

May 7, 1993

MEMORANDUM

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

FROM: John Allen, Asbestos Group, Environmental Health and Safety (EH&S), B-7
U-Tech Building, 1313 5th St. SE, Minneapolis, MN 55414

SUBJECT: Asbestos Material Survey - Pillsbury Hall
EH&S Project No: 002-93-055
Client Project No: 002-92-1654

Scope of Work: A full building asbestos material survey was conducted April 6 through April 19, 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 scope 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 Pillsbury Hall.

Project Description: Two hundred fifteen (215) bulk samples of suspect ACM were collected on-site and one hundred fifty-four (154) analyzed via polarized light microscopy (PLM) by Nova Environmental 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" felt with tar pipe insulation and associated pipe fitting insulation
- <4" fiberglass with tar pipe insulation and associated pipe fitting insulation
- <4" fibrous pipe fitting insulation on fiberglass
- 4"-8" white fibrous pipe insulation and associated pipe fitting insulation
- 4"-8" felt with tar pipe insulation and associated pipe fitting insulation
- 2'x2' ceiling tile, pinhole
- 2'x2' ceiling tile, fissured pinhole
- 9"x9" floor tile, white with grey and blue
- 9"x9" floor tile, white with blue
- 9"x9" floor tile, white with olive swirls
- 9"x9" floor tile, white with olive streaks
- 9"x9" floor tile, white with grey
- 9"x9" floor tile, white with green
- 9"x9" floor tile, white with orange

- 9"x9" floor tile, grey with white and dark grey
- 9"x9" floor tile, grey with white
- 9"x9" floor tile, light grey with grey
- 9"x9" floor tile, light grey with black and white
- 9"x9" floor tile, light grey with dark grey and white
- 9"x9" floor tile, dark grey with white
- 9"x9" floor tile, olive with white and black
- 9"x9" floor tile, olive with white and brown
- 9"x9" floor tile, olive with white
- 9"x9" floor tile, beige with brown
- 9"x9" floor tile, beige with cream
- 9"x9" floor tile, light yellow with rust
- 9"x9" floor tile, tan with brown
- 9"x9" floor tile, cream with light brown
- 9"x9" floor tile, cranberry with beige
- 12"x12" floor tile, grey with white and dark grey
- 12"x12" floor tile, light grey with black and white
- 12"x12" floor tile, olive with brown and white
- 12"x12" floor tile, white with grey and blue
- 12"x12" floor tile, beige with white
- sheetrock taping compound
- black tar on duct
- transite panels
- blackboard
- white fibrous cloth

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

- 4"-8" fibrous pipe fitting insulation on fiberglass
- ceiling plaster
- wall plaster
- 12"x12" ceiling tile, smooth white
- 12"x12" ceiling tile, holed
- 12"x12" ceiling tile, fissured
- 2'x2' ceiling tile, fissured nailhole
- 2'x2' ceiling tile, nail and pinhole
- 2'x2' ceiling tile, crater pinhole
- 2'x4' ceiling tile, fissured
- 9"x9" floor tile, grey with black and white
- 12"x12" floor tile, grey with black and white
- 12"x12" floor tile, grey with blue and white
- 12"x12" floor tile, grey with dark grey
- 12"x12" floor tile, olive with black and white
- 12"x12" floor tile, tan with grey
- 2'x2' floor tile, black with white
- linoleum, green
- baseboard adhesive, brown
- black lab top
- vibration joints
- concrete block mortar
- red clay tile mortar
- stringboard
- fiberboard
- exterior rock mortar
- ceiling tile adhesive, brown

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: Asbestos containing white fibrous debris was found on the dirt floors throughout the sub-basement. Extensive cleaning of the dirt flooring would need to take place in order to deregulate the sub-basement.

The asbestos containing sheetrock taping compound cannot be removed separately from the non-asbestos containing sheetrock walls, thus, if impacted, entire sheetrock walls would have to be abated as ACM.

Transite panels were found stored in both the sub-basement and the attic. It is recommended that this material be properly disposed of by qualified personnel.

Rooms 18 C on the ground floor and 215 A on the second floor were inaccessible.

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.

<u>MATERIAL TYPE</u>	<u>LOW RANGE</u>	<u>HIGH RANGE</u>
• thermal system insulation	\$73,373	\$94,171
• sheetrock & taping compound	39,744	39,744
• dirt cleaning & gypcrete	30,000	40,000
• black tar on duct	13,540	20,310
• transite panels	2,270	3,405
• ceiling tile	14,940	29,880
• floor tile & adhesive	47,284	94,568
TOTAL	\$221,151	\$322,078

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.

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