

February 17, 1994

REPORT: Full Building Survey

TO: Ken Almer, Project Development, 100 Shops Building, 319 15th Avenue SE,
Minneapolis, MN 55414

FROM: John Allen, Asbestos Group, Environmental Health and Safety, B-7 U-Tech Building,
1313 5th ST. S.E., Minneapolis, MN 55414

SUBJECT: Asbestos Material Survey - Wulling Hall
EH&S Project No: 006-94-006
Client Project No: 006-93-1579

Scope of Work: A full building asbestos material survey was conducted on January 26 through February 1, 1994. 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 Wulling 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" aircell insulation and associated pipe fitting insulation
- <4" fibrous pipe fitting insulation on fiberglass with tar
- <4" fibrous pipe fitting insulation on fiberglass
- 4"-8" white fibrous pipe insulation and associated pipe fitting insulation
- 4"-8" fibrous pipe fitting insulation on fiberglass with tar
- white fibrous tank insulation
- 9"x9" floor tile, light grey with black and tan
- 9"x9" floor tile, tan with black
- 9"x9" floor tile, grey with white
- 9"x9" floor tile, grey with evergreen
- 9"x9" floor tile, light grey with black and white
- 12"x12" floor tile, light grey with white

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

- <4" fiberglass with tar pipe insulation
- 4"-8" fiberglass with tar pipe insulation
- ceiling plaster
- wall plaster
- 12"x12" ceiling tile, crater
- 12"x12" ceiling tile, pencil hole

- 12"x12" ceiling tile, textured
- 12"x12" ceiling tile, fissured
- 2'x2' ceiling tile, nail hole
- 2'x2' ceiling tile, pinhole crater
- 2'x2' ceiling tile, fiberglass
- 2'x4' ceiling tile, pinhole crater
- 9"x9" floor tile, tan with grey and white
- 12"x12" floor tile, light grey with charcoal and white
- 12"x12" floor tile, light grey with black and white
- 12"x12" floor tile, cream with tan
- baseboard adhesive, brown
- sheetrock and taping compound
- ceiling tile adhesive
- red clay tile mortar
- red brick mortar
- incubator brick

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

- **floor tile adhesive**

The following nonfriable with low potential to become friable materials tested less than 1% asbestos:

- ceiling tile adhesive

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

Observations and Recommendations: A pipe chase was discovered on the east side of the South Stairs. Due to limited accessibility, the quantities listed in the Appendices reflect the amount visible at the time of the survey.

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.

Carpeting is covering the asbestos containing floor tile in certain rooms. This should be noted in case the carpeting is removed during a renovation project. If the floor tile comes up with the carpet, the carpet should then be removed by the Facilities Management Asbestos Abatement Unit.

Debris from asbestos containing pipe insulation was discovered throughout the crawl space in the dirt floor. Following a clean-up of the visible debris, it is recommended that either the area be sprayed with a penetrating encapsulant or, in the case of demolition, the area be wetted and locked down with encapsulant. Contact Facilities Management's Asbestos Coordinator Tim Nelson if these remediation techniques wish to be examined further.

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	\$45,266	\$58,714
• floor tile & adhesive	38,202	76,404
TOTAL	\$83,468	\$135,118

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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