

**MICHIGAN STATE UNIVERSITY  
EAST LANSING, MICHIGAN**

**CONRAD HALL  
ASBESTOS INSPECTION**

**SEPTEMBER 2006  
PROJECT NO. G06373**

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## INTRODUCTION

Fishbeck, Thompson, Carr & Huber, Inc. (FTC&H) was retained by Michigan State University (MSU), Office of Environmental and Occupational Safety (OEOS), East Lansing, Michigan, to conduct an asbestos building inspection of Conrad Hall. FTC&H discussed the project with Mr. Andy Smith, MSU-OEOS, prior to beginning the field work. The inspection was conducted in accordance with the FTC&H proposal to MSU dated June 2, 2006.

## CERTIFICATION

The asbestos building inspection was conducted by Mr. Steven M. Kimm, CPG, State-of-Michigan Accredited Asbestos Inspector No. A29671. The bulk asbestos samples were analyzed using Polarized Light Microscopy by EMSL Analytical, Inc. of Ann Arbor, Michigan (EMSL), which participates in the National Voluntary Laboratory Accreditation Program (Accreditation No. 101048-4).

## INSPECTION PROCEDURES AND SAMPLING METHODOLOGY

The survey was a functional space (room by room) survey and was used to design the sampling plan. Materials of similar age and uniform color and texture were classified into homogeneous areas. The following rooms in Conrad Hall were not accessible during the inspection: B4, B7A, and 102D. In addition, the entire basement crawlspace could not be inspected. Room by Room Asbestos Building Inspection Forms are provided in Appendix 1.

A minimum of one bulk asbestos sample was collected from miscellaneous materials, three to seven samples were collected from surfacing materials, and thermal systems were sampled as necessary. Obvious asbestos-containing materials (ACMs) such as transite, aircell, or other labeled materials were not sampled. As required by MSU, the inspection was limited to the building interior. Samples were not collected from roofing materials or exterior materials. In addition, samples were not collected from operating machinery or fire doors. Confined spaces and tunnels were not entered; however, the spaces were viewed from the doorways or openings.

All samples were collected by a State-of-Michigan Accredited Asbestos Building Inspector. The samples were collected from areas considered representative of each homogeneous area. Destructive sampling was not conducted, and the samples were collected from accessible materials. Where appropriate, non-permanent labels were used to mark the sampling sites. Where necessary, sampling locations were repaired.

Thirty distinct homogeneous materials suspected of containing asbestos were identified during the inspection. The homogeneous materials are described on the table in Appendix 2. A total of forty-four bulk material samples (sixty total analyses) were collected from the homogenous materials for asbestos analysis. Bulk material samples were collected from suspect ACMs according to the protocol described in 29 CFR 1926.1101 (Occupational Safety and Health Administration Asbestos Construction Standard). Sample locations are described on the Bulk Sample Log (Appendix 3) and located on the drawings included as Appendix 4. Site photographs are included as Appendix 5

## RESULTS

The samples were transported to EMSL for analysis. The analytical data report provided by EMSL is included as Appendix 6

Of the thirty homogeneous materials sampled, a total of five homogenous materials were identified to contain asbestos above one percent by weight. The asbestos-containing homogeneous materials include:

- Spray-on fireproofing/insulation on basement mechanical room ceilings.
- Mud insulated fittings on piping.
- 9" x 9" vinyl floor tile, beige with brown linear streaks (black mastic is also ACM).
- 9" x 9" vinyl floor tile, dark reddish-brown with beige and dark-brown streaks.
- 9" x 9" vinyl floor tile, putty with linear brown streaks (tile non-ACM, but black mastic is ACM).

Homogeneous materials assumed to be ACM include:

- Fire doors and associated caulking.
- Roofing materials.

Homogeneous materials that are non-ACM include:

- Cloth on fiberglass-insulated piping
- Gray vibration dampening cloth on air handlers
- 1' x 1' interlocking ceiling tile, white, fissures with pinholes
- 1' x 1' interlocking ceiling tile, bright white, pinhole with fissures
- 1' x 1' interlocking ceiling tile, white, fine pinholes and fine fissures
- 2' x 2' lay in ceiling tile, white, fissures and pinholes
- 4" black base and mastic

- Laminate – cream
- Laminate - salmon
- Laminate – greenish brown
- Drywall – brown paper
- Drywall joint mud – brown – brittle
- 12"x12" vinyl floor tile, aqua green with green and cream splotches
- Black carpet edge
- Black tile edge
- 4" brown cove base and mastic
- 12" x 12" floor tile, beige with brown and gray streaks/swirls
- Stairtread, red brown with pink, black and cream swirls and mastic
- Stair back splash, red brown and mastic
- 4" red brown cove base and mastic
- 9" x 9" floor tile, red brown with cream splotches
- 12" x 12" floor tile, light gray with dark gray flecks
- Window caulking - interior

Estimated quantities of each homogeneous area by function space are provided on the Room by Room Asbestos Building Inspection Forms (Appendix 1). Estimates of total quantity in the building for each homogeneous area are provided on the table in Appendix 2. The quantities provided within this report are only estimates. Additional materials may exist within wall cavities, ceiling cavities, or other inaccessible areas that could not be evaluated as part of this asbestos inspection.

## CONCLUSIONS

Friable and non-friable ACMs and assumed ACMs were discovered during this inspection. None of the materials were significantly damaged.

Non-destructive testing was conducted to collect the bulk samples. The samples collected were small in size and from inconspicuous areas. Several samples of materials that were adhered using mastics did not contain a sufficient amount of mastic for the laboratory to analyze. The homogeneous areas of these samples include floor tile (15, 22, 26, and 27). If these materials are to be removed, additional samples may need to be collected of the mastics to determine if they are ACM.

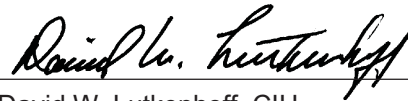
Four bulk samples were collected from mud-insulated fittings. The insulation on the piping was fiberglass with a hard canvas cover. The insulation cover from different piping systems (steam, condensate, cold water, etc.) was painted different colors. The piping insulation was considered to be one homogeneous

area. The mud-insulated fitting samples were collected from different piping systems and were considered to be one homogeneous area. All four bulk samples were analyzed for asbestos content. One of the four samples contained asbestos at a concentration greater than 1%; therefore, the homogeneous area is considered to be ACM. It could not be determined from the scope of this survey if the mud-insulated pipe fittings represent different homogeneous areas.



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