SECTION 6.0 – ASSESSMENTS AND RECOMMENDATIONS

SECTION 6.1

ASSESSMENTS AND RECOMMENDATIONS

Asbestos containing materials within the Michigan State Fairgrounds & Exhibition Center facility consist generally of thermal system insulation located on mechanical utility systems, floor tile, window caulking, fire doors, sprayed-on acoustical material, transite materials and roofing materials. Asbestos containing straight pipe insulation consists of aircell pipe insulation, magnesium silicate pipe insulation or woolfelt pipe insulation. In most cases, fittings and joints are insulated with asbestos containing mud compound. Asbestos containing thermal system insulation throughout the building is generally rated as having some damage. Asbestos containing flooring materials include vinyl asbestos floor tile (VAT). Roofing materials were shown to contain asbestos in various buildings. The following tables summarize asbestos containing materials at the site:

Agriculture Building - (Building No. 3)

Building Material Description	Type and Percent of Asbestos	Approximate Quantity	Material Condition
Window Caulk	Chrysotile 3%	7,320 Lin. Ft.	Fair
1' x 2' Block Flooring Material – Black	Chrysotile 10%	24,990 Sq. Ft.	Fair
Fire Doors	Assumed	18 Door	Fair

Coliseum – (Building No. 5)

Building Material Description	Type and Percent of Asbestos	Approximate Quantity	Material Condition
Aircell Pipe Insulation	Chrysotile 35%	1,448 Lin. Ft.	Fair
Mud Compound Insulation on Aircell Pipe Lines	Chrysotile 35%	97 Fittings	Fair
Tank Insulation	Chrysotile 40% Amosite 20%	322 Sq. Ft.	Fair
Boiler Insulation	Chrysotile 35% Amosite 10%	366 Sq. Ft.	Fair
Interior Boiler Materials	Assumed	Not Quantified	---
Boiler Duct Insulation	Amosite 20% Crocidolite 5% Chrysotile 3%	242 Sq. Ft.	Fair
Fire Doors	Assumed	12 Doors	Good
9" x 9" Floor Tile – Tan with Brown and White Streaks	Chrysotile 3%	109 Sq. Ft.	Fair

Dairy Cattle Building – (Building No. 6)

Building Material Description	Type and Percent of Asbestos	Approximate Quantity	Material Condition
Fire Door	Assumed	1 Door	Fair

Main Horse Barn – (Building No. 9)

Building Material Description	Type and Percent of Asbestos	Approximate Quantity	Material Condition
Window Caulk	Chrysotile 5%	720 Lin. Ft.	Fair
Transite Panels	Chrysotile 30 %	360 Sq. Ft.	Fair

Whitehall Building – (Building No. 13)

Building Material Description	Type and Percent of Asbestos	Approximate Quantity	Material Condition
Roofing Material	Chrysotile 10%	12,480 Sq. Ft.	Poor

Volunteer Building – (Building No. 14)

Building Material Description	Type and Percent of Asbestos	Approximate Quantity	Material Condition
Mud Compound Joint and Fitting Insulation on Glass Domestic Water	Chrysotile 45%	9 Fittings	Fair
Aircell Pipe Insulation	Chrysotile 40%	132 Lin. Ft.	Fair
Mud Compound Joint and Fitting Insulation on Aircell Pipe	Chrysotile 20%	17 Fittings	Fair
9" x 9" Floor Tile – Tan with White and Brown Streaks	Chrysotile 1 – 2 %	100 Sq. Ft.	Fair
Roofing Materials	Assumed	2,625 Sq. Ft.	---

Band Shell – (Building No. 15)

Building Material Description	Type and Percent of Asbestos	Approximate Quantity	Material Condition
Roofing Tar Paper	Chrysotile 60 %	7,088 Sq. Ft.	Poor

Dodge Pavilion – (Building No. 16)

Building Material Description	Type and Percent of Asbestos	Approximate Quantity	Material Condition
12" x 12" Ceiling Tile – White, Glued-on, Lateral Grooves and Pinholes	Chrysotile 3%	3,383 Sq. Ft.	Poor
Woolfelt Pipe Insulation on Domestic Water Lines	Chrysotile 40%	253 Lin. Ft.	Fair
Mud Compound Joint and Fitting Insulation on Woolfelt Domestic Water	Chrysotile 30%	53 Fittings	Fair
Magnesium Silicate Pipe Insulation on Heat Exchanger	Chrysotile 35% Amosite 5%	32 Sq. Ft.	Poor
Magnesium Silicate Pipe Insulation on Heating Lines	Chrysotile 40% Amosite 5%	20 Lin. Ft.	Poor
Mud Compound Joint and Fitting Insulation on Magnesium Silicate	Chrysotile 40%	16 Fittings	Poor
Magnesium Silicate Pipe Insulation on Duct Insulation	Amosite 30%	32 Sq. Ft.	Poor
Fire Doors	Assumed	1 Door	Fair
Boiler Materials	Chrysotile 80%	30 Lin. Ft.	Poor
9" x 9" Floor Tile – Grey with Black and White Streaks	Chrysotile 3%	54 Sq. Ft.	Poor
9" x 9" Floor Tile – Red with White Streaks	Chrysotile 5%	27 Sq. Ft.	Poor

