

October 9, 1995

REPORT: Full Building Survey

TO: Linda McCracken-Hunt, Project Development, 400 Shops Building  
Tim Nelson, Facilities Management Asbestos Coordinator  
Fay Thompson, Department of Environmental Health and Safety, Director

FROM: John Allen, Asbestos Group, Environmental Health and Safety, Suite 153 U-Tech East  
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SUBJECT: Asbestos Material Survey - Fraser Hall  
EH&S Project No: 051-95-074  
Client Project No: For Data Base

**Scope of Work:** A full building asbestos material survey was conducted on July 21 through August 4, 1995. The purpose of the survey was to identify asbestos-containing materials (ACM) as defined by the Environmental Protection Agency (EPA). Any material that is greater than 1% asbestos is considered to be ACM. The intent of the survey was to identify both friable and nonfriable suspect ACM, identify nonfriable ACM that may become friable under demolition or renovation conditions, and to provide approximate cost estimates for the removal of identified ACM prior to renovation of Fraser Hall.

**Project Description:** Bulk samples of suspect ACM were collected on-site and analyzed via polarized light microscopy (PLM) for asbestos content. Results of analyses are listed in Appendix I of this report. Appendix I is formatted to provide a room by room inventory of suspect ACM, the asbestos content of each material listed, and friability. An explanation of the tables and abbreviations used in the tables is included with Appendix I. Appendix II is a room by room listing of only those suspect materials that tested >1% asbestos. Minnesota Department of Health (MDH) Asbestos Rules regulate only friable ACM (material may be reduced to powder or dust under hand pressure) while the EPA regulates ACM that may become friable under demolition or renovation conditions.

The following friable or potentially friable materials tested positive as ACM:

- <4" white fibrous pipe insulation and associated pipe fitting insulation
- <4" pink fibrous pipe insulation and associated pipe fitting insulation
- <4" aircell pipe insulation and associated pipe fitting insulation
- <4" felt with tar pipe insulation and associated pipe fitting insulation
- <4" fibrous pipe fitting insulation on fiberglass with tar
- 4"-8" white fibrous pipe insulation and associated pipe fitting insulation
- 4"-8" aircell pipe insulation and associated pipe fitting insulation
- 4"-8" felt with tar pipe insulation and associated pipe fitting insulation
- white fibrous duct insulation
- 12"x12" ceiling tile, pinhole crater
- 9"x9" floor tile, light brown with brown and white
- 9"x9" floor tile, light grey with black and white
- 9"x9" floor tile, grey with black and white
- 9"x9" floor tile, emerald green and white
- 9"x9" floor tile, beige with white
- 12"x12" floor tile, off white with black
- 12"x12" floor tile, beige with brown and cream

The following suspect materials tested none detected (ND) as ACM:

- <4" fiberglass with tar pipe insulation
- <4" fiberglass pipe insulation and associated pipe fitting insulation

- ceiling plaster
- wall plaster
- 6"x12" ceiling tile, pegboard
- 12"x12" ceiling tile, pegboard
- 12"x12" ceiling tile, computer board
- 12"x12" ceiling tile, fissured
- 2'x2' ceiling tile, pinhole mini-fissure
- 2'x2' ceiling tile, pinhole worm
- 2'x2' ceiling tile, pinhole fissure
- 2'x2' ceiling tile, nail hole fissure
- 2'x4' ceiling tile, pinhole crater
- 2'x4' ceiling tile, pinhole worm
- 12"x12" floor tile, caramel with brown and white
- 12"x12" floor tile, beige with peach and cream
- 12"x12" floor tile, blue with white
- 12"x12" floor tile, off white with charcoal
- 12"x12" floor tile, off white with olive
- 12"x12" floor tile, cream with brown
- brown and cream linoleum
- fiberglass duct insulation
- red brick mortar
- canvass vibration joint
- baseboard adhesive
- clay tile mortar
- concrete block mortar
- sheetrock and taping compound
- ceiling tile adhesive

The following nonfriable with low potential to become friable materials tested positive as ACM:

- **floor tile adhesive**

For room locations of above noted materials, refer to Appendices.

**Observations and Recommendations:**

1. Department of Environmental Health & Safety (DEHS);  
Please refer to condition assessments for specific damaged areas. In general, materials were found to be in good shape.
2. Facilities Management;  
The quantities listed reflect the visibility and accessibility at the time of the survey. Actual quantities must be verified by contracting entities.

In some rooms throughout the building, carpeting is covering the asbestos containing floor tile. This should be noted in case the carpeting is removed during the proposed renovation project. If the floor tile comes up with the carpet, the carpet should then be removed by the Facilities Management Asbestos Abatement Unit or a Minnesota Licensed asbestos abatement contractor.

Debris from asbestos containing pipe insulation was discovered throughout Room S50A in the dirt floor. Following a clean-up of the visible debris, it is recommended the area be sprayed with a penetrating encapsulant. Contact Facilities Management's Asbestos Coordinator Tim Nelson if these remediation techniques wish to be examined further.

3. General;  
Due to limited access points in the ceilings and walls, some pipe chases and areas above ceilings were completely inaccessible or only slightly visible. According to building mechanical prints, perimeter radiation

lines exist in most rooms behind the columns and above the ceilings. As a result, the quantities listed reflect the visibility available at the time of the survey.

At the time of the survey, a 12"x12" black & white floor tile was being installed in Room 120. This material is not listed in the survey and is assumed to be asbestos free.

Although no roof sampling was done, complete roof sampling is recommended at a time when a qualified roofing contractor is on-site to patch core sample holes in roofing.

Due to the difficulty associated with identifying or sampling, fire doors and fire hoses were not included in the scope of the survey. Please note that these items frequently contain asbestos.

Rooms S22, 26A, M130, M149, and 288 were inaccessible at the time of the survey.

**Cost Information:** The approximate cost for the removal of all ACM is itemized below. These figures are based on the assumption that all friable and potentially friable ACM are going to be removed. For project specific removal costs, contact this office with your project requirements and unit costs can be calculated for the impacted areas.

MATERIAL TYPE	LOW RANGE	HIGH RANGE
• thermal system insulation	\$114,398	\$146,694
• floor tile & adhesive	27,042	54,084
• ceiling tile	12,363	24,726
<b>TOTAL</b>	<b>\$153,803</b>	<b>\$225,504</b>

All ACM removal must be performed by a Minnesota licensed asbestos abatement contractor. All asbestos removal shall be performed within the specified procedures as outlined in the University of Minnesota Technical Specification for Asbestos Abatement. Please note that removal costs are highly variable and dependent on such factors as contractor availability, accessibility of work areas and site specific work plans.

Air monitoring is required for many asbestos-related projects. Environmental Health and Safety (EH&S) is available to provide this service. The estimated cost for EH&S to complete air monitoring requirements for specific projects will be made available upon request. The cost of air monitoring is a function of contractor on-site days and may vary dependent upon project specific scope of work. EH&S will provide labor, equipment and project oversight as necessary. Project management and contract administration will be provided by the Facilities Management Project Development Group.

EH&S also recommends that throughout the general renovation activities associated with this building, precautions and work practices should be implemented to minimize nuisance dust levels. Dust suppression techniques (misting the air with water and keeping materials wet) should be required of the general contractor.

If there is any further information required, or other questions arise regarding this request, please contact John Allen at 627-4861.

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