

**POTENTIALLY HAZARDOUS MATERIALS
BUILDING INSPECTION REPORT**

for

Barton Malow/Clark
MSU Spartan Stadium
58 Shaw Lane
East Lansing, Michigan 48824-1215

at

Michigan State University
I.M. West Building
East Lansing, Michigan 48824

Investigation conducted by

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

Project # 18768-1

Project Duration: February 13 – February 18, and March 4, 2004

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INTRODUCTION

Fibertec Industrial Hygiene Services, Inc. (Fibertec IHS) was retained by Barton Malow/Clark to perform an inspection for potentially hazardous materials at the Michigan State University, I.M. West Building, East Lansing, Michigan. The project was discussed with Mr. Troy Keim, prior to beginning the fieldwork. The inspection was designed to identify potentially hazardous materials within the building including: asbestos containing material, lead paint, mercury in switches and thermostats, and hydraulic oil in hydraulic door closers. Fluorescent light bulbs and ballasts were not included in the scope of this inspection. The project included all rooms and corridors within the building and was conducted in preparation for building renovation.

The potentially hazardous materials building inspection took place from February 13 through February 18 and March 4, 2004. During the inspection, bulk samples of suspect asbestos-containing material (ACM) and suspect lead paint were collected. Collected asbestos bulk samples were submitted to the Fibertec IHS Polarized Light Microscopy (PLM) laboratory for analysis. Paint samples were submitted to the Fibertec, Inc. Analytical Laboratory for analysis.

CERTIFICATION

Michelle Zajac, a State of Michigan accredited asbestos building inspector, conducted the building inspection. Ms. Zajac also maintains accreditation as an Asbestos Contractor/Supervisor. A copy of Ms. Zajac's asbestos inspector credentials appear in Appendix A.

Steven Day and John Walker, trained polarized light microscopists, analyzed all bulk asbestos samples in the Fibertec IHS Polarized Light Microscopy (PLM) laboratory. This laboratory maintains current National Voluntary Laboratory Accreditation Program (NVLAP) accreditation (Lab Code 101510-0). A copy of the Fibertec IHS NVLAP accreditation certificate appears in Appendix B.

Jeri Haney, a trained laboratory chemist, analyzed all lead paint samples in the Fibertec, Inc. Analytical Lab. The Fibertec, Inc. Analytical Laboratory is a proficient participant in the NIOSH/AIHA PAT Program.

GENERAL INSPECTION PROCEDURES

In an effort to identify asbestos-containing material (ACM) and lead-containing paint in all areas of the facility, an extensive inspection procedure was followed. A visual inspection of all rooms within the facility was combined with the collection of an appropriate number and distribution of bulk samples. The visual inspection included all rooms and corridors within the facility with the exception of rooms; 1A, 16B, 16C, 230A, 233A which were locked and for which keys could not be obtained. Rooms 108, 109, 109A, and 109B were in use at the time of inspection (as a men's locker room) and therefore were not inspected but assumed to contain the same materials as room 106, 111, 111A, and 111B (the women's locker room).

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 and distribution of samples were collected from material in each homogenous area. All samples were analyzed by polarized light microscopy. 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 believed to exist in inaccessible areas (like pipe joint insulation and pipe hangers in wall cavities or above the plaster ceilings) have been estimated. Additionally, some asbestos-containing material hidden from view may be present (e.g. floor leveling compound beneath the floor tile) and may not have been accounted for as part of this inspection.

Determination of lead paint was based on visual examination and bulk sample analysis. Specifically, a sample of each observed major paint color was collected pursuant to the requirements of ASTM Standard E1729-95 Standard Practice for Field Collection of Dried Paint Samples. All paint samples were submitted to the Fibertec, Inc. Analytical Laboratory, Holt, Michigan for analysis. When results indicate lead levels above 0.5 weight percent, the paint is considered lead-based. When the results indicate lead present below 0.5 weight percent and at or above the detection limit, the paint is considered lead-containing. When the results indicate lead present below the method detection limit, the paint is considered non lead-containing.

The identification of other potentially hazardous materials, including: mercury switches/thermostats, and hydraulic oil in hydraulic door closers, were made by detailed visual inspection.

RESULTS OF VISUAL INSPECTION

Based on the inspection, 59 distinct suspect asbestos-containing materials and 15 major paint colors were identified in the I.M. West Building, East Lansing, Michigan. Some suspect asbestos-containing materials were sampled a number of times in different locations, drywall, being an example. All suspect asbestos-containing materials and suspect lead paint observed at the time of the inspection are listed in the Room by Room Hazard Assessment Forms. Information from lab analysis of collected samples is incorporated into the Room by Room Hazard Assessment Forms to facilitate interpretation of the data. Neither mercury light switches or thermostats, nor hydraulic oil in hydraulic door closers were identified within the facility.