U.S. Grants House – (Building No. 17)

Building Material Description	Type and Percent of Asbestos	Approximate Quantity	Material Condition
12" x 12" Floor Tile – Off-white, Octagon Pattern	Chrysotile 3%	89 Sq. Ft.	Fair

Administration Building – (Building No. 18)

Building Material Description	Type and Percent of Asbestos	Approximate Quantity	Material Condition
Mud Compound Joint and Fitting Insulation on Glass Heating Lines	Chrysotile 20%	84 Fittings	Good
Fire Doors	Assumed	4 Doors	Good

Community Arts Building – (Building No 19/20)

Building Material Description	Type and Percent of Asbestos	Approximate Quantity	Material Condition
Aircell Pipe Insulation on Heating Lines	Chrysotile 40 %	1,224 Lin. Ft.	Fair
Aircell Pipe Insulation on Joints on Heating Lines	Chrysotile 10%	268 Fittings	Fair
Boiler Insulation/Wrap	Chrysotile 10 – 45% Amosite 35%	168 Sq. Ft.	Fair
Boiler Duct Insulation	Chrysotile 10 – 45% Amosite 35%	96 Sq. Ft.	Fair
Magnesium Pipe Insulation on Heat Exchanger	Chrysotile 10 – 45% Amosite 35%	21 Sq. Ft.	Fair
Fire Doors	Assumed	16 Doors	Good
Woolfelt Pipe Insulation on Domestic Cold Water	Chrysotile 40%	1,097 Lin. Ft.	Fair
Mud Compound Joint and Fitting Insulation on Woolfelt Pipe	Chrysotile 10%	284 Fittings	Fair
9" x 9" Floor Tile – Tan with Brown and White Streaks	Chrysotile 3%	6,625 Sq. Ft.	Fair
9" x 9" Floor Tile – Green with White Streaks	Chrysotile 5%	694 Sq. Ft.	Fair
9" x 9" Floor Tile – Red with White Streaks	Chrysotile 5%	280 Sq. Ft.	Fair
Sprayed-on Acoustical Material	Chrysotile 15%	6,108 Sq. Ft.	Fair/Poor
Roof Flashing	Chrysotile 3%	2,276 Sq. Ft.	Fair
Roof Tar	Assumed	34,724 Sq. Ft.	---

Poultry Building – (Building No. 24)

Building Material Description	Type and Percent of Asbestos	Approximate Quantity	Material Condition
Fire Door	Assumed	4 Doors	Fair
12" x 12" Floor Tile – Red Deck with Red and Peach Streaks	Chrysotile 3%	85 Sq. Ft.	Fair

Milk House

Building Material Description	Type and Percent of Asbestos	Approximate Quantity	Material Condition
Transite Panels	Chrysotile 30%	24 Sq. Ft.	Fair

Red Brick Comfort Station

Building Material Description	Type and Percent of Asbestos	Approximate Quantity	Material Condition
Roof Tar on Flashing	Chrysotile 5%	1,870 Sq. Ft.	Fair

North Restrooms

Building Material Description	Type and Percent of Asbestos	Approximate Quantity	Material Condition
Fire Doors	Assumed	1 Door	Fair

White Brick Comfort Station

Building Material Description	Type and Percent of Asbestos	Approximate Quantity	Material Condition
Roofing Material – Lower Layer, Silver	Chrysotile 3%	1,920 Sq. Ft.	Fair

White Electrical Building

Building Material Description	Type and Percent of Asbestos	Approximate Quantity	Material Condition
Roof Shingles	Chrysotile 3%	220 Sq. Ft.	Fair
Transite Sheets	Chrysotile 15%	36 Sq. Ft.	Poor
Fire Door	Assumed	1 Door	Fair

Building #1 (Michigan Mart), Building #2 (West Mall), Building #4 (East Mall), Building #7 (Pole Barn), Building #8 (North Riding Arena), Building #10 (South Riding Arena), Building #11 (Grand Champion Barn), Building #12 (Multi-Livestock Barn), Building #23 (Exhibits Building), Building #27 (Pavilion South of the Bandshell), Building #28 (North Restrooms), Building #29 (Plaza Toilet Building), Building #32 (South Goat Barn) and Building #33 (North Goat Barn) either through visual inspection or through laboratory analysis did not include asbestos containing building materials (ACBM).

Generally thermal system insulation was found to be in a damaged condition and is located in ceiling cavities, pipe chases, and mechanical areas with minimal access to building occupants. Only within the coliseum is piping exposed to building occupants, which is located along the perimeter adjacent to the bleacher seating. It is recommended that Michigan Exhibition and Fairgrounds staff label these materials as asbestos containing per OSHA and MIOSHA requirements and that they adopt an Operations and Maintenance Program which includes labeling and regular inspection of these materials with patch and repair completed as needed to maintain this good condition. MTC also recommends that the openly visible asbestos containing pipe insulation be properly abated by a State of Michigan licensed asbestos abatement contractor.

