:

521004 - PLM

Project:

145 New Town Ave, Battle Creek MI

Project No.:

075290.00

#### PLM BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 6046535

Client No.: HA1A

Percent Asbestos:

None Detected

Lab No.: 6046535(L2) Client No.: HA1A

Percent Asbestos:

None Detected

Lab No.: 6046536

Client No.: HA1B

Facility:

None Detected

**Description:** Off-White Floor Tile; 12x12

Facility:

Percent Asbestos: None Detected

Lab No.: 6046536(L2)

Client No.: HA1B

Percent Asbestos: None Detected

Lab No.: 6046537

Client No.: HA2A

Percent Asbestos: PC 3.4 Chrysotile

Lab No.: 6046537(L2) Client No.: HA2A

Percent Asbestos: None Detected **Description:** Off-White Floor Tile; 12x12

Facility:

Percent Non-Asbestos Fibrous Material:

None Detected

Description: Black Mastic

Percent Non-Asbestos Fibrous Material:

Percent Non-Asbestos Fibrous Material: None Detected

**Description:** Black Mastic

Facility:

Percent Non-Asbestos Fibrous Material:

None Detected

**Description:** Brown Floor Tile; 9x9

Facility:

Percent Non-Asbestos Fibrous Material:

None Detected

**Description:** Black Mastic

Facility:

Percent Non-Asbestos Fibrous Material:

None Detected

Location: Office #1

Percent Non-Fibrous Material:

Location: Office #1

Percent Non-Fibrous Material:

Location: South Restroom

Percent Non-Fibrous Material: 100

Location: South Restroom

Percent Non-Fibrous Material:

Location: Main Entrance

Percent Non-Fibrous Material: 96.6

Location: Main Entrance

Percent Non-Fibrous Material:

Analytical Method -US EPA 600, R93-116. Please refer to the Appendix of this report for further information regarding your analysis.

Date Received:

10/4/2016

Date Analyzed:

10/06/2016

land 5 mod TI

Signature: Analyst:

Vane Smith

Approved By:

Frank E. Ehrenfeld, III Laboratory Director



### CERTIFICATE OF ANALYSIS

Client: Soil & Materials Engineers-995

3301 Tech Circle Drive

Kalamazoo MI

SOI995 Client:

Report Date:

10/6/2016

Report No.:

521004 - PLM

Project:

145 New Town Ave, Battle Creek MI

Project No.:

075290.00

#### PLM BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 6046538

**Description:** Black Mastic

Location: Main Entrance

Client No.: HA2B Percent Asbestos:

Facility:

Percent Non-Asbestos Fibrous Material:

Percent Non-Fibrous Material:

None Detected

Lab No.: 6046539

None Detected

Description: Brown Rubber

Location: South Restroom

Client No.: HA3A

Facility:

Facility:

Percent Asbestos: None Detected Percent Non-Asbestos Fibrous Material:

Percent Non-Fibrous Material:

None Detected

100

**Lab No.:** 6046539(L2)

Client No.: HA3A

**Description:** Brown Mastic

Location: South Restroom

Percent Asbestos: None Detected

Percent Non-Asbestos Fibrous Material:

Percent Non-Fibrous Material:

None Detected

Lab No.: 6046540

Percent Asbestos:

None Detected

Client No.: HA4A

Description: Dk.Brown Rubber Facility:

Percent Non-Fibrous Material: Percent Non-Asbestos Fibrous Material:

None Detected

Location: NW Corner Of South Half Of Building

Location: NW Corner Of South Half Of Building

Lab No.: 6046540(L2) Client No.: HA4A

Facility:

Percent Non-Asbestos Fibrous Material:

None Detected

Percent Non-Fibrous Material:

None Detected Lab No.: 6046541

Percent Asbestos:

Description: Dk.Brown Rubber

Facility: Client No.: HA4B

Location: NE Corner Of South Half Of Entrance

Percent Asbestos:

None Detected

Percent Non-Asbestos Fibrous Material:

**Description:** Off-White Texture Mastic

Percent Non-Fibrous Material:

None Detected

100

Analytical Method - US EPA 600, R93-116. Please refer to the Appendix of this report for further information regarding your analysis.

