ASBESTOS BUILDING INSPECTION REPORT

for

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

At

Olin Health Center
Building # 3
East Lansing, Michigan 48823

Inspection conducted by:

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

Project #19221-1

Project dates: May 18 – June 2, 2004

Final Report date: June 8, 2004

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INTRODUCTION

Fibertec Industrial Hygiene Services, Inc. (Fibertec IHS) was retained by Michigan State University, Office of Environmental Safety, to perform an asbestos building inspection in the Olin Memorial Health Center. The project was discussed with Mr. Thomas Grover and Ms. Mary Lindsey-Frary of the Michigan State University Office of Radiation, Chemical and Biological Safety and the office of environmental and Occupational Safety, respectfully, prior to beginning the fieldwork. Mr. Grover and Ms. Lindsey-Frary 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 on May 18 – June 3, 2004. During the inspection, bulk 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.

John Walker, John Sink and Steve Day, trained polarized light microscopists, analyzed all bulk asbestos samples in the Fibertec IHS Polarized Light Microscopy (PLM) laboratory, which maintains current National Voluntary Laboratory Accreditation Program (NVLAP) accreditation (Lab Code 101510-0).

GENERAL INSPECTION PROCEDURES

In an effort to identify asbestos-containing material (ACM) at the Olin Memorial Health Center, an extensive inspection procedure was followed. A visual inspection of the basement, 1st, 2nd, 3rd, and 4th floors (attic area) was combined with the collection of an appropriate number and distribution of bulk samples. Material sampling that would potentially compromise the weather tight integrity of the building envelope were not collected (e.g., window glaze) per the request of Michigan State University, (including any outside sampling). The following rooms were not accessible during the inspection: B2B, B3, B5, B8, B10, B11, B15, B17, B28, B28A, B29, B58, 103 through 105, 128, 129, 145, 146, 147. 206B, 244, 305 (not on print), 307, 322, 343, 344, and 366.

Determination of suspect asbestos-containing material was based on visual examination, bulk sample analysis, material age and professional experience. 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. As such, quantities of ACM shown in pipe chases, above drywall ceilings or other inaccessible areas have been estimated. Additionally, some asbestos-containing material hidden from view (e.g., pipe insulation in inaccessible pipe chases, 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.

RESULTS OF VISUAL INSPECTION

Based on the inspection, 58 distinct suspect asbestos-containing materials were identified in the Olin Memorial Health Center. Some suspect asbestos-containing materials were sampled a number of times in different locations, pipe insulation, 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 H (Significantly Damaged ACM).

SUMMARY OF ASBESTOS CONDITIONS

The following materials were found to contain asbestos in the Olin Memorial Health Center:

Steam pipe straight insulation
Steam pipe joint insulation
Domestic water pipe straight insulation
Domestic water pipe joint insulation
Vibration/expansion joint cloth
Domestic water holding tank insulation
Green condensate holding tank insulation
12" x 12" cream floor tile with white streaks and associated mastic
9" x 9" dark maroon floor tile with white specks and associated mastic
Red vinyl stair tread with cream streaks and associated mastic
9" x 9" beige floor tile with cream swirls and associated mastic
9" x 9" dark brown floor tile with cream and red streaks and associated mastic
9" x 9" green floor tile with cream and black streaks and associated mastic
9" x 9" dark tan floor tile with cream and brown streaks and associated mastic
9" x 9" red floor tile with cream streaks and associated mastic
9" x 9" pink floor tile with cream and brown streaks and associated mastic
9" x 9" cream floor tile with white streaks and associated mastic
Debris in Mechanical Room B52
Pink sink undercoating
Sewage drain pipe straight insulation
Sewage drain pipe joint insulation

The following materials were found not to contain asbestos in the Olin Memorial Health Center:

9" x 9" light tan floor tile with cream and brown streaks and associated mastic
9" x 9" white floor tile with brown streaks and associated mastic
12" x 12" white ceiling tile with uniform large holes and associated glue pods
12" x 12" ceiling tile caulk on plaster
Duct seam caulk
4" gray cove molding and associated mastic
4" red cove molding and associated mastic
White sink undercoating
4" tan cove molding and associated mastic
Gray linoleum and associated mastic
Tan linoleum and associated mastic
1' x 2' black border floor tile and associated mastic
12" x 12" white floor tile with gray swirls and associated mastic

12" x 12" white ceiling tile with large holes and associated glue pods
12" x 12" white ceiling tile with pin holes
12" x 12" white ceiling tile with pin holes and fissures and associated glue pods
12" x 12" white ceiling tile with fissures and associated glue pods
12" x 12" white ceiling tile with rough texture
Plaster walls and ceilings
Wood pattern linoleum and associated mastic
White linoleum with marble pattern and associated mastic
Black sink undercoating
Gray sink undercoating
6" black cove molding and associated mastic
4" black cove molding and associated mastic
4" green cove molding with cream and black streaks and associated mastic
2' x 2' white drop-in ceiling tile with rough texture
2' x 2' white lay-in ceiling tile with pin holes and fissures
2' x 4' white lay-in ceiling tile with pin holes and fissures
4" brown cove molding and associated mastic
Drywall
Drywall joint compound
2' x 2' white drop-in ceiling tile with light texture
2' x 2', white drop-in ceiling tile with pin holes and fissures

The following materials were assumed to contain asbestos in the Olin Memorial Health Center:

Transite vent pipe
Spray on fireproofing
White (interior) window glazing compound
Glue pods (beneath 12" x 12" white ceiling tile with pin holes)
Glued pods (beneath 12" x 12" white ceiling tile with rough texture)
Fire doors and frames
Roofing products

CONCLUSION

Undamaged, non-friable (material which can not be crumbled, pulverized or reduced to powder by hand pressure when dry) known or assumed asbestos-containing 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 (and 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 currently observed conditions and may have to be adjusted if change of 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 buildings 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.

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)...when a building owner/or employer identifies previously installed PACM and /or ACM, labels or signs shall be affixed or posted so that employees are notified of what materials contain PACM and/or ACM. The employer shall attach such labels in areas where they will clearly be noticed by employees who are likely to be exposed, such as at the entrance to mechanical rooms/areas. Signs required by paragraph (k)(5) of this section may be posted in lieu of labels so long as they contain information required for labeling. In the case of the Olin Memorial Health Center, labels have already been placed in mechanical room entrances, and should be placed on the inside of ceiling access hatches accordingly.

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

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