Asbestos containing acoustical ceiling plaster materials were found on the ceilings of the auditorium, projection room and stairwell located within the Community Arts Building. **The projection room has material that has delaminated from the ceiling, MTC recommends that no personnel enter the area until proper cleanup has taken place by a licensed State of Michigan asbestos abatement contractor.** Any activity, which could make these materials loose, should be avoided. Materials should be inspected on a periodic basis and an Operations and Maintenance Plan should be enacted to maintain these materials in a non-damaged condition.

Asbestos containing ceiling tile was found in the Dodge Pavilion. **The mechanical room has had significant damage to the piping and heating system, MTC recommends that no personnel enter the area until proper cleanup has taken place by a licensed State of Michigan asbestos abatement contractor.** Asbestos containing ceiling tile should be properly labeled with asbestos warning labels and tile should only be moved by properly trained personnel within a regulated area. Damaged tile should be replaced.

Asbestos containing floor tile generally is not a hazard to building occupants unless cut, drilled or otherwise made friable through mechanical action. Tile should be maintained with a coat of wax and should be buffed and scrubbed with nonabrasive pads.

Transite panels, window caulk, fire doors and roofing materials are all considered non-friable and do not present a hazard as long as they are maintained in a non-friable condition. Any activity, which could make these materials friable, should be avoided. Materials should be inspected on a periodic basis and an Operations and Maintenance Plan should be enacted to maintain these materials in a non-friable condition.

It is recommended that the Michigan State Fairgrounds & Exhibition Center Facility Manager or the Department of Management and Budget contact Materials Testing Consultants, Inc. prior to any renovation activities to review the plans to determine if materials are to be impacted and so that MTC can recommend proper abatement levels to allow for these renovation activities to proceed.

Personnel Requirements and Recommendations:

The Occupational Safety and Health Administration requires that the facility maintain an asbestos management plan to keep a record of asbestos containing materials and their condition and label asbestos containing materials within buildings. This record will provide facility maintenance staff, visiting contractors, and employees with the information that they require to minimize the risk of exposure to elevated fiber levels during repair and/or maintenance activities. MTC recommends that the Michigan State Fairgrounds & Exhibition Center Staff adopt a management plan based upon this survey report, conduct employee training, develop an operations and maintenance program and label asbestos containing materials as necessary to comply with OSHA Standards.

Proper training of personnel involved in activities with asbestos containing materials (ACM) is necessary to protect the health of the workers. Training requirements are dependent upon the activities with ACM that are to be conducted. Training, as described below, is a summary of the OSHA Standard that outlines training requirements. Personnel should consult with the OSHA Standard or with MTC for any clarifications or interpretations. Activities involving ACM are classified in the following table along with the required training to conduct these activities:

Types of Asbestos Work under OSHA Standard 1926.1101 "Asbestos Standard for Construction" regulated by the Michigan Department of Labor and Economic Growth

Class I: Activities involving the removal of Thermal System Insulation (TSI) and surfacing ACM.

Class II: Activities involving the removal of ACM which is not TSI or surfacing material. This includes, but is not limited to, the removal of asbestos-containing wallboard, floor tile, and sheeting, roofing and siding shingles, and construction mastics.

Class III: Repair and maintenance operations where ACM, including TSI and surfacing ACM may be disturbed.

Class IV: Maintenance and custodial activities during which employees contact but do not disturb ACM and activities to cleanup dust, waste and debris resulting from Class I, II, and III activities.

Training Requirements based on Activities under OSHA Standard 1926.1101 "Asbestos Standard for Construction" regulated by the Michigan Department of Labor and Economic Growth

Class I & II work must be supervised by a competent person with minimum **40-hour** training conducted in accordance with EPA's Model Accreditation Plan for supervisor. Workers conducting abatement must obtain accreditation with minimum **32-hour** training for Abatement Workers.

Class II work where negative pressure enclosures and critical barriers are not necessary, 8-hour "hands on training" is required. This would include work with asbestos containing roofing, flooring, siding, ceiling tiles, or transite panels.

Class III work must be supervised by a competent person with training in accordance with EPA training for local education agency maintenance and custodial staff. This training shall be "hands on" and be a minimum of **16-hours**.

Class IV work must be conducted by training in accordance with EPA training for local education agency maintenance and custodial staff and be a minimum **2 hours** of asbestos awareness training to familiarize themselves with issues relating to asbestos containing building materials within their facilities.