Date Received:

10/4/2016

Date Analyzed:

10/06/2016

Signature: Analyst:

Vane Smith

Approved By:

Frank E. Ehrenfeld, III Laboratory Director



#### CERTIFICATE OF ANALYSIS

Client: Soil & Materials Engineers-995

3301 Tech Circle Drive

Kalamazoo MI 49008

SOI995 Client:

Report Date: 10/6/2016

521004 - PLM Report No.:

Project:

145 New Town Ave, Battle Creek MI

Project No.: 075290.00

#### PLM BULK SAMPLE ANALYSIS SUMMARY

Location: NE Corner Of South Half Of Entrance Description: Brown Mastic Lab No.: 6046541(L2) Client No.: HA4B Facility: Percent Asbestos: Percent Non-Asbestos Fibrous Material: Percent Non-Fibrous Material: None Detected None Detected Location: West Wall Of North Half Of Building Lab No.: 6046542 **Description:** Brown Mastic Facility: Client No.: HA5A Percent Non-Asbestos Fibrous Material: Percent Non-Fibrous Material: Percent Asbestos: None Detected None Detected Location: East Wall Of South Half Of Building **Description:** Brown Mastic Lab No.: 6046543 Facility: Client No.: HA5B Percent Non-Asbestos Fibrous Material: Percent Non-Fibrous Material: Percent Asbestos: None Detected None Detected **Description:** Black Mastic Location: South Wall Of South Half Of Building Lab No.: 6046544 Facility: Client No.: HA6A Percent Non-Fibrous Material: Percent Asbestos: Percent Non-Asbestos Fibrous Material: None Detected None Detected Location: South Wall Of South Half Of Building **Description:** Black Mastic Lab No.: 6046545 Client No.: HA6B Facility: Percent Non-Fibrous Material: Percent Asbestos: Percent Non-Asbestos Fibrous Material: None Detected None Detected Location: NW Corner Of Building, Exterior, Lab No.: 6046546 **Description:** White Glazing Window Client No.: HA7A Facility: Percent Non-Fibrous Material: Percent Non-Asbestos Fibrous Material: Percent Asbestos: 97.1 None Detected

Analytical Method -US EPA 600, R93-116. Please refer to the Appendix of this report for further information regarding your analysis.

Date Received:

PC 2.9 Chrysotile

10/4/2016

Date Analyzed:

10/06/2016

Signature: Analyst:

Vane Smith

lare smoth

Approved By:

Frank Tuantel Frank E. Ehrenfeld, III Laboratory Director



#### CERTIFICATE OF ANALYSIS

Client: Soil & Materials Engineers-995

3301 Tech Circle Drive

Kalamazoo MI 49008

Client: SO1995 Report Date: 10/6/2016

Report No .:

521004 - PLM

Project:

145 New Town Ave, Battle Creek MI

Project No.:

075290.00

#### PLM BULK SAMPLE ANALYSIS SUMMARY

Description: Sample Not Analyzed Location: East Wall North Half Of Building, Interior, Lab No.: 6046547 Facility: Window Client No.: HA7B Percent Non-Asbestos Fibrous Material: Percent Non-Fibrous Material: Percent Asbestos: Sample Not Analyzed Sample Not Analyzed Location: SW Corner Of Building, Window Lab No.: 6046548 **Description:** Sample Not Analyzed Client No.: HA7C Facility: Percent Asbestos: Percent Non-Asbestos Fibrous Material: Percent Non-Fibrous Material: Sample Not Analyzed Sample Not Analyzed Location: Doorway To South Restroom (Damaged) Lab No.: 6046549 **Description:** White/Tan Ceiling Tile; 2x4 Facility: Client No.: HA8A Percent Non-Asbestos Fibrous Material: Percent Non-Fibrous Material: Percent Asbestos: 40 Cellulose None Detected 20 Mineral Wool Location: Doorway To South Restroom (Damaged In **Description:** Brown/White Sheetrock Lab No.: 6046550 Client No.: HA9A Facility: Percent Non-Asbestos Fibrous Material: Percent Non-Fibrous Material: Percent Asbestos: 5 Cellulose None Detected Location: Along South Wall Of South Half Of Lab No.: 6046551 **Description:** Brown/White Sheetrock Building (Damaged In a Pile) Client No.: HA9B Facility: Percent Non-Fibrous Material: Percent Asbestos: Percent Non-Asbestos Fibrous Material: 10 Cellulose None Detected Location: East Wall Of South Half (Damaged In a Lab No.: 6046552 **Description:** Brown/White Sheetrock Client No.: HA9C Facility: Percent Non-Fibrous Material: Percent Asbestos: Percent Non-Asbestos Fibrous Material: 5 Cellulose None Detected

Analytical Method -US EPA 600, R93-116. Please refer to the Appendix of this report for further information regarding your analysis.

