ASBESTOS BUILDING INSPECTION REPORT

for

Michigan State University
Office of Environmental and Occupational Safety
East Lansing, Michigan 48823

at the

Old Botany Building
Building #17
East Lansing, Michigan 48823

Inspection conducted by

Fibertec Industrial Hygiene Services, Inc.
1914 Holloway Drive
Holt, Michigan 48842

Project #22605-1

Project dates: August 18-19, 2006

Final Report date: August 31, 2006

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INTRODUCTION

Fibertec Industrial Hygiene Services, Inc. (Fibertec IHS) was retained by the Michigan State University, Office of Environmental and Occupational Safety to perform an asbestos building inspection in the Old Botany Building. The project was discussed with Mr. Andy Smith of the Michigan State University, Office of Environmental and Occupational Safety prior to beginning the fieldwork. Mr. Smith requested a comprehensive asbestos building inspection including the collection of an appropriate number of bulk asbestos samples in accordance with the provisions of the Asbestos in Construction Standard.

The asbestos building inspection took place from August 18 – August 19, 2006. During the inspection, bulk asbestos samples were collected and quantities of suspect asbestos-containing materials were estimated.

CERTIFICATION

The asbestos building inspection was conducted by John Luna, a State of Michigan Accredited Asbestos Building Inspector. Mr. Luna also maintains accreditation as an Asbestos Contractor Supervisor. A copy of inspector credentials appears in Appendix A.

Adam Mittino, Sean Hillaker and Aimee Kniesel**,** trained Polarized Light Microscopists, analyzed all bulk asbestos samples in the Fibertec IHS Polarized Light Microscopy (PLM) laboratory. The Fibertec IHS PLM laboratory maintains current National Voluntary Laboratory Accreditation Program (NVLAP) accreditation (Lab Code 101510-0). A copy of the Fibertec IHS NVLAP certificate of accreditation can be found in Appendix B.

GENERAL INSPECTION PROCEDURES

In an effort to identify asbestos-containing material (ACM) at the Old Botany Building, an extensive inspection procedure was followed. A visual inspection of the building was combined with the collection of an appropriate number and distribution of bulk asbestos samples. Material sampling that would potentially compromise the weather tight integrity of the building envelope was not conducted (*e.g.*, building caulk compound, roofing) at the request of Michigan State University (including any outside sampling). The following rooms in the Old Botany Building were not accessible during the inspection: 2 and 7.

Determination of suspect asbestos-containing material was based on visual examination, bulk sample analysis and material age. Specifically, materials similar in color and texture were classified into homogenous areas (*e.g.*, drywall). An appropriate number of samples were collected from material in each homogenous area. The samples were analyzed by Polarized Light Microscopy (PLM) in the Fibertec IHS PLM Laboratory. When the results of analysis of all samples from a homogenous area indicate no asbestos present (less than or equal to one percent), the homogenous area is considered to be a non-asbestos containing material. When the results of analysis indicate asbestos present (in a quantity greater than one percent) in just one sample of those collected from a single homogenous area, the material in the entire homogenous area must be considered asbestos-containing.

Destructive testing (*i.e.*, demolition) was not conducted as part of this asbestos building inspection. Quantities of ACM shown in pipe chases or other inaccessible areas have been estimated. Additionally, some asbestos-containing material hidden from view (*e.g.*, pipe insulation in inaccessible pipe chases and between walls, floor leveling compound below floor tile, duct caulk on duct in mechanical shafts and vermiculite in cinderblock walls) may be present and may not have been accounted for as part of this inspection. Where floor tile were detected below carpet, the tile found at the room edge was presumed present in the entire room.

RESULTS OF VISUAL INSPECTION

Based on the inspection, 33 distinct suspect asbestos-containing materials were identified in the Old Botany Building. Some suspect asbestos-containing materials were sampled a number of times in different locations, smooth white wall and ceiling plaster being an example. All suspect asbestos-containing materials observed at the time of the inspection are listed in the Room by Room Asbestos Building Inspection Forms.

BULK SAMPLE RESULTS

The information gathered from the inspection is included in Appendices C (Bulk Sample Log), D (Bulk Sample Analytical Report), E (Room By Room Asbestos Building Inspection Forms), F (Photograph Log), G (Floor Plan Sketches and Asbestos Sample Locations) and H (Significantly Damaged ACM).