SECTION 7.0 – ESTIMATED ASBESTOS ABATEMENT COSTS

SECTION 7.1

ESTIMATED ASBESTOS ABATEMENT COSTS

Removal costs may vary significantly based on quantity of and access to the material being removed with setup costs becoming significant for small abatement quantities or for abatement in difficult access locations. Initial cleaning costs required of the abatement contractor can also result in a significant increase to overall abatement costs. If the area of abatement has become contaminated with significant amounts of suspect asbestos containing debris, power washing, HEPA vacuuming and/or wet wiping may be required in addition to the removal being performed. Abatement costs are also dependent on the requested time of completion with emergency, short notice, off hour and summer work generally resulting in premium charges from the contractor to the Owner. Competitive bidding will generally reduce costs for removal as well as costs for other response actions, but if competitive bids are solicited, the Owner should carefully weigh the low bidder's qualifications, experience and references and those of the competent person who the low bidder proposes to provide for on-site supervision prior to making any final selection or contract award.

The following estimated costs are for the abatement and at the end gives estimated costs associated with the engineering, industrial hygiene air monitoring and other professional service fees. The estimated costs are for 2009 rates, for each consecutive year add 10% to the total.

Estimated costs per building assuming total abatement of all asbestos containing materials are summarized as follows:

ESTIMATED ASBESTOS ABATEMENT COSTS (Total Abatement)

An estimate of abatement costs per building of concern is as follows:

Description	Estimated Unit Rate	Total Estimated Cost for Each Function Area	Total Estimated Cost
Mobilization Fee			$5,000.00
Building No. 3 – Agriculture Building			
Set-up Fee		$1,000.00	
Removal of Window Caulking - 7,320 lin. ft. (est.)	$4.00/lin. ft.	$29,280.00	
Removal of 1' x 2' Flooring Material - 24,990 sq. ft. (est.)	$2.00/sq. ft.	$49,980.00	
Removal of Fire Doors – 18 doors (est.)	$50.00/door	$900.00	
Total			$81,160.00
Building No. 5 - Coliseum			
Set-up Fee		$1,000.00	
Removal of Straight Pipe Insulation - 1,448 lin. ft. (est.)	$10.00/lin. ft.	$14,480.00	
Removal Joint and Fitting Insulation - 97 fittings (est.)	$15.00/fitting	$1,455.00	
Removal of Tank Insulation – 322 sq. ft. (est.)	$10.00/sq. ft.	$3,220.00	
Removal of Boiler Covering Insulation – 366 sq. ft. (est.)	$10.00/sq. ft.	$3,660.00	
Removal of Duct Insulation – 242 sq. ft. (est.)	$10.00/sq. ft.	$2,420.00	
Removal and Disposal of Boilers – 2 boilers (est.)	$25,000.00/ea.*	$50,000.00	
Removal of 9" x 9" Floor Tile – 109 sq. ft. (est.)	$2.00/sq. ft.	$218.00	
Removal of Fire Doors – 12 doors (est.)	$50.00/door	$600.00	
Total			$77,053.00
Building No. 6 – Dairy Cattle Building			
Set-up Fee		$0.00	
Removal of Fire Doors – 1 door (est.)	$50.00/door	$50.00	
Total			$50.00
Building No. 9 – Main Horse Barn			
Set-up Fee		$200.00	
Removal of Window Caulking – 720 lin. ft. (est.)	$4.00/lin. ft.	$2,880.00	
Removal Transite Panels – 360 sq. ft. (est.)	$5.00/sq. ft.	$1,800.00	
Total			$4,880.00

Building No. 13 - Whitehall			
Set-up Fee		$500.00	
Removal Roofing Material – 12,480 sq. ft. (est.)	$1.00/sq. ft. **	$12,480.00	
Total			$12,980.00
Building No. 14 – Volunteer Headquarters			
Set-up Fee		$200.00	
Removal of Straight Pipe Insulation - 132 lin. ft. (est.)	$10.00/lin. ft.	$1,320.00	
Removal Joint and Fitting Insulation - 26 fittings (est.)	$15.00/fitting	$390.00	
Removal of 9" x 9" Floor Tile – 134 sq. ft. (est.)	$2.00/sq. ft.	$268.00	
Removal Roofing Material – 2,625 sq. ft. (est.)	$1.00/sq. ft. **	$2,625.00	
Total			$4,803.00
Building No. 15 - Bandshell Building			
Set-up Fee		$200.00	
Removal Roofing Material – 7,088 sq. ft. (est.)	$1.00/sq. ft. **	$7,088.00	
Total			$7,288.00
Building No. 16 – Dodge Pavillion			
Set-up Fee		$1,000.00	
Removal of 12" x 12" Ceiling Tile – 3,383 sq. ft. (est.)	$8.00/sq. ft.	$27,064.00	
Removal of Straight Pipe Insulation - 273 lin. ft. (est.)	$10.00/lin. ft.	$2,730.00	
Removal Joint and Fitting Insulation – 69 fittings (est.)	$15.00/fitting	$1,035.00	
Removal of Tank Insulation – 32 sq. ft. (est.)	$10.00/sq. ft.	$320.00	
Removal of Duct Insulation – 32 sq. ft. (est.)	$10.00/sq. ft.	$320.00	
Removal and Disposal of Boilers – 1 boiler (est.)	$1,000.00/ea. *	$1,000.00	
Removal of 9" x 9" Floor Tile – 81 sq. ft. (est.)	$2.00/sq. ft.	$162.00	
Removal of Fire Doors – 1 door (est.)	$50.00/door	$50.00	
Total			$33,681.00
Building No. 17 – Grant's House			
Set-up Fee		$0.00	
Removal of 9" x 9" Floor Tile – 89 sq. ft. (est.)	$2.00/sq. ft.	$178.00	
Total			$178.00