Date Received:

10/4/2016

Date Analyzed:

10/06/2016

lare 5 mod III

Signature: Analyst:

Vane Smith

Approved By:

Frank E. Ehrenfeld, III Laboratory Director



## CERTIFICATE OF ANALYSIS

Client: Soil & Materials Engineers-995

3301 Tech Circle Drive

Kalamazoo MI 49008

Client: SOI995

**Report Date:** 10/6/2016

**Report No.:** 521004 - PLM

Project:

145 New Town Ave, Battle Creek MI

Project No.:

075290.00

PLM BULK SAMPLE ANALYSIS SUMMARY				
Lab No.: 6046553 Client No.: HA10A	Description: White/Tan Ceiling Tile; 2x4 Facility:	Location: Mechanical Room, Stacked On Furnace		
<u>Percent Asbestos:</u> None Detected	Percent Non-Asbestos Fibrous Material: 40 Cellulose 20 Mineral Wool	Percent Non-Fibrous Material: 40		
Lab No.: 6046554 Client No.: HA10B	Description: White/Tan Ceiling Tile; 2x4 Facility:	<b>Location:</b> Mechanical Room, Damaged Pile On Floor		
<u>Percent Asbestos:</u> None Detected	Percent Non-Asbestos Fibrous Material: 40 Cellulose 20 Mineral Wool	Percent Non-Fibrous Material: . 40		
 Lab No.: 6046555 Client No.: HA11A	Description: Brown/White Sheetrock Facility:	Location: Doorway In Mechanical Room		
<u>Percent Asbestos:</u> None Detected	<u>Percent Non-Asbestos Fibrous Material:</u> 5 Cellulose Trace Mineral Wool	Percent Non-Fibrous Material: 95		
Lab No.: 6046556 Client No.: HA12A	Description: Grey Mortar Facility:	Location: Northwest Corner Of Building		
<u>Percent Asbestos:</u> None Detected	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	Percent Non-Fibrous Material: 100		
Lab No.: 6046557 Client No.: HA13A	Description: Grey Mortar Facility:	Location: Northwest Corner Of Mechanical Room		
<u>Percent Asbestos:</u> None Detected	Percent Non-Asbestos Fibrous Material: None Detected	<u>Percent Non-Fibrous Material:</u> 100		

Analytical Method -US EPA 600, R93-116. Please refer to the Appendix of this report for further information regarding your analysis.

Facility:

None Detected

**Description:** Grey Glazing

Percent Non-Asbestos Fibrous Material:

Date Received:

Lab No.: 6046558

Percent Asbestos:

None Detected

Client No.: HA14A

10/4/2016

Date Analyzed:

10/06/2016

Signature: Analyst:

Vane Smith

and 5 mod III

Approved By:

Building

100

Frank E. Ehrenfeld, III

Location: Entry Door Window, Southeast Corner Of

Frank E. Ehrenfeld, III Laboratory Director

Percent Non-Fibrous Material:



#### CERTIFICATE OF ANALYSIS

Client: Soil & Materials Engineers-995

3301 Tech Circle Drive

Kalamazoo MI 49008

Client: SOI995

Report Date:

Report No.:

521004 - PLM

10/6/2016

075290.00

Project:

145 New Town Ave, Battle Creek MI

Project No.:

#### PLM BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 6046559

Client No.: HA15A

In • HA15A

Percent Asbestos:

None Detected

**Lab No.:** 6046560 **Client No.:** HA16A

Percent Asbestos:

PC 3.7 Chrysotile

Lab No.: 6046561 Client No.: HA16B

Percent Asbestos:

Sample Not Analyzed

**Description:** Grey Mortar

Facility:

Percent Non-Asbestos Fibrous Material:

None Detected

Description: White/Tan Glazing

Facility:

Percent Non-Asbestos Fibrous Material:

None Detected

**Description:** Sample Not Analyzed

Facility:

Percent Non-Asbestos Fibrous Material:

Sample Not Analyzed

Location: East Wall Of Building

Percent Non-Fibrous Material:

100

Location: North Half Of East Wall Of Building

(Around Glass Block Windows)

Percent Non-Fibrous Material:

96.3

Location: South Half Of East Wall Of Building

(Around Glass Block Windows)

Percent Non-Fibrous Material:

Analytical Method -US EPA 600, R93-116. Please refer to the Appendix of this report for further information regarding your analysis.

