

July 22, 1994

REPORT: Full Building Survey

TO: Linda McCracken-Hunt, Project Development, 100 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, B-7 U-Tech Building,
1313 5th St. S.E., Minneapolis, MN 55414

SUBJECT: Asbestos Material Survey - Child Development
EH&S Project No: 019-94-055
Client Project No: For Data Base

Scope of Work: A full building asbestos material survey was conducted by Nova Environmental Services on May 2 through May 20, 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 Child Development.

Project Description: One hundred fifty-four (154) bulk samples of suspect ACM were collected on-site and one hundred thirty-one (131) analyzed via polarized light microscopy (PLM) by Nova Environmental Services 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" felt with tar insulation and associated pipe fitting insulation
- <4" fibrous pipe fitting insulation on fiberglass
- 4"-8" white fibrous pipe insulation and associated pipe fitting insulation
- white fibrous tank insulation
- 2'x2' ceiling tile, pinhole worm
- 2'x2' ceiling tile, fissured
- 2'x2' ceiling tile, five hole pattern
- 9"x9" floor tile, grey with tan
- 9"x9" floor tile, dark grey with white
- 9"x9" floor tile, light grey with white
- 9"x9" floor tile, tan
- 9"x9" floor tile, white with brown streaks
- 9"x9" floor tile, grey with white streaks
- 9"x9" floor tile, white with grey streaks
- 9"x9" floor tile, white with brown specks
- 9"x9" floor tile, beige
- 12"x12" floor tile, white with brown streaks
- 12"x12" floor tile, white
- 12"x12" floor tile, white with green

- **12"x12" floor tile, mocha**
- **12"x12" floor tile, black with white streaks**
- **12"x12" floor tile, tan with brown and white**
- **12"x12" floor tile, grey marbled**
- **12"x12" floor tile, beige**
- **white ceiling tile residue**

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

- <4" white fibrous pipe insulation and associated pipe fitting insulation
- <4" pink fibrous pipe insulation and associated pipe fitting insulation
- 4"-8" fibrous pipe fitting insulation on fiberglass
- spray-on fireproofing
- ceiling plaster
- wall plaster
- 12"x12" ceiling tile, pegboard
- 12"x12" wall tile, fissured
- 12"x12" ceiling tile, polka dot
- 2'x2' ceiling tile, stringboard
- 2'x2' ceiling tile, cratered
- 2'x2' ceiling tile, random crater
- 2'x4' ceiling tile, fissured
- 2'x4' ceiling tile, small fissured
- ceiling tile, plain border
- 9"x9" floor tile, mocha
- 9"x9" floor tile, grey with grey streaks
- 12"x12" floor tile, tan
- floor tile, black
- fiberglass duct insulation
- brown linoleum
- baseboard adhesive, brown
- sheetrock and taping compound
- concrete block mortar
- red brick mortar
- clay tile mortar
- stone mortar
- canvass vibration joints
- 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 to excellent shape and do not pose significant health concerns to the building occupants.
2. Facilities Management;
Samples taken of fibrous fittings on fiberglass produced mixed results. As a result, all <4" fibrous fittings on fiberglass are listed as positive. It appears as if occupied areas of the South Building may have been abated. Therefore, project specific sampling can be conducted in order to minimize abatement costs. Also, any pipe

fittings on fiberglass discovered in areas inaccessible at the time of the survey should be considered asbestos containing until testing proves otherwise.

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 any 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.

Asbestos containing ceiling tiles were found in Rooms 10, 10A, 25, 25A, 35, 38, 108, and 113. Proper Operation & Maintenance (O&M) procedures should be followed whenever working on or above these ceiling tiles.

3. General;

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 limited access points in the plaster ceilings and walls, some pipe chases were completely inaccessible or only slightly visible. 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, or prior to roof removal or demolition.

Rooms 53B, 53C and 76 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	\$41,411	\$52,102
• floor tile & adhesive	48,308	92,616
• ceiling tile	4,299	8,598
TOTAL	\$94,018	\$153,316

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.

Written By:

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

Reviewed By:

Roger L. Jeremiah
Environmental Health & Safety
Asbestos Group Manager

cc: John Sundsmo