

ASBESTOS BUILDING INSPECTION REPORT

for

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

at the

Dairy Cattle Teaching and Research Center
Building #469
(Main Barn) Buildings H and I
East Lansing, Michigan 48823

Inspection conducted by:

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

Project #21706-1

Project dates: January 18-19, 2006

Final Report date: February 14, 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 Dairy Cattle Teaching and Research Center, Buildings H and I. The project was discussed with Mr. Tom Grover of the Michigan State University, Office of Environmental and Occupational Safety prior to beginning the fieldwork. Mr. Grover 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, 29 CFR 1926.1101 (k)(2)(i).

The asbestos building inspection took place from January 18 through January 19, 2006. 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. A copy of Mr. Luna's inspector credential appears in Appendix A.

Adam Mittino, a trained Polarized Light Microscopist, 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). A copy of the Fibertec IHS NVLAP Certificate of Accreditation appears in Appendix B.

GENERAL INSPECTION PROCEDURES

In an effort to identify asbestos-containing material (ACM) at the Dairy Cattle Teaching and Research Center Buildings H and I, an extensive inspection procedure was followed. A visual inspection of the buildings was combined with the collection of an appropriate number and distribution of bulk samples. All areas of the Dairy Cattle Teaching and Research Center Buildings H and I were accessible during the inspection.

Determination of suspect ACM 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.*, gray transite wall and ceiling panels). 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.

Minimal destructive testing (*i.e.*, drilling into walls and ceilings) was conducted as part of this asbestos building inspection. A High Efficiency Particulate Air (HEPA) filter equipped vacuum cleaner was utilized while drilling in order to contain all drilling debris. Quantities of ACM shown in pipe chases, above drywall or plaster ceilings or other inaccessible areas have been estimated. Additionally, some ACM hidden from view (*e.g.*, pipe insulation in inaccessible pipe chases or 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.

RESULTS OF VISUAL INSPECTION

Based on the inspection, 18 distinct suspect asbestos-containing materials were identified in the Dairy Cattle Teaching and Research building. Some suspect asbestos-containing materials were sampled a number of times in different locations, 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 H (Significantly Damaged ACM).

SUMMARY OF ASBESTOS-CONTAINING MATERIALS

The following materials were found to contain asbestos in the Dairy Cattle Teaching and Research Center Buildings H and I:

- Steam and condensate supply and return pipe joint and hanger insulation
- Domestic water supply pipe joint and hanger insulation
- Drain line pipe joint and hanger insulation
- Transite wall and ceiling panels
- Window and door frame caulk compound
- Light heat shield insulation
- Drywall joint compound

The following materials were assumed to contain asbestos in the Dairy Cattle Teaching and Research Center Buildings H and I:

- Chalkboards and associated glue pods
- Transite roof vent covers

The following materials were found not to contain asbestos in the Dairy Cattle Teaching and Research Center Buildings H and I:

- Drywall
- Canvas wrap on fiberglass pipe straight insulation
- 2' x 4' white lay-in ceiling tile with raised 4" x 4" squares with pin holes and fissures
- 2' x 4' white lay-in ceiling tile with raised 12" squares with pin holes and fissures
- Pink sink undercoating
- 9" x 9" green floor tile with white and black streaks and associated mastic
- 9" x 9" white floor tile with black streaks and associated mastic
- Multi-colored, square pattern linoleum and associated mastic
- 4" white cove molding and associated mastic

CONCLUSION

Undamaged and damaged, non-friable (cannot be crumbled, pulverized or reduced to powder by hand pressure when dry) known or assumed asbestos-containing materials, as well as damaged and undamaged, friable known 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 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 2-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.
4. Label any ACM identified in routine maintenance areas, mechanical rooms, and custodial closets. Ceiling and wall access hatches should be labeled at a minimum, in accordance with 29 CFR 1910.1200(7)(vii).
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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