

December 5, 1995

REPORT: Full Building Survey

TO: Ben Ystenes, Facilities Supervisor, Facilities Management Zone 5, Room 19, Scott Hall

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 - Nicholson Hall  
EH&S Project No: 005-95-104  
Client Project No: for Data Base

**Scope of Work:** A full building asbestos material survey was conducted on October 19 through November 10, 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, to 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 Nicholson 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 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 and associated pipe fitting insulation
- 4"-8" aircell pipe insulation and associated pipe fitting insulation
- 2'x2' ceiling tile, pinhole worm
- 9"x9" floor tile, black with white
- 9"x9" floor tile, black with red and white
- 9"x9" floor tile, light grey with white
- 9"x9" floor tile, light grey with black and white streaks
- 9"x9" floor tile, light grey with black and white spots
- 9"x9" floor tile, light olive with cream
- 9"x9" floor tile, grey with white
- 9"x9" floor tile, dark grey with black and white
- 9"x9" floor tile, beige with dark beige and cream
- 9"x9" floor tile, black with orange and white
- 9"x9" floor tile, beige with brown and peach
- 12"x12" floor tile, cream with brown
- 12"x12" floor tile, grey with charcoal and white
- 12"x12" floor tile, white with beige

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

- <4" fiberglass with tar pipe insulation
- <4" fiberglass pipe insulation
- 4"-8" fiberglass pipe insulation and associated pipe fitting insulation
- ceiling plaster
- wall plaster
- wavy plaster
- 12"x12" ceiling tile, pinhole
- 12"x12" ceiling tile, pegboard
- 12"x12" ceiling tile, smooth
- 12"x12" ceiling tile, deep fissure
- 12"x12" ceiling tile, computer board
- 12"x12" ceiling tile, pinhole mini-crater
- 2'x2' ceiling tile, pinhole fissure
- 2'x2' ceiling tile, pinhole mini-crater
- 2'x2' ceiling tile, nail hole fissure
- 2'x2' ceiling tile, pinhole crater
- 2'x4' ceiling tile, pinhole fissure
- 9"x9" floor tile, grey with aqua
- 9"x9" floor tile, olive with black
- 9"x9" floor tile, dark beige with charcoal and white
- 9"x9" floor tile, cream with brown
- 12"x12" floor tile, black with white
- 12"x12" floor tile, grey with peach and brown
- 12"x12" floor tile, pumpkin spice
- 12"x12" floor tile, olive with black and tan
- 12"x12" floor tile, terrazzo
- 12"x12" floor tile, white with charcoal
- fiberglass duct insulation
- red brick mortar
- concrete block mortar
- clay tile mortar
- sheetrock and taping compound
- canvass vibration joint
- baseboard adhesive
- canvass vibration joint
- brown flooring
- fiberglass batting with tar paper
- pipe putty
- fiberboard
- blown-in insulation
- stringboard
- radiator backing

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

- **floor tile adhesive**
- **ceiling tile adhesive**
- **canvass vibration joint**

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.

Debris from asbestos containing pipe insulation was discovered throughout the dirt crawl spaces in the Basement. Some soil has been covered with plastic. It is also presumed to be ACM. 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.

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.

Asbestos containing ceiling tiles were found in the following areas: Rooms 149/149A, 156 and 1st Floor Hallway. Proper Operation & Maintenance (O&M) procedures should be followed whenever working on or above these ceiling tiles.

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. As a result, the quantities listed reflect the visibility available at the time of the survey.

Samples taken of the fibrous fittings on fiberglass lines produced mixed results. As a result these materials are listed in the Appendices as being asbestos containing. Project specific sampling would be recommended to minimize abatement costs.

In Room B10A in the Basement it appears as if some abatement has taken place. Because DEH&S has no record of the abatement, the <4" fittings on fiberglass are listed in the Appendices as asbestos containing. Project specific sampling would be recommended to minimize abatement costs.

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 115A is a high voltage room and was not surveyed due to safety concerns.

**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
• floor tile & adhesive	<b>\$62,634</b>	<b>\$125,268</b>
• thermal system insulation	<b>59,119</b>	<b>75,190</b>
• ceiling tile adhesive	<b>59,880</b>	<b>119,760</b>
• ceiling tile	<b>2,700</b>	<b>5,400</b>
<b>TOTAL</b>	<b>\$184,333</b>	<b>\$325,618</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 626-2199.

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