

ASBESTOS BUILDING INSPECTION REPORT

for

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

at the

Kellogg Hotel and Conference Center
Building #55
East Lansing, Michigan 48823

Inspection conducted by

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

Project #23085-1

Project Dates: December 18, 2006 - January 4, 2007

Final Report Date: February 9, 2007

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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 Kellogg Hotel and Conference Center. 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 General Industry Standard for Asbestos.

In 2003 Fibertec IHS conducted a limited asbestos building inspection in the bathroom and bathroom pipe chases on the 1st through 5th floor of the Kellogg Hotel and Conference Center. The information collected during that inspection (Fibertec IHS Project #18206-1) appear in Appendix C. As part of the bathrooms renovation project which occurred from 2004 through 2005 the following materials (which were identified as ACM in the initial limited asbestos building inspection report) were removed from the bathrooms and bathroom pipe chases on the 1st floor through the 5th floor:

- Brown bath tub caulk
- Domestic cold water pipe straight and joint insulation
- Domestic hot water pipe straight and joint insulation
- Fire suppression pipe joint insulation

This asbestos building inspection took place from December 18, 2006 through January 4, 2007. 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 Kristin Peterson, Darrell DeMasters, and John Luna, all State of Michigan Accredited Asbestos Building Inspectors. Ms. Peterson, Mr. DeMasters and Mr. Luna also maintain accreditation as Asbestos Contractor Supervisors. A copy of their inspector credentials appear in Appendix A.

Adam Mittino 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 Kellogg Hotel and Conference Center, 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.*, roofing materials and products) at the request of Michigan State University. All rooms in the Kellogg Hotel and Conference Center were accessible during the inspection including elevator and dumbwaiter shafts.

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 was detected below carpet, the tile found at the room edge was presumed present in the entire room.

The initial asbestos inspection was conducted in 2003. The project number for the initial inspection was 18206-1. This inspection was conducted prior to the demolition and renovation of the hotel guest bathrooms. A copy of the inspection data appears in Appendix E. The sample results from the 2003 inspection are included in the 2006-2007 inspection report.

RESULTS OF VISUAL INSPECTION

Based on the inspections, 93 distinct suspect asbestos-containing materials were identified in the Kellogg Hotel and Conference Center. Some suspect asbestos-containing materials were sampled a number of times in different locations, drywall 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 D (Bulk Sample Log), E (Bulk Sample Analytical Report), F (Bulk Sample Log and Analytical Report for Project #18206-1), G (Materials Sorted by Room), H (Non ACM Material), I (ACM Material), J (Assumed ACM Material), K (Photograph Log), L (Floor Plan Sketches and Sample Locations) and M (Significantly Damaged ACM).

SUMMARY OF ASBESTOS-CONTAINING MATERIALS

The following materials were found to contain asbestos in the Kellogg Hotel and Conference Center:

- Hot water pipe straight insulation (see Appendix C)
- Hot water pipe joint insulation (see Appendix C)
- Cold water pipe straight insulation (see Appendix C)
- Cold water pipe joint and hanger insulation (see Appendix C)
- 9" x 9" black floor tile with white streaks
- Red stair tread
- Textured ceiling plaster
- Steam pipe joint insulation
- 12" x 12" black floor tile with brown streaks and associated mastic
- 9" x 9" brown floor tile with brown and white streaks
- Mastic to 12" x 12" white floor tile with brown and white streaks
- Mastic to 12" x 12" tan floor tile with cream and rust streaks
- Mastic to 9" x 9" dark brown floor tile with cream and brown streaks
- Tank insulation

The following materials were assumed to contain asbestos in the Kellogg Hotel and Conference Center:

- Gray roof flashing
- White exterior caulk compound
- Black roof flashing
- Black roof membrane
- Fire door and frame
- Gray exterior caulk compound
- Red-brown exterior caulk compound

The following materials were found not to contain asbestos in the Kellogg Hotel and Conference Center:

Plaster (see Appendix E)
White caulk (see Appendix E)
Drywall
Drywall joint compound
Drywall with plaster skim coat
Dark brown window caulk
Fire suppression pipe straight insulation (see Appendix C)
2" x 2" light brown ceramic floor tile bedding compound (see Appendix C)
18" x 18" light brown squared ceramic wall tile bedding compound (see Appendix C)
12" x 12" light brown textured glued-on ceiling tile and associated gluepods
Gray sink undercoating
Mastic to 9" x 9" black floor tile with white streaks
4", black cove molding and associated mastic
12" x 12" green floor tile with white and black streaks and associated mastic
2' x 2' light brown textured drop ceiling tile
Mastic to red stair tread
Red linoleum with white streaks
Dark brown window glazing compound
12" x 12" white glued on ceiling tile with pinholes and fissures and associated gluepods
2' x 2' white lined drop ceiling tile
12" x 12" red floor tile with white streaks and associated mastic
12" x 12" white floor tile with blue streaks and associated mastic
12" x 12" light brown ceramic tile bedding compound
2' x 2' white lay-in ceiling tile with pin hole and fissures
2' x 2' white lay-in ceiling tile with raised 2" x 2" squares
2' x 4' white drop in ceiling tile pin holes and fissures
Black vibration collar
2' x 2' black linoleum with circle pattern and associated mastic
Brown ceramic floor tile bedding compound
Pryobar
2' x 2' white light textured drop-in ceiling tile
Tan linoleum and associated mastic
2' x 2' white snowflake pattern drop ceiling tile
Gray duct caulk
Mastic to 9" x 9" brown floor tile with white streaks
4" dark brown cove molding and associated mastic
2' x 2' off-white fuzzy drop-in ceiling tile
2' x 2' white drop in ceiling tile with pin holes
2' x 2' white smooth lay-in ceiling tile
Red ceramic floor tile with squares bedding compound
12" x 12" beige floor tile with marble pattern and associated mastic
6" green cove molding and associated mastic
Spray on fireproofing
White ceramic wall tile bedding compound
4' x 4' white pin holed lay- in ceiling tile
12" x 12" white glued on ceiling tile with snowflake pattern and associated glue pods
Gray circle pattern linoleum
Gray stair tread and associated mastic
4" gray cove molding and associated mastic
12" x 12" white floor tile with brown and white streaks
4" green cove molding and associated mastic
Black tar paper
2' x 4' white smooth lay-in ceiling tile
2' x 2' white drop in ceiling tile with tiny squares
2' x 2' white small textured drop in ceiling tile
4" tan cove molding and associated mastic

12" x 12" gray floor tile with marble pattern and associated mastic
12" x 12" tan floor tile with marble pattern and associated mastic
12" x 12" tan floor tile with cream and rust streaks
Mastic to 9" x 9" dark brown floor tile with cream and brown streaks
Green linoleum with green and tan specs
4" mint green cove molding and associated mastic
Duct insulation
4" dark gray cove molding and associated mastic
White acoustical ceiling
Green linoleum
6" black cove molding and associated mastic

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 General Industry Standard for Asbestos, 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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