Building No. 18 – Administration Building			
Set-up Fee		$200.00	
Removal Joint and Fitting Insulation – 84 fittings (est.)	$15.00/fitting	$1,260.00	
Removal of Fire Doors – 5 door (est.)	$50.00/door	$250.00	
Total			$1,710.00
Building No. 19/20 – Community Arts Building			
Set-up Fee		$1,000.00	
Removal of Acoustical Ceiling Material – 6,108 sq. ft. (est.)	$8.00/sq. ft.	$48,864.00	
Removal of Straight Pipe Insulation - 2,321 lin. ft. (est.)	$10.00/lin. ft.	$23,210.00	
Removal Joint and Fitting Insulation – 552 fittings (est.)	$15.00/fitting	$8,280.00	
Removal of Tank Insulation – 189 sq. ft. (est.)	$10.00/sq. ft.	$1,890.00	
Removal of Duct Insulation – 96 sq. ft. (est.)	$10.00/sq. ft.	$960.00	
Removal and Disposal of Boilers – 1 boiler (est.)	$2,000.00/ea. *	$2,000.00	
Removal of 9" x 9" Floor Tile – 7,599 sq. ft. (est.)	$2.00/sq. ft.	$15,198.00	
Removal of Fire Doors – 16 doors (est.)	$50.00/door	$800.00	
Removal Roofing Material – 37,000 sq. ft. (est.)	$1.00/sq. ft. **	$37,000.00	
Total			$139,202.00
Building No. 24 – Poultry Building			
Set-up Fee		$0.00	
Removal of 12" x 12" Floor Tile – 85 sq. ft. (est.)	$2.00/sq. ft.	$170.00	
Removal of Fire Doors – 4 doors (est.)	$50.00/door	$200.00	
Total			$370.00
Building No. 25 – Milk House			
Set-up Fee		$0.00	
Removal Transite Panels – 24 sq. ft. (est.)	$5.00/sq. ft.	$120.00	
Total			$120.00
Building No. 26 – Red Brick Comfort Station			
Set-up Fee		$200.00	
Removal Roofing Material – 1,870 sq. ft. (est.)	$1.00/sq. ft. **	$1,870.00	
Total			$2,070.00

Building No. 28 – North Restrooms			
Set-up fee		$0.00	
Removal of Fire Doors – 1 door (est.)	$50.00/door	$50.00	
Total			$50.00
Building No. 30 – White Brick Comfort Station			
Set-up fee		$200.00	
Removal Roofing Material – 1,920 sq. ft. (est.)	$1.00/sq. ft. **	$1,920.00	
Total			$2,120.00
Building No. 31 – White Electrical Shack			
Set-up fee		$0.00	
Removal Transite Panels – 36 sq. ft. (est.)	$5.00/sq. ft.	$180.00	
Removal Roofing Material – 220 sq. ft. (est.)	$1.00/sq. ft. **	$220.00	
Removal of Fire Doors – 1 door (est.)	$50.00/door	$50.00	
Total			$450.00
Total Estimated Abatement Cost (All Buildings)			$373,165.00
Engineering and Bid Document Preparation (5%)			$18,658.25
Industrial Hygiene Fees (10%)			$37,316.50
Contingency (5%)			$18,658.25
Total Estimated Abatement Cost			$447,779.00

* - The estimated cost for the disposal of the boilers is an approximation depending upon the size and assumed asbestos containing materials inside the boilers.

** - The estimated cost for the abatement of roofing materials is only for unoccupied buildings and no additional roofing materials are to be reapplied.

SECTION 8.0 – LIMITED LEAD-BASED PAINT SURVEY

SECTION 8.1

INTRODUCTION

Under current Michigan Law, demolition and other contractors working in an environment with potentially lead-containing paint must demonstrate that their workers are not exposed to elevated lead levels, especially lead containing dust. Lead has been targeted as a major health concern especially for young children in their developmental years.

According to the Michigan Department of Labor & Economic Growth (MDLEG) Lead Exposure in Construction Standard (29 CFR 1926.62, Michigan Rule 325.51991, Rule 1), the lead exposure rules apply to all construction work including:

> Demolition or salvage of structures where lead or materials containing lead are present.
>
> New construction, alteration, repair, painting, decorating, or renovation of structures, substrates, or portions thereof that contain lead or materials containing lead.