Date Received:

10/4/2016

Date Analyzed:

10/06/2016

and 5 mod 1711

Signature: Analyst:

Vane Smith

Approved By:

Frank Enamps

Frank E. Ehrenfeld, III Laboratory Director



## CERTIFICATE OF ANALYSIS

Client: Soil & Materials Engineers-995

3301 Tech Circle Drive

Kalamazoo MI 49008

Client: SOI995

**Report Date:** 10/6/2016

**Report No.:** 521004 - PLM

Project:

145 New Town Ave, Battle Creek MI

Project No.: 075290.00

#### PLM BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 6048326 Client No.: HA17A

Percent Asbestos:

None Detected

**Lab No.:** 6048326(L2) **Client No.:** HA17A

Percent Asbestos:
None Detected

Description: Black Shingle

Facility:

Percent Non-Asbestos Fibrous Material:

10 Fibrous Glass

Description: Black Tar Paper

Facility:

Percent Non-Asbestos Fibrous Material:

30 Fibrous Glass

Location: Southeast Portion Of Building

Percent Non-Fibrous Material:

90

Location: Southeast Portion Of Building

Percent Non-Fibrous Material:

70

Analytical Method -US EPA 600, R93-116. Please refer to the Appendix of this report for further information regarding your analysis.

Date Received:

10/4/2016

Date Analyzed:

10/06/2016

Signature:

Analyst:

Tiffany Lowe

Approved By:

Frank E. Ehrenfeld, III Laboratory Director



9000 Commerce Parkway Suite B Mt. Laurel, New Jersey 08054 Telephone: 856-231-9449

Email: customerservice@iatl.com

# CERTIFICATE OF ANALYSIS

Client: Soil & Materials Engineers-995

3301 Tech Circle Drive

49008 Kalamazoo MI

SO1995 Client:

Report Date: 10/6/2016

521004 - PLM Report No.:

Project:

145 New Town Ave, Battle Creek MI

075290.00 Project No.:

# Appendix to Analytical Report

Customer Contact: Davin Ojala Analysis: US EPA 600, R93-116

This appendix seeks to promote greater understanding of any observations, exceptions, special instructions, or circumstances that the laboratory needs to communicate to the client concerning the above samples. The information below is used to help promote your ability to make the most informed decisions for you and your customers. Please note the following points of contact for any questions you may have.

iATL Customer Service: customerservice@iatl.com

iATL Office Manager: cdavis@iatl.com iATL Account Representative: Shirley Clark Sample Login Notes: See Batch Sheet Attached Sample Matrix: Bulk Building Materials **Exceptions Noted:** See Following Pages

#### General Terms, Warrants, Limits, Qualifiers:

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#### **Information Pertinent to this Report:**

Analysis by US EPA 600 93-116: Determination of Asbestos in Bulk Building Materials by Polarized Light Microscopy (PLM).

#### Certifications:

- NIST-NVLAP No. 101165-0
- NY-DOH No. 11021
- AIHA-LAP, LLC No. 100188

Quantification at <0.25% by volume is possible with this method. (PC) Indicates Stratified Point Count Method performed. (PC-Trace) means that asbestos was detected but is not quantifiable under the Point Counting regimen. Analysis includes all distinct separable layers in accordance with EPA 600 Method. If not reported or otherwise noted, layer is either not present or the client has specifically requested that it not be analyzed (ex. analyze until positive instructions). Small asbestos fibers may be missed by PLM due to resolution limitations of the optical microscope. Therefore, PLM is not consistently reliable in detecting asbestos in non-friable organically bound (NOB) materials. Quantitative transmission electron microscopy (TEM) is currently the only method that can pronounce materials as non-asbestos containing.

Analytical Methodology Alternatives: Your initial request for analysis may not have accounted for recent advances in regulatory requirements or advances in technology that are routinely used in similar situations for other qualified projects. You may have the option to explore additional analysis for further information. Below are a few options, listed as the matrix followed by the appropriate methodology. Also included are links to more information on our website.

Bulk Building Materials that are Non-Friable Organically Bound (NOB) by Gravimetric Reduction techniques employing PLM and TEM: ELAP 198.6 (PLM-NOB), ELAP 198.4 (TEM-NOB)

Loose Fill Vermiculite Insulation, Attic Insulation, Zonolite (copyright), etc.: US EPA 600 R-4/004 (multi-tiered analytical process) Sprayed On Insulation/Fireproofing with Vermiculite (SOF-V): ELAP 198.8 (PLM-SOF-V)>

Soil, sludge, sediment, aggregate, and like materials analyzed for asbestos or other elongated mineral particles (ex. erionite, etc.): ASTM D7521, CARB 435, and other options available



9000 Commerce Parkway Suite B Mt. Laurel, New Jersey 08054 Telephone: 856-231-9449

Email: customerservice@iatl.com

#### CERTIFICATE OF ANALYSIS

Client: Soil & Materials Engineers-995

3301 Tech Circle Drive

Kalamazoo MI 49008

Client: SOI995

**Report Date:** 10/6/2016

**Report No.:** 521004 - PLM

Project: 145 N

145 New Town Ave, Battle Creek MI

Project No.: 075290.00

Asbestos in Surface Dust according to one of ASTM's Methods (very dependent on sampling collection technique - by TEM): ASTM D 5755, D5756, or D6480

Various other asbestos matrices (air, water, etc.) and analytical methods are available.

