Michigan State University
East Lansing, Michigan

Asbestos Inspection
Chittenden Hall

January 12, 2007
Project No. G06671

Fishbeck, Thompson, Carr & Huber
engineers • scientists • architects • constructors

MICHIGAN STATE UNIVERSITY

EAST LANSING, MICHIGAN

CHITTENDEN HALL

ASBESTOS INSPECTION

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ACM	Asbestos-Containing Material
EMSL	EMSL Analytical, Incorporated, Ann Arbor, Michigan
FTC&H	Fishbeck, Thompson, Carr & Huber, Inc.
MSU	Michigan State University
OEOS	Office of Environmental and Occupational Safety

INTRODUCTION

FTC&H was retained by MSU OEOS, East Lansing, Michigan, to conduct an asbestos building inspection of Chittenden Hall located on East Circle Drive. FTC&H discussed the project with Mr. Andrew D. Smith, MSU-OEOS, prior to beginning the field work. The inspection was conducted in accordance with the September 13, 2006, FTC&H proposal to MSU.

CERTIFICATION

The asbestos building inspection was conducted by Mr. Mark Nelson, State-of-Michigan Accredited Asbestos Inspector No. A33420. The bulk asbestos samples were analyzed using Polarized Light Microscopy by 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. Room 7 in Chittenden Hall was not accessible during the inspection. 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 Insulation were sampled as necessary. As required by MSU, the inspection was limited to the building interior and exterior mechanical equipment. Samples were not collected from roofing materials or exterior building materials materials. In addition, samples were not collected from operating machinery or fire doors.

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.

Nineteen distinct homogeneous materials suspected of containing asbestos were identified during the inspection. The homogeneous materials are described on Table 1. A total of 37 bulk material samples were collected from the homogenous material, and 91 total analyses were performed for asbestos. 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 2) and located on the drawings included as Appendix 3.

RESULTS

The samples were transported to EMSL for analysis. The analytical data report provided by EMSL is included as Appendix 4.

Of the seventeen 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:

- 9” x 9” vinyl floor tile, gray with white and brown streaks (HA 11)
- 12” x 12” vinyl floor tile, brown with white and gray (HA 12)
- Red seamless floor covering (floor covering is non ACM, but mastic is ACM) (HA 13)
- 8” transite pipe (HA 16)
- 9” x 9” vinyl floor tile, tile and mastic is ACM (HA 10)

Homogeneous materials assumed to be ACM include:

- Fire doors

Homogeneous materials that are non-ACM include:

- 2' x 2' White ceiling tile with pinholes and fissures (HA 1)
- White plaster (HA 2)
- Old chalk boards (HA 3)
- Chalkboards (HA 4)
- Seamless floor covering, green with white stripes (HA 5)
- Gray Plaster (HA 6)
- 1’ x 1’ ceiling tile with glue pods (HA 7)
- 12” x 12” floor tile, gray with brown and white specks (HA 8)
- Window caulk (HA 9)
- 2’ x 2’ Ceiling tile, white with fissures (HA 14)
- 12” x 12” floor tile, light gray with white and brown streaks (HA 15)
- Seamless floor covering, light red (HA 17)

Estimated quantities of each homogeneous area by functional 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 Table 1.

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. Non-destructive testing was conducted to collect the bulk samples. The samples collected were small in size and from inconspicuous areas.

CONCLUSIONS

On October 10, 2006, a State-of-Michigan Accredited Asbestos Building Inspector conducted an inspection for asbestos at Chittenden Hall on East Circle Driver. The ACMs found as a result of this inspection were 9" x 9" red floor tile, 9" x 9" gray floor tile, 9" x 9" brown floor tile, red seamless floor covering, and transite pipe.

Mark R. Nelson
Building Inspector No. A33420

David W. Lutkenhoff, CIH, CIAQP

Table 1 - Description of Homogeneous Materials
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Material Description	Condition	Homogeneous Area No.	Asbestos Containing ?	Quantity	Unit
2'x2' White ceiling tile with pinholes and fissures	sd	1	N	1,736	s.f.
White plaster	sd	2	N	12,150	s.f.
Old chalk board	u	3	N	1,480	s.f.
Chalk board	u	4	N	240	s.f.
Seamless floor covering - green with white stripes	u	5	N	74	s.f.
Gray plaster	sd	6	N	350	s.f.
1'x1' Ceiling tile with glue pods	u	7	N	502	s.f.
12"x12" Floor tile - Gray with brown and white specks	u	8	N	52	s.f.
Window caulk	u	9	N	1,185	l.f.
9"x9" Floor tile - red	u	10	Y	342	s.f.
9"x9" Floor tile - gray with white and brown streaks	u	11	Y	215	s.f.
12"x12" Floor tile - brown with white and gray	u	12	Y	106	s.f.
Seamless floor covering - red	u	13	Y	1,214	s.f.
2'x2' Ceiling tile - white with fissures	u	14	N	106	s.f.
12"x12" Floor tile - light gray with white and brown streaks	u	15	N	60	s.f.
8" Transite pipe	sd	16	Y	10	l.f.
Seamless floor covering - light red	u	17	N	10	s.f.

Notes:
u = no damage observed
sd = slightly damaged
d = damaged
l.f. = linear feet
s.f. = square feet