October 11, 1993

REPORT:  Full Building Survey

TO:  Marilyn Rosberg, 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 - Williamson Hall
EH&S Project No:  152-93-135
Client Project No:  152-93-1401

Scope of Work:  A full building asbestos material survey was conducted September 27 through October 5, 1993.  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 Williamson Hall.

Project Description:  Sixty-nine (69) bulk samples of suspect ACM were collected on-site and sixty-seven (67) analyzed via polarized light microscopy (PLM) by Twin City Testing 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:

- 12"x12" floor tile, tan with brown and white
- 12"x12" floor tile, tan with grey
- transite pipe
- transite panels

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

- <4" fibrous pipe fitting insulation on fiberglass
• 4"-8" pink fibrous pipe insulation and associated pipe fitting insulation
• 4"-8" fibrous pipe fitting insulation on fiberglass
• white fibrous tank insulation
• 12'x12' ceiling tile, fissured
• 2'x2' ceiling tile, fissured pinhole
• 2'x4' ceiling tile, crater pinhole
• 12'x12' floor tile, grey with red and white
• 12'x12' floor tile, grey with salmon
• sheetrock and taping compound
• baseboard adhesive, brown
• concrete block mortar
• fiberglass batting
• concrete

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

• floor tile adhesive
• putty patching

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

Observations and Recommendations: A non-friable asbestos containing brown putty was found in various areas of Williamson Hall. The material was typically found as a filler around pipes running though walls. Because this material was found within some walls, it is possible the putty was not observed in all areas.

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.

<table>
<thead>
<tr>
<th>MATERIAL TYPE</th>
<th>LOW RANGE</th>
<th>HIGH RANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>transite piping &amp; panels</td>
<td>$12,460</td>
<td>$18,212</td>
</tr>
<tr>
<td>floor tile &amp; adhesive</td>
<td>3,448</td>
<td>6,896</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$15,908</td>
<td>$25,108</td>
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</tbody>
</table>

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.

Environmental Health and Safety (EH&S) recommends that air quality monitoring be conducted during any asbestos related project. 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.

Written By:

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