#### **Disclaimers / Qualifiers:**

There may be some samples in this project that have a "NOTE:" associated with a sample result. We use added disclaimers or qualifiers to inform the client about something that requires further explanation. Here is a list with highlighted disclaimers that may be pertinent to this project. For a full explanation of these and other disclaimers, please inquire at customerservice@iatl.com.

- 1) Note: No mastic provided for analysis.
- 2) Note: Insufficient mastic provided for analysis.
- 3) Note: Insufficient material provided for analysis.
- 4) Note: Insufficient sample provided for QC reanalysis.
- 5) Note: Different material than indicated on Sample Log / Description.
- 6) Note: Sample not submitted.
- 7) Note: Attached to asbestos containing material.
- 8) Note: Received wet.
- 9) Note: Possible surface contamination.
- 10) Note: Not building material. 1% threshold may not apply.
- 11) Note: Recommend TEM-NOB analysis as per EPA recommendations.
- 12) Note: Asbestos detected but not quantifiable.
- 13) Note: Multiple identical samples submitted, only one analyzed.
- 14) Note: Analyzed by EPA 600/R-93/116. Point Counting detection limit at 0.080%.
- 15) Note: Analyzed by EPA 600/R-93/116. Point Counting detection limit at 0.125%.

#### **Recommendations for Vermiculite Analysis:**

Several analytical protocols exist for the analysis of asbestos in vermiculite. These analytical approaches vary depending upon the nature of the vermiculite mineral being tested (e.g. un-processed gange, homogeneous exfoliated books of mica, or mixed mineral composites). Please contact your client representative for pricing and turnaround time options available.

iATL recommends initial testing using the EPA 600/R-93/116 method. This method is specifically designed for the analysis of asbestos in bulk building materials. It provides an acceptable starting point for primary screening of vermiculite for possible asbestos.

Results from this testing may be inconclusive. EPA suggests proceeding to a multi-tiered analysis involving wet separation techniques in conjunction with PLM and TEM gravimetric analysis (EPA 600/R-04/004).

Further information on this method and other vermiculite and asbestos issues can be found at the following: Agency for Toxic Substances and Disease Registry (ATSDR) www.atsdr.cdc.gov, United States Geological Survey (USGS) www.minerals.usgs.gov/minerals/, US EPA www.epa.gov/asbestos. The USEPA also has an informative brochure "Current Best Practices for Vermiculite Attic Insulation" EPA 747F03001 May 2003, that may assist the health and remediation professional.

The following is a summary of the analytical process outlines in the EPA 600/R-04/004 Method:

1) Analytical Step/Method: Initial Screening by PLM, EPA 600R-93/116

Requirements/Comments: Minimum of 0.1 g of sample. ~0.25% LOQ for most samples.

2) Analytical Step/Method: Wet Separation by PLM Gravimetric Technique, EPA R-04/004 Requirements/Comments: Minimum 50g\*\* of dry sample. Analysis of "Sinks" only.

3)Analytical Step/Method: Wet Separation by PLM Gravimetric Technique, EPA R-04/004 Requirements/Comments: Minimum 50g\*\* of dry sample. Analysis of "Floats" only.

4)Analytical Step/Method: Wet Separation by TEM Gravimetric Technique, EPA R-04/004 Requirements/Comments: Minimum 50g\*\* of dry sample. Analysis of "Sinks" only.

5)Analytical Step/Method: Wet Separation by TEM Gravimetric Technique, EPA R-04/004 Requirements/Comments: Minimum 50g\*\* of dry sample. Analysis of "Suspension" only.

LOO, Limit of Quantitation estimates for mass and volume analyses.

- \*With advance notice and confirmation by the laboratory.
- \*\*Approximately 1 Liter of sample in double-bagged container (~9x6 inch bag of sample).

