

# **ASBESTOS BUILDING INSPECTION REPORT**

for

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

at the

Regional Chilled Water Plant No. 1  
Building #189  
East Lansing, Michigan 48823

Inspection conducted by

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

Project #21824-1

Project dates: February 16, 2006

Final Report date: March 7, 2006

# Contents

Introduction

Certification

General Inspection Procedures

Results of Visual Inspection

Bulk Sample Results

Summary of Asbestos-Containing Materials

Conclusion

Recommendations

Appendices

A. Asbestos Inspector Credential

B. Fibertec IHS NVLAP Certification

C. Bulk Asbestos Sample Log

D. Bulk Asbestos Sample Analytical Reports

E. Room by Room Asbestos Building Inspection Forms

F. Photograph Log

G. Floor Plan Sketches and Sample Locations

H. Significantly Damaged ACM

**ASBESTOS BUILDING INSPECTION REPORT**  
**for**  
**Michigan State University**  
**Office of Environmental and Occupational Safety**  
**Regional Chilled Water Plant No. 1**  
**Project #21824**

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 Regional Chilled Water Plant No. 1 Building. The project was discussed with Ms. Mary Lindsey-Frary of the Michigan State University, Office of Environmental and Occupational Safety prior to beginning the fieldwork. 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 February 16, 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.

Adam Mittino, a trained Polarized Light Microscopist, 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

Asbestos

In an effort to identify asbestos-containing material (ACM) at the Regional Chilled Water Plant No.1 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 room in the Regional Chilled Water Plant No.1 Building was not accessible during the inspection: Mechanical Room #4 (Transformer 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 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.

## RESULTS OF VISUAL INSPECTION

Based on the inspection, 11 distinct suspect asbestos-containing materials were identified in the Regional Chilled Water Plant No.1 Building. Some suspect asbestos-containing materials were sampled a number of times in different locations, thermal system (pipe, boiler) 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 B (Bulk Asbestos Sample Logs), C (Bulk Asbestos Sample Analytical Reports), D (Room By Room Asbestos Building Inspection Forms), E (Photograph Log), F (Floor Plan Sketches and Asbestos Sample Locations) and G (Significantly Damaged ACM).

## SUMMARY OF ASBESTOS-CONTAINING MATERIALS

The following materials were found to contain asbestos in the Regional Chilled Water Plant No. 1 Building:

- Steam/condensate supply and return pipe joint and hanger insulation
- Steam/condensate supply and return pipe straight insulation
- Domestic water supply and return pipe joint and hanger insulation
- 12" x 12" brown floor tile with cream streaks
- Drywall
- Drywall joint compound

The following materials were assumed to contain asbestos in the Regional Chilled Water Plant No.1 Building:

- Gray building caulk compound (exterior walls)
- Roofing materials and products

The following materials were found not to contain asbestos in the Regional Chilled Water Plant No.1 Building:

- 2" x 2" white lay-in ceiling tile with pin holes and fissures
- 4" brown cove molding and associated mastic
- Chilled water supply and return pipe joint and hanger insulation
- Mastic associated with 12" x 12" brown floor tile with cream streaks

## 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 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.
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 significantly damaged ACM. Ensure contractors performing the work are licensed, provide appropriate regulatory notification and conduct appropriate air monitoring, including final clearance monitoring.

---

John Luna  
Michigan Accredited Asbestos Inspector  
Card #A4665

---

Phillip A. Peterson  
Vice President