At the Michigan State Fairgrounds & Exhibition Center, impact to lead containing materials will likely result from the demolition or renovation of walls and ceilings covered with lead-based paint. In order to provide the Owner with information regarding the presence of lead-based paint within the buildings slated for demolition, MTC inspectors took several paint samples to obtain an assessment of lead content.

SECTION 8.2

SURVEY, SAMPLING AND ANALYSIS

To obtain a quantification of the lead content of paints within the Michigan State Fairgrounds & Exhibition Center buildings, MTC inspectors collected samples of paints on walls and ceilings throughout the building. An effort was made to collect at least one sample representative of each separate paint color. Samples were collected in unobtrusive areas where possible.

In the 1999 original report samples were packaged and sent by Federal Express to EMSL Analytical, Inc. in Ann Arbor, Michigan for analysis by Flame AAS, Method SW 846 3050B/7420. The results of laboratory analysis of lead paint chip samples are as follows:

SAMPLE NO.	SAMPLE ID	BUILDING NUMBER - BUILDING NAME	COLOR	RESULTS (by weight %)
256078	101	#5 - Coliseum	Grey	**0.30**
256079	201	#5 – Coliseum	Blue	**3.14**
256080	301	#5 – Coliseum	White	**4.47**
256081	401	#5 – Coliseum	Cream	**1.83**
256082	501	#5 – Coliseum	Rust	**0.17**
256083	601	#5 – Coliseum	Yellow	**4.06**
256084	101	#28 – North Restrooms	Cream	**0.04**
256085	101	#6 – Dairy Cattle Building	Blue	**0.17**
256086	201	#6 – Dairy Cattle Building	Yellow	**7.57**
256087	101	#8 – North Riding Arena	White	**0.92**
256088	101	#12 – Multi-Livestock Barn	Grey	**0.02**
256089	201	#12 – Multi-Livestock Barn	Yellow	**0.01**
256090	101	#10 – South Riding Arena	White	**0.05**
256091	101	#9 – Main Horse Barn	White	**0.11**
256092	201	#9 – Main Horse Barn	Tan	**4.15**
256093	101	#29 – Plaza Toilet Building	Brown	**0.52**
256098	101	#17 – U.S. Grants House	White	**0.36**
256099	201	#17 – U.S. Grants House	Blue	**23.84**
256100	301	#17 – U.S. Grants House	Tan	**0.11**
256101	401	#17 – U.S. Grants House	Grey	**0.95**
256102	501	#17 – U.S. Grants House	Brown	**0.20**
256103	101	#15 – Band Shell	White	**0.14**
256104	201	#15 – Band Shell	Tan	**2.02**
256105	301	#15 – Band Shell	Grey	**0.11**
256106	101	#18 – Administration Building	White	**0.06**
256107	201	#18 – Administration Building	Yellow	**0.08**
256108	301	#18 – Administration Building	Tan	**0.06**
256110	101	#24 – Poultry Building	Tan	**0.88**
256111	201	#24 – Poultry Building	White	**0.16**
256112	301	#24 – Poultry Building	Salmon	**1.18**
256113	401	#24 – Poultry Building	Blue	**0.02**
256114	101	#33 – North Goat Barn	White	**1.20**
256115	101	#32 – South Goat Barn	White	**0.05**

SAMPLE NO.	SAMPLE ID	BUILDING NUMBER – BUILDING NAME	COLOR	RESULTS (by weight %)
256116	101	#13 - Whitehall	White	**2.08**
256117	201	#13 – Whitehall	Blue	**0.33**
256118	301	#13 - Whitehall	Grey	**0.58**
256119	101	#30 – White Brick Comfort Station	Cream	**3.40**
256120	201	#30 – White Brick Comfort Station	Brown	**0.02**
256121	301	#30 – White Brick Comfort Station	Grey	**0.26**
256122	401	#30 – White Brick Comfort Station	White	**0.05**
256123	101	#23 – Exhibit Building	White	**0.05**
256124	201	#23 – Exhibit Building	Grey	**0.06**
256131	101	#27 – Pavilion South of Band Shell	White	**0.02**
256132	201	#27 – Pavilion South of Band Shell	Grey	**0.04**
256133	101	#14 – Volunteer Building	Green	**0.47**
256134	201	#14 – Volunteer Building	White	**0.03**
256135	301	#14 – Volunteer Building	Tan	**0.74**
256136	401	#14 – Volunteer Building	Brown	**0.03**
256137	501	#14 – Volunteer Building	Grey	**0.78**
256138	101	#19/20 – Community Arts Building	Cream	**0.11**
256139	201	#19/20 – Community Arts Building	White	**0.03**
256140	301	#19/20 – Community Arts Building	Purple	**0.02**
256141	101	#16 – Dodge Pavilion	White	**0.02**
256155	101	#26 – Red Brick Comfort Station	Grey	**0.46**
256156	201	#26 – Red Brick Comfort Station	Brown	**6.29**
256157	301	#26 – Red Brick Comfort Station	White	**9.01**
256158	101	#4 – East Mall	Brown	**0.02**
256159	101	#3 – Agriculture Building	Blue	**0.16**
256160	201	#3 – Agriculture Building	White	**0.03**
256161	301	#3 – Agriculture Building	Light Green	**0.14**
256162	401	#3 – Agriculture Building	Dark Green	**0.26**
256163	501	#3 – Agriculture Building	Grey	**0.01**
256164	101	#2 – West Mall	Brown	**0.05**
256165	101	#1 – Michigan Mart	White	**0.03**
256166	201	#1 – Michigan Mart	Grey	**0.01**
256167	301	#1 – Michigan Mart	Brown	**0.13**
256168	401	#1 – Michigan Mart	Cream	**0.15**
256169	501	#1 – Michigan Mart	Blue	**0.02**
256170	101	#25 - Milk house	White	**0.06**