BULK SAMPLE RESULTS

The information gathered from the inspection is included in Appendices C (Bulk Asbestos and Paint Sample Log), D (Bulk Asbestos and Paint Sample Analytical Report), E (Room by Room Hazard Assessment Forms), F (Photo Log), and G (Floor Plan Drawings).

SUMMARY OF ASBESTOS-CONTAINING MATERIALS AND LEAD PAINT

The following materials were found to contain asbestos at I.M West:

- White textured ceiling paint
- Gray door caulk
- Black door caulk
- Gray window caulk
- White exterior window caulk
- Brown exterior window caulk
- Silver exterior building caulk
- Gray flooring and paper backing
- 12" x 12", black floor tile and associated mastic
- 12" x 12", black and blue floor tile and associated mastic
- 9" x 9", green floor tile and associated mastic
- 9" x 9", dark brown floor tile and associated mastic
- 9" x 9", black floor tile (mastic is non-asbestos containing)
- 9" x 9", dark gray floor tile (mastic is non-asbestos containing)
- Pink sink undercoating
- Woolfelt
- Pipe joint insulation
- Boiler tank insulation

The following materials were found not to contain asbestos at I.M. West:

- Silver exterior window glazing compound
- Off white window glazing compound
- Smooth plaster
- Drywall
- Drywall joint compound
- Drywall tape
- White wall caulk
- White wall filler
- Brown floor caulk
- Gray floor caulk
- Brown radiator caulk
- Brown window glazing compound
- Gray rubber window glazing compound
- Black rubber window glazing compound
- Black exterior rubber window glazing compound
- Brown flooring and backing
- Olive green speck linoleum and associated mastic
- 9" x 9", bluish gray floor tile and associated mastic
- 9" x 9", brown floor tile and associated mastic
- 12" x 12", light gray floor tile and associated mastic
- 12" x 12", beige floor tile and associated mastic
- 12" x 12", light brown floor tile and associated mastic
- 12" x 12", white and gray floor tile and associated mastic
- Mastic under 9" x 9", black floor tile
- Mastic under 9" x 9", dark gray floor tile
- 4", brown cove molding and associated mastic
- 4", beige cove molding and associated mastic
- 4", tan cove molding and associated mastic
- 4", gray cove molding and associated mastic
- 4", black cove molding and associated mastic
- 6", black cove molding and associated mastic
- Gray counter top
- Green panel board over plywood
- White sink undercoating
- Red stair tread
- Black stair tread
- Small tank insulation
- 2' x 2', small wormwood drop ceiling tile
- 2' x 2', large wormwood drop ceiling tile

The following materials were assumed to contain asbestos at I.M. West:

- Exterior window glazing compound
- Black vibration collar
- Gold vibration collar
- Gasket material
- Roofing material
- Fire doors and frames

The following paints were found to be lead-based (0.5% or greater lead by weight) at I.M. West:

- Beige paint
- Bright green paint

The following paints were found to be lead-containing (at or above the detection limit and below 0.5% lead by weight) at I.M. West:

- Off-white paint
- Mauve paint
- Yellow paint
- Bluish green paint
- Light green paint
- Green paint
- Dark green paint
- Red paint
- Orange paint
- Gray paint
- Black paint
- White ceiling paint

The following paint was found to be non lead-containing (below the method detection limit) at I.M. West:

- White wall paint

SUMMARY OF OTHER POTENTIALLY HAZARDOUS MATERIALS

No mercury switches/thermostats were found in the building. Hydraulic door closers were not found in the building.

CONCLUSION

Non-friable (cannot be crumbled, pulverized or reduced to powder by hand pressure when dry) known or assumed asbestos-containing materials, (*e.g.*, 9" x 9", dark brown floor tile) were identified at I.M. West.

Friable (can be crumbled, pulverized or reduced to powder by hand pressure when dry) asbestos-containing materials, (*e.g.*, various thermal system insulations) were identified at I.M. West.

Twelve paints (off white, mauve, yellow, bluish green, light green, green, dark green, red, orange, gray, black, and white ceiling) were found to be lead-containing. Two lead-based paints (beige and bright green) were found in the building. One non lead-containing paint (white wall paint) was found in the building.

Based on our understanding of the upcoming renovation project, some of the identified potentially hazardous materials (specifically ACM and lead paint) are likely to be disturbed and should be removed or controlled prior to and during renovation.

Other materials unlikely to be disturbed by the renovation may remain in the building and should be managed in place.

This inspection, to determine the location of potentially hazardous building materials, was conducted in accordance with the inspection provisions of the Asbestos Hazard Emergency Response Act (AHERA 40 CFR, Part 763), the EPA Asbestos Sampling Bulletin dated September 30, 1994 and current industry standards.

RECOMMENDATIONS

Based on the information collected during this potentially hazardous material building inspection, the following recommendations are offered. These recommendations are based on plans to renovate the building and may have to be adjusted if change of ownership, emergency, change in the scope or sequencing of renovation or other factors alter the condition, use or planned use of the building.

Perform the following in this case:

- 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.

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