

December 20, 1995

REPORT: Full Building Survey

TO: Don Hau, Project Development, 400 Donhowe Building, 319 15th Ave. S.E.,
Minneapolis, MN, 55414

FROM: John Allen, Asbestos Group, Environmental Health and Safety, W140 Boynton Health
Services, 410 Church St. S.E., Minneapolis, MN 55455

SUBJECT: Asbestos Material Survey - Comstock Hall
EH&S Project No: 063-95-110
Client Project No: 063-92-1512

Scope of Work: A full building asbestos material survey was conducted on November 8 through December 15, 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 Comstock 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 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" fibrous pipe fitting insulation on fiberglass
- 4"-8" white fibrous pipe insulation
- 4"-8" fibrous pipe fitting insulation on fiberglass with tar
- 4"-8" fibrous pipe fitting insulation on fiberglass
- 9"x9" floor tile, black
- 9"x9" floor tile, light brown with brown and white
- 12"x12" floor tile, black
- 12"x12" floor tile, beige with tan and brown
- transite panels

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

- <4" fiberglass with tar pipe insulation
- <4" fiberglass pipe insulation
- 4"-8" fiberglass with tar pipe insulation
- 4"-8" fiberglass pipe insulation
- fiberglass duct insulation
- textured ceiling plaster
- ceiling plaster

- wall plaster
- 12"x12" ceiling tile, pegboard
- 12"x12" ceiling tile, deep fissured
- 12"x12" ceiling tile, pinhole mini-crater
- 12"x12" ceiling tile, pinhole fissure
- 12"x12" ceiling tile, textured
- 12"x12" ceiling tile, computerboard
- 2'x2' ceiling tile, pinhole mini-crater
- 2'x2' ceiling tile, pinhole irregular fissure
- 2'x2' ceiling tile, pinhole drop
- 2'x4' ceiling tile, nailhole mini-crater
- 2'x4' ceiling tile, smooth
- 12"x12" floor tile, white with grey and beige
- 12"x12" floor tile, cranberry pebble
- 12"x12" floor tile, beige with olive and white
- 12"x12" floor tile, light grey with charcoal and white
- 12"x12" floor tile, beige with grey and tan
- 12"x12" floor tile, off white with charcoal and grey
- 12"x12" floor tile, grey with light grey and salmon
- brown pipe putty
- clay tile mortar
- red brick mortar
- canvass vibration joint
- baseboard adhesive
- concrete block mortar
- sheetrock and taping compound
- brown flooring
- grey flooring
- floor tile adhesive

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

- **floor tile adhesive**
- **ceiling tile adhesive**
- **grey putty on duct**

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 to excellent 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.

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.

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.

In the Appendices, material descriptions followed by a date refer to samples referenced from previous surveys conducted by Delta Environmental Consultants or by the Department of Environmental Health & Safety. The date refers to the original sampling date.

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 B1B, B2, B15A, B26, B27, B39, B63A, B65A, G54A, G57A, G62, G64, and E127/E129 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	\$78,032	\$102,402
• floor tile & adhesive	81,425	162,850
• ceiling tile adhesive	14,704	29,408
TOTAL	\$174,161	\$294,660

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 626-2199.

Written By:

John F. Allen
Environmental Health & Safety
Asbestos Group Senior Safety Technician

Reviewed By:

Roger L. Jeremiah
Environmental Health & Safety
Asbestos Group Manager

cc: John Sundsmo
Tim Nelson
Harold Hall
Ken Snare