SUMMARY OF ASBESTOS-CONTAINING MATERIALS

The following materials were found to contain asbestos in the Old Botany Building:

Steam/condensate supply and return pipe straight insulation
Steam/condensate supply and return pipe joint and hanger insulation
Steam/condensate heat exchange tank insulation
Ventilation duct expansion cloth
Domestic water supply pipe straight insulation
Domestic water supply pipe joint and hanger insulation
Drywall joint compound
9” x 9” gray floor tile with black and white streaks and associated mastic (mastic is non ACM)
9” x 9” light brown floor tile with white and rust streaks and associated mastic
9” x 9” tan floor tile with white and rust streaks and associated mastic (mastic is non ACM)
9” x 9” beige floor tile with pink, white and brown streaks and associated mastic (mastic is non ACM)
9” x 9” green floor tile with green streaks and associated mastic (although the tile itself is not asbestos-containing it will be contaminated by the underlying mastic when removed and should be considered asbestos-containing material)
9” x 9” red floor tile with cream streaks and associated mastic (mastic is non ACM)
9” x 9” white floor tile with tan marble pattern and associated mastic (although the tile itself is not asbestos-containing it will be contaminated by the underlying mastic when removed and should be considered asbestos-containing material)
9” x 9” white floor tile with black streaks and associated mastic (mastic is non ACM)
12” x 12” tan floor tile with white and rust streaks (mastic is non ACM)

The following materials were assumed to contain asbestos in the Old Botany Building:

Fire doors and frames
Window and door frame caulk compound
Roofing materials and products
Chalkboards and associated glue pods

The following materials were found not to contain asbestos in the Old Botany Building:

Plaster (smooth wall and ceiling)
2’ x 2’ white lay-in ceiling tile with pin holes and fissures
2’ x 2’ white drop-in ceiling tile with gouges and fissures
Drywall
12” x 12” white ceiling tile with gouges and associated glue pods
12” x 12” white ceiling tile with uniform holes and associated glue pods
12” x 12” gray floor tile with gray and white marble pattern and associated mastic
12” x 12” beige floor tile with pink, white and brown streaks and associated mastic
12” x 12” white floor tile with tan marble pattern and associated mastic
Black stair tread and associated mastic
6” black cove molding and associated mastic

4” black cove molding and associated mastic
Attic insulation

CONCLUSION

Undamaged and damaged, friable (can be crumbled, pulverized or reduced to powder by hand pressure when dry) and non-friable (cannot be crumbled, pulverized or reduced to powder by hand pressure when dry) known or assumed asbestos-containing materials were discovered during the course of this inspection.

This facility inspection to determine the location of asbestos-containing materials was conducted in accordance with the provisions of the Asbestos in Construction Standard, the EPA Sampling Bulletin of September 30, 1994 and current industry standards.

RECOMMENDATIONS

Based on the information collected during this asbestos building inspection, the following recommendations are offered. These recommendations are based on the current regulatory framework, currently observed conditions and may have to be adjusted if change in regulations, ownership, emergency, or other factors substantially alter the condition, use or planned future use of the building.

1. Notify the building occupants, custodians, Physical Plant personnel and others who may encounter ACM during the routine execution of their assigned work of the presence of known or assumed asbestos-containing products in or on the building. This notification must be given to any outside contractors (*e.g.*, HVAC maintenance personnel) who work within or atop the building and may disturb the asbestos-containing material(s). Depending on the specific activity being performed, maintenance or repair personnel may need to utilize personal protective equipment or other engineering controls and comply with the provisions of various asbestos regulations.

2. Provide two-hour asbestos hazard awareness training including specific information regarding the quantity, condition and location of ACM for those individuals in the building who may encounter asbestos during the course of their work. Ensure that contractors performing work in the building have equivalent training (at a minimum) and provide appropriate documentation.

3. Plan for the proper removal of any asbestos-containing materials which may be impacted by renovation or demolition prior to any renovation or demolition within the facility. Inspect any rooms that were inaccessible during this inspection prior to any renovation or demolition. Sample and analyze any samples representing materials which were assumed to contain asbestos prior to renovation or demolition.

4. Label any ACM identified in routine maintenance areas, mechanical rooms, custodial closets, and inside ceiling access hatches at a minimum, in accordance with 29 CFR 1910.1200(7) (vii).

5. Repair or remove areas of ACM that are significantly damaged. Ensure contractors performing the work are licensed, provide appropriate regulatory notification and conduct appropriate air monitoring, including final clearance monitoring.

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John Luna
Michigan Accredited Asbestos Inspector
Card #A4665

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Phillip A. Peterson
Vice President