A copy of the laboratory results is attached to this report in Appendix C.

For the current report any additional samples taken were properly packaged and sent by Federal Express to EMSL Analytical, Inc. in Indianapolis, Indiana for analysis by Flame AAS, Method SW 846 3050B/7420. The EMSL Analytical, Inc. results and Chain of Custody are included in Appendix C. The results of laboratory analysis of lead paint chip samples are as follows:

LAB ID	SAMPLE NO.	BUILDING NUMBER - BUILDING NAME	COLOR	RESULTS (by weight %)
0001	101	#24 - Poultry Building	Blue	**<0.010**
0002	201	#24 - Poultry Building	Green	**0.015**
0003	301	#1 - Michigan Mart	Green	**<0.017**
0004	401	#1 - Michigan Mart	Yellow	**<0.080**
0005	501	#1 - Michigan Mart	Blue	**<0.010**
0006	601	#15 - Band Shell	Black	**0.12**
0007	701	#15 - Band Shell	Brown	**2.5**

A copy of the laboratory results is attached to this report in Appendix C.

SECTION 8.3

ASSESSMENTS AND RECOMMENDATIONS

Because these colors of paint appear throughout the buildings, MTC recommends that all painted surfaces within the Michigan State Fairgrounds & Exhibition Center be assumed to contain lead. According to the Occupational Safety and Health Administration (OSHA), any lead content in paint or other materials, regardless of concentration, must be treated as lead containing. Thus, building demolition operations at the Michigan State Fairgrounds & Exhibition Center must comply with the Michigan Lead Exposure in Construction Statute, as adopted by reference from rules published in the Federal Register and codified at 29 CFR 1926.62. These rules were adopted in the State of Michigan and were effective as of November of 1993.

To assure compliance MTC recommends that language be included within the specifications for all trades stating that lead-based paint has been confirmed in the building and that contractors will be responsible for assuring that their workers are not exposed to lead paint concentrations in excess of the action level or Permissible Exposure Limit as a part of their contracts, as required by the standard.

APPENDIX A

Materials Testing Consultants, Inc. Employee Credentials

Training was conducted in accordance with the requirements of 40 CFR 763 (AHERA) Appendix C and Michigan Act 440, PA 1988

CERTIFICATE NO. PDR08100102

TILLOTSON ENVIRONMENTAL OCCUPATIONAL CONSULTING

presents this certificate to:

CHRIS KESTNER/SS# 3358

Dated:

OCTOBER 1, 2008

for successful completion of the course and examination for:

ASBESTOS ABATEMENT PROJECT DESIGNER REFRESHER COURSE

EXPIRATION DATE: OCTOBER 1, 2009

MICHAEL R. TILLOTSON, CIH, CHMM

101 W. Cass Suite C
St. Johns, MI 48879
989-227-2000

Training was conducted in accordance with TOSCA II; the requirements of 40 CFR 763, (AHERA) Appendix C; and Michigan Act 440, PA 1988

CERTIFICATE NO. BI/MPR08061301

TILLOTSON ENVIRONMENTAL OCCUPATIONAL CONSULTING

presents this certificate to:

CHRISTOPHER KESTNER/SS# 3358

Dated:

JUNE 13, 2008

for successful completion of the course and examination for:

8-HOUR ASBESTOS BUILDING INSPECTOR/MANAGEMENT PLANNER REFRESHER TRAINING

EXPIRATION DATE: JUNE 13, 2009

MICHAEL R. TILLOTSON, CIH, CHMM

101 W. Cass Suite C
St. Johns, MI 48879
989-227-2000

Training was conducted in accordance with TOSCA II, the requirements of 40 CFR 763, (AHERA) Appendix C, and Michigan Act 440, PA 1988

CERTIFICATE NO. BIR08100305

TILLOTSON ENVIRONMENTAL OCCUPATIONAL CONSULTING

presents this certificate to:

ANDREW DUNCAN/SS# 4105

Dated:

OCTOBER 3, 2008

for successful completion of the course and examination for:

4-HOUR ASBESTOS BUILDING INSPECTOR REFRESHER TRAINING

EXPIRATION DATE: OCTOBER 3, 2009

MICHAEL R. TILLOTSON, CIH, CHMM

101 W. Cass Suite C
St. Johns, MI 48879
989-227-2000

APPENDIX B

EMSL Analytical, Inc. Asbestos Analysis Results

EMSL Analytical, Inc.
212 South Wagner Road, Ann Arbor, MI 48103
Phone: (734) 668-6810 Fax: (734) 668-8532 Email: annarborlab@emsl.com

Attn: **Chris Kestner**
Materials Testing Consultants
693 Plymouth N. E.
Grand Rapids, MI 49505

Fax: (616) 456-5784 Phone: (616) 456-5469
Project: **081563 Michigan State Fairgrounds Michigan Mart**

Customer ID: MATE53
Customer PO:
Received: 04/09/09 9:30 AM
EMSL Order: 080900797

EMSL Proj:
Analysis Date: 4/11/2009
Report Date: 4/13/2009

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

			Non-Asbestos				Asbestos
Sample	**Location**	**Appearance**	**%**	**Fibrous**	**%**	**Non-Fibrous**	**% Type**
401 *080900797-0001*	Drywall	Green/Gray Fibrous Homogeneous	2%	Cellulose	98%	Non-fibrous (other)	**None Detected**
402 *080900797-0002*	Drywall	Gray Fibrous Homogeneous	4%	Cellulose	96%	Non-fibrous (other)	**None Detected**
403 *080900797-0003*	Drywall	Gray/White Fibrous Homogeneous	10%	Cellulose	90%	Non-fibrous (other)	**None Detected**

Analyst(s)

Natasha Khan (2)
Orlando J. Ivey II (1)

Brian Walczak, Laboratory Manager
or other approved signatory

Due to magnification limitations inherent in PLM, asbestos fibers in dimensions below the resolution capability of PLM may not be detected. The limit of detection as stated in the method is 1%. The above test report relates only to the items tested and may not be reproduced in any form without the express written approval of EMSL Analytical, Inc. EMSL's liability is limited to the cost of analysis. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted. This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government.

Analysis performed by EMSL Ann Arbor (NVLAP #101048-4)

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Materials Testing Consultants, INC.
693 PLYMOUTH N.E. GRAND RAPIDS, MI 49505
PHONE (616) 456-5469 • FAX (616) 456-5784
P.O. BOX 3425 TRAVERSE CITY, MI 49685-3425
PHONE (616) 922-7111

080900797

CHAIN-OF-CUSTODY

Project: Michigan State Fairgrounds
Michigan Mart

Client: MDMB

Verbal Results to: Christopher Kestner
Telephone Number:
Facsimile Number:
Delivered By: FedEx
MTC Job Number: 081563

Written Report to: Christopher Kestner
Turnaround Time: 5 Days
Purchase Order #
Attached Documents:

Comments:

Client Number	Sample Description	Sampled By	Date Sampled	Type of Sample	Air Volume	Analysis Requested	MTC Number
401	Drywall	CK	04/03/09	Bulk	—	PLM	—
402	Drywall	CK	04/03/09	Bulk	—	PLM	—
403	Drywall	AD	04/03/09	Bulk	—	PLM	—

Relinquished by:	Date:	Time:	Received by:
	04/07/09		RECEIVED EMSL OF MICHIGAN DATE: 4/8/09 TIME: 9:20 SIGNATURE

EMSL Analytical, Inc.
212 South Wagner Road, Ann Arbor, MI 48103
Phone: (734) 668-6810 Fax: (734) 668-8532 Email: annarborlab@emsl.com

Attn: **Chris Kestner**
Materials Testing Consultants
693 Plymouth N. E.
Grand Rapids, MI 49505

Fax: (616) 456-5784 Phone: (616) 456-5469
Project: **081563 Michigan State Fairgrounds Michigan Mall West**

Customer ID: MATE53
Customer PO:
Received: 04/09/09 9:30 AM
EMSL Order: 080900800

EMSL Proj:
Analysis Date: 4/10/2009
Report Date: 4/10/2009

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

			Non-Asbestos				Asbestos
Sample	**Location**	**Appearance**	**%**	**Fibrous**	**%**	**Non-Fibrous**	**% Type**
101 *080900800-0001*	Drywall	Gray/Brown Fibrous Heterogeneous	15%	Cellulose	85%	Non-fibrous (other)	**None Detected**
102 *080900800-0002*	Drywall	Gray/Brown Fibrous Heterogeneous	15%	Cellulose	85%	Non-fibrous (other)	**None Detected**
103 *080900800-0003*	Drywall	Tan/Gray Fibrous Heterogeneous	10%	Cellulose	90%	Non-fibrous (other)	**None Detected**

Analyst(s)

Brian Walczak (2)
Ericka Wagner (1)

B. Walczak

Brian Walczak, Laboratory Manager
or other approved signatory

THIS IS THE LAST PAGE OF THE REPORT.