June 29, 1995

REPORT: Limited Building Survey, Sanford Tower

TO: Don Hau, Project Development, 400 Shops Building, 319 15th Avenue SE, Minneapolis, MN 55414

FROM: Patrick Leahy and Michael Buck, Asbestos Group, Environmental Health and Safety (EH&S), 2331 University Avenue SE, Suite #153, Minneapolis, MN 55414

SUBJECT: Asbestos Material Survey - Sanford Tower
EH&S Project No: 056-95-056
Client Project No: 028-95-1190

Summary: A limited building asbestos material survey was conducted May 30, 1995 through June 20, 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 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 the above mentioned section of the Sanford Tower Building. The scope of this report is limited to the scope of work as defined in the work request dated May 22, 1994.

Project Description: One hundred nine (109) bulk samples of suspect ACM were collected on-site and seventy-eight (78) analyzed via polarized light microscopy (PLM) by Environmental Health and Safety for asbestos content. Results of analyses are listed in Appendix I of this report. Appendix I is formatted to provide an 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 listing of only those suspect materials that tested greater than one percent (>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 suspect friable or potentially friable materials tested positive for ACM:

- **<4" white fibrous (WF) pipe insulation (PI) (1)**
- **<4" pipe fitting insulation (PFI) on WF PI (2)**
- **<4"PFI on FG w/tar PI (8)**
- **<4" PFI on FG PI (10)**
- **4-8" WF PI (11)**
- **4-8" PFI on WF PI (12)**
- **4-8" PFI on FG PI (20)**
- **9-14" WF PI (21)**
- **9-14” PFI on WF PI (22)**
- **<4” PFI on Black Foam PI (25)**
- **4-8” FG w/white fibrous PI (28)**
- **4-8” PFI on FG w/white fibrous PI(29)**
- **WF duct insulation (30)**
- **Textured spray-on (33)**
- **12x12” gray Floor Tile (FT) (49)**
- **Top of Tank Insulation on Asbestos Free Tanks (52)**

The following suspect friable or potentially friable materials tested to contain trace amounts of ACM:

- 4-8” FG w/tar PI (17)

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

- <4" fiberglass (FG) w/tar PI (7)
- <4" FG w/tar PI (9)
- 4-8" PFI on FG PI (19)
- Duct access hatch liner (32)
- ceiling plaster (34)
- wall plaster (35)
- red brick mortar (36)
- ceramic tile mortar (37)
- concrete block mortar (38)
- acoustical wall panels (41)
- pipe putty (42)
- exposed aggregate walls (45)
- ceramic tile mortar (floors) (46)
- vibration cloth (47)
- 4-8" PFI on Asbestos Free Line (50)
- PFI on valve on Asbestos Free Line (51)

The following non-friable with low potential to become friable materials tested positive for ACM:

- **sink liner (48)**
- **floor tile adhesive (49.5)**

The following non-friable with low potential to become friable materials tested none detected (ND) as ACM:

- baseboard (BBA) adhesive (40)

Observations and Recommendations: All Rooms containing plaster ceilings had limited visibility due to location of access hatches beneath ventilation duct work.

The suspect materials that tested to contain trace amounts of asbestos do not meet the strict definition of asbestos-containing materials. However, as with any dust creating activity, precautions and work practices should be implemented to minimize nuisance dust levels. Dust suppression techniques (misting the air with water and keeping materials wet during general construction activities) should be required of the general contractor.

In Mechanical Room #53, project specific sampling is recommended for all thermal system insulation labeled Asbestos Free. This is due to the positive results obtained from the tank top insulation that is demarcated Asbestos Free.

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.

In Room #75, a fire door is present leading to the crawlspace. This door was not sampled and is assumed to be asbestos-containing due to prior labeling.

White fibrous debris (1 SF) was noted on the survey in Pipe Chase #784. This material should be HEPA vacuumed and wet wiped by Facilities Management Asbestos Unit. Contact John Sundsmo at 626-0313.

Cost Information: The approximate cost for the removal of all ACM is itemized below. These figures are based on the assumption that all ACM is going to be removed.

MATERIAL TYPE	LOW RANGE	HIGH RANGE
• thermal system insulation	**$52,972**	**$69,814**
• fibrous debris	**$50**	**$100**
• textured spray-on	**$462,960**	**$720,160**
• floor tile & adhesive	**$3,200**	**$6,400**
• sink liner	**$50**	**$100**

TOTAL	**$519,232**	**$796,574**

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 this project is approximately $51,00 0to $81,500. The cost of air monitoring is a function of contractor on-site days and may vary greatly from the above figures as a result. 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 Michael Buck at 627-4911 or Patrick Leahy at 627-4909.

Written By:

Michael W. Buck
Environmental Health & Safety
Asbestos Group Principal Technician

Written By:

Patrick F. Leahy
Environmental Health & Safety
Asbestos Group Principal Technician

Reviewed By:

Roger L. Jeremiah
Environmental Health & Safety
Asbestos Group Manager

cc: Steve Knutson, Wolfgram/Knutson
David Rasch, General Maintenance Supervisor, Sanford Hall