# **APPENDIX C**PAINT CHIP SAMPLE CHAIN OF CUSTODY FORMS AND CERTIFICATES OF ANALYSIS



9000 Commerce Parkway, Suite B • Mount Laurel, NJ 08054 Phone: 877-428-4285/856-231-9449 • Fax: 856-231-9818

# **Chain of Custody**

- Environmental Lead -

Contact Informa	ation				
Client Company:		Project Number:	075290.00		
Office Address:	3301 TECH CIRCLE DR.	Project Name:	145 NEWTOWN AVE.		
City, State, Zip:	KALAMAZOO, MICHIGAN	Primary Contact:	DAVIN OJALA		
Fax Number:	269-323-3555	Office Phone:	269-323-3555		
Email Address:	ojala@sme-usa.com	Cell Phone:	269-207-0009		
		Cent none.	203-201-0003		
iATL is accredited by the National Lead Laboratory Accreditation Program (NLLAP) to perform analytical testing of environmental samples for lead (Pb). The accreditation is through AIHA-LAP, LLC and several other nationally recognized state programs.  Matrix/Method:  Paint by AAS: ASTM D3335-85a, 2009  Wipe/Dust by AAS: SW 846: 3050B: 700B, 2010  Air by AAS: NIOSH 7082, 1994  Soil by AAS: EPA SW 846 (Soil)  Water by AAS-GF: ASTM D3559-03D, USEPA 40CFR 141.11B, 2010  Other Metals (Cd, Zn, Cr) by AAS  Toxicity Characteristic Leaching Procedure (TCLP) by AAS: USEPA 1311  Other  Special Instructions: REFER TO SME'S ATTACHED COC					
Turnaround Time  Preliminary Results Requested Date: 10/10/16 3:30PM					
Received (Name / iz Sample Login (Nam Analysis(Name(s) / QA/QC Review (Na	e/Organization): ANTHONY HOSBEIN ATL): ne / iATL): iATL):	Date: Date: Date: Date: Date:	Fime: 5:00PM  Time: Time		



3301 Tech Circle Drive Kalamazoo, Michigan, 49008 Phone 269-323-3555

FAX

269-323-3553

CLIENT NAME: Battle Creek TIFA

SITE ADDRESS: 145 Newtown Avenue, Battle Creek, MI

ANALYSIS REQUESTED: AAS: Wipe/Dust SW 846: 3050B: 700B, 2010

Sample #	Description/Location	Description/Location	
PS1	Grey, Exterior	6946522	
PS2	Green, Exterior	6046523	
PS3	Yellow, Exterior	6046524	
PS4	Brown, Interior and Exterior, Door Frames and Doors	6046525	
PS5	Beige, Exterior, Pump Room Northeast Corner of Building	6046525	
PS6	White, Interior, Throughout	6046527	
PS7	Off white, Interior, Throughout	6046528	
PS8	Light Brown, Interior, Throughout	6046529	
PS9	Bright yellow, Interior, Individual blocks along east wall	6046530	
PS10	Dark Green, Interior, Individual blocks along east wall	6046531	
PS11	Orange, Interior, Individual blocks along east wall	6046532	
PS12	Pink, Interior, Individual blocks along east wall	6046533	
PS13	Grey, Interior, Door frame in Entrance	6046534	

RELINQ RECEIVI		Anthony Hosbein	DATE:10/3/16 DATE:	TIME: 5:00pm TIME:	177
Please provide	5 day	turnaround, emaile	ed to _Davin Ojala at	_ojala@sme-usa.com	
SME USE ONL' Date Sampled: 1			SME Pro 07529	-	



# DAILY QUALITY CONTROL DATA

#### LEAD SAMPLE ANALYSIS

(DATE: 10/11/16)

Standard	Total Lead (mg)	Percent Recovery **
Reagent Blank	0.000	< LOQ
Blank Spike	0.500	100
Lab Control Std	1.400	95
Matrix Spike - LBP *	0.28	92
Matrix Spike - Wipe *	0.29	104
Matrix Spike - Soil *		
Matrix spike - Air *	0.050	106
2.5 ppm Standard	0.25	99
10.0 ppm Standard	1.0	100
40.0 ppm Standard	4.0	102

	AIHA-LAP, LLC No. 100188	NYSDOH-ELAP No. 11021	
Analysis Method:	ASTM D3335-85A		
	NIOSH 7082		
	EPA SW846 3050B 7000B		
Comments:	IATL assumes that all sampling complies with accepted	methods.	
	All client supplied sampling data is assumed to be corre	ect when calculating results.	
	Detection limit based upon 0.2 mg/L reporting limit and	1 sample size.	
	* NIST Traceable.		
	** 80-120% acceptable limits.		_

Analyzed By:

R. Chad Shaffer

Date: 10/11/16

Approved By

Frank E. Ehrenfeld, III

Laboratory Director



#### CERTIFICATE OF ANALYSIS

Client: Soil & Materials Engineers-995

3301 Tech Circle Drive

Kalamazoo MI 49008

Client: SOI995

Report Date: 10/11/2016

Report No.:

521003 - Lead Paint

Project:

145 Newtown Ave.

Project No.:

075290.00

#### LEAD PAINT SAMPLE ANALYSIS SUMMARY

Lab No.: 6046522 Client No.: PS1

Description: Grey

Result (% by Weight): 0.024

Location: Exterior

Result (ppm): 240

Comments:

Lab No.: 6046523 Client No.: PS2

Description: Green

Result (% by Weight): 0.083

Location: Exterior

Result (ppm): 830 Comments:

Lab No.: 6046524 Client No.: PS3

**Description:** Yellow

**Result (% by Weight): <0.0064** 

Location: Exterior

Result (ppm): <64

Comments:

Lab No.: 6046525

**Description:** Brown Client No.: PS4

Location: Interior And Exterior Door Frames

Result (% by Weight): 0.27 Result (ppm): 2700

And Doors

Comments:

**Lab No.:** 6046526

Description: Beige Client No.: PS5

Location: Exterior Pump Rm Northeast Corner

Result (ppm): <38

Comments:

Lab No.: 6046527 Client No.: PS6

**Description:** White

Location: Interior Throughout

**Result (% by Weight): <0.0038** 

Result (% by Weight): 0.078 Result (ppm): 780

Comments:

Description: Off-White Lab No.: 6046528

Location: Interior Throughout Client No.: PS7

**Result (% by Weight): <0.0058** 

Result (ppm): <58

Comments:

Lab No.: 6046529 Client No.: PS8

**Description:** Lt Brown

Location: Interior Throughout

**Result (% by Weight): <0.0066** 

Result (ppm): <66

**Comments:** 

Please refer to the Appendix of this report for further information regarding your analysis.

759~ M-~

Date Received:

10/4/2016

Date Analyzed:

10/11/2016

(19 march

Signature: Analyst:

Chad Shaffer

Approved By:

Frank E. Ehrenfeld, III

Laboratory Director



### CERTIFICATE OF ANALYSIS

Client: Soil & Materials Engineers-995

3301 Tech Circle Drive Kalamazoo MI

SOI995

10/11/2016 Report Date:

521003 - Lead Paint Report No .:

Project:

145 Newtown Ave.

Project No.:

075290.00

#### LEAD PAINT SAMPLE ANALYSIS SUMMARY

Lab No.: 6046530

Description: Bright Yellow

Result (% by Weight): 0.027

Client No.: PS9

Client:

Location: Interior Individual Blocks Along East Result (ppm): 270

Comments:

Lab No.: 6046531

Description: Dk Green

Result (% by Weight): 0.030

Client No.: PS10

Location: Interior Individual Blocks Along East Result (ppm): 300 Wall

Comments:

Lab No.: 6046532

Description: Orange

Result (% by Weight): 0.030

Client No.: PS11

Location: Interior Individual Blocks Along East Result (ppm): 300

Comments:

**Description:** Pink

**Result (% by Weight): <0.0085** 

Lab No.: 6046533 Client No.: PS12

Location: Interior Individual Blocks Along East Result (ppm): <85

Wall

Comments:

Lab No.: 6046534 Client No.: PS13

**Description:** Grey

Location: Interior Door Frame In Entrance

Result (% by Weight): 0.073

Result (ppm): 730 Comments:

Please refer to the Appendix of this report for further information regarding your analysis.

759~ M3~

Date Received:

10/4/2016

Date Analyzed:

10/11/2016

Signature: Analyst:

" Day 1 Chad Shaffer

Approved By:

Frank E. Ehrenfeld, III

Laboratory Director



9000 Commerce Parkway Suite B Mt. Laurel, New Jersey 08054 Telephone: 856-231-9449

Email: customerservice@iatl.com

## CERTIFICATE OF ANALYSIS

Client: Soil & Materials Engineers-995

3301 Tech Circle Drive

Kalamazoo MI 49008

Client: SOI995

**Report Date:** 10/11/2016

Report No.: 521

521003 - Lead Paint

Project:

145 Newtown Ave.

Project No.: 075290.00

# Appendix to Analytical Report:

Customer Contact: Davin Ojala Analysis: ASTM D3335-85a

This appendix seeks to promote greater understanding of any observations, exceptions, special instructions, or circumstances that the laboratory needs to communicate to the client concerning the above samples. The information below is used to help promote your ability to make the most informed decisions for you and your customers. Please note the following points of contact for any questions you may have.

iATL Customer Service: customerservice@iatl.com

iATL Office Manager: cdavis@iatl.com iATL Account Representative: Shirley Clark Sample Login Notes: See Batch Sheet Attached

Sample Matrix: Paint

Exceptions Noted: See Following Pages

#### General Terms, Warrants, Limits, Qualifiers:

General information about iATL capabilities and client/laboratory relationships and responsibilities are spelled out in iATL policies that are listed at www.iATL.com and in our Quality Assurance Manual per ISO 17025 standard requirements. The information therein is a representation of iATL definitions and policies for turnaround times, sample submittal, collection media, blank definitions, quantification issues and limit of detection, analytical methods and procedures, sub-contracting policies, results reporting options, fees, terms, and discounts, confidentiality, sample archival and disposal, and data interpretation.

iATL warrants the test results to be of a precision normal for the type and methodology employed for each sample submitted. iATL disclaims any other warrants, expressed or implied, including warranty of fitness for a particular purpose and warranty of merchantability. iATL accepts no legal responsibility for the purpose for which the client uses test results. Any analytical work performed must be governed by our Standard Terms and Conditions. Prices, methods and detection limits may be changed without notification. Please contact your Customer Service Representative for the most current information.

This confidential report relates only to those item(s) tested and does not represent an endorsement by NIST-NVLAP, AIHA LAP LLC, or any agency of local, state or province governments nor of any agency of the U.S. government.

This report shall not be reproduced except in full, without written approval of the laboratory.

#### **Information Pertinent to this Report:**

Analysis by ASTM D3335-85a by AAS

#### <u>Certification</u>:

- National Lead Laboratory Program (NLLAP): AIHA-LAP, LLC No. 100188
- NYSDOH-ELAP No. 11021

Regulatory limit is 0.5% lead by weight (EPA/HUD guidelines). Recommend multiple sampling for all samples less than regulatory limit for confirmation.

All results are based on the samples as received at the lab. iATL assumes that appropriate sampling methods have been used and that the data upon which these results are based have been accurately supplied by the client.

Method Detection Limit (MDL) per EPA Method 40CFR Part 136 Apendix B.

Reporting Limit (RL) based upon Lowest Standard Determined (LSD) in accordance with AIHA-ELLAP policies.

LSD=0.2 ppm MDL=0.005% by weight. RL= 0.010% by weight (based upon 100 mg sampled).

- \* Insufficient sample provided to perform QC reanalysis (<200 mg)
- \*\* Not enough sample provided to analyze (<50 mg)
- \*\*\* Matrix / substrate interference possible.



# CERTIFICATE OF ANALYSIS

Client: Soil & Materials Engineers-995

3301 Tech Circle Drive

Kalamazoo MI 49008

Client: SOI995

**Report Date:** 10/11/2016

Report No.: 521003 - Lead Paint

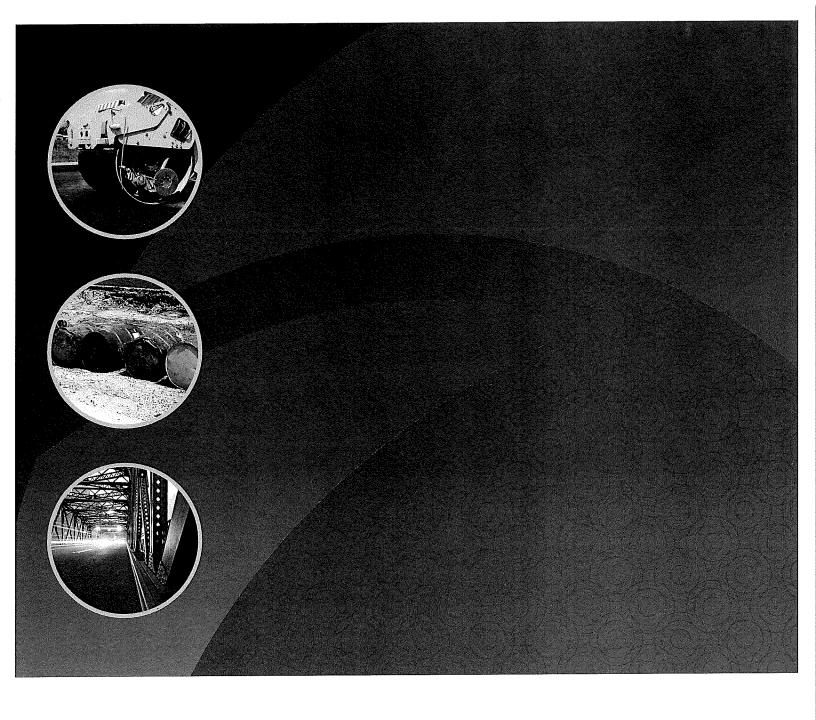
**Project:** 145 Newtown Ave.

**Project No.:** 075290.00

#### **Disclaimers / Qualifiers:**

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\* NOTE: Multiple samples received in container. Composite analysis requested per EPA/HUD guidelines not covered by NLLAP/AIHA accreditation.



Passionate People Building and Revitalizing our World

