NARRATIVE REPORT

1.0 BUILDING INFORMATION

Longwell Hall was originally constructed in 1949 and moved to its current location around 1997; although specific dates are not available, small renovations are evident.

Longwell Hall is a single-story, 2,400 ft^2 building which primarily serves as office areas and work areas for maintenance personnel. The Maintenance Butler Building (A032) is attached to the east side of the Longwell Building and is reported separately.

The interior floor finishes included concrete and floor tile; the interior wall finishes included gypsum wallboard and fiberboard; and the interior ceiling finishes included gypsum wallboard, ceiling tile, and fiberboard. The roofing system is a peaked metal roof and the exterior of the structure is metal.

Piping systems were not present; the building does not utilize domestic water or steam. HVAC systems in the building consisted of small unit heaters (natural gas).

2.0 ASBESTOS SURVEY INFORMATION

The Longwell Building was surveyed as part of a larger project on NDSU's Fargo, ND Campus. This report is part of "Volume 5" of a nine volume series. This report includes building specific information only; please refer to the opening section of "Volume 5" for methodologies, definitions, and other pertinent supporting information.

A total of 29 samples were collected from suspect asbestos-containing materials (ACM) from the Longwell Building on September 20, 2007. Laboratory analysis results indicate **14 of these samples tested positive for asbestos**.

2.1 Suspect Materials Identified and Sampled

Ceiling Tile (3 types)
Joint Compound
Window Caulk
Window Glazing on Door
Exterior Building Seam Caulk (3 types)
Exterior Window Caulk
Exterior Foundation Tar Coating (2 types)
Asphalt Shingle
Roof Tarpaper
Gypsum Wallboard (2 types)
Fiberboard
Base Caulk
Residual Caulk (on metal siding)
Exterior Penetration Putty (3 types)
Exterior Window Glazing
Exterior Corrugated Metal Seam Filler
Roof Flashing

The Asbestos Bulk Sample Results Table includes asbestos sampling data.

2.2 Asbestos Containing Materials

Joint Compound
Transite Ceiling Tile
Window Glazing on Door
Exterior Window Glazing
Residual Caulk (on metal siding)

Building Seam Caulk (between wood siding and metal siding)
Base Caulk
Exterior Window Caulk
Exterior Window Glazing
Exterior Corrugated Metal Seam Filler
Exterior Penetration Putty (on electrical conduit)
Roof Flashing
9" Floor Tile and Mastic (assumed)

The ACM Locations/ Friable Materials Assessments Table includes ACM locations data.

2.3 Cost Estimates

Legend Technical Services Inc. estimates abatement costs (removal & disposal) of ACM for the Longwell Building as follows:

ACM	QUANTITY	UNIT COST	TOTAL COST
Asbestos Floor Tile and Mastic	110 ft^2	\$4.00/ ft^2	\$440.00
Asbestos Joint Compound	1,604 ft^2	\$5.00/ ft^2	\$8,020.00
Asbestos Ceiling Tile	1 ea	\$60.00/ ft^2	\$60.00
Asbestos Caulk (residual, building and base)	44 ft	\$7.50/ ft	\$330.00
Asbestos Window Glazing (all types)	5 ea	\$225.00/ ea	\$1,125.00
Asbestos Window Caulk	4 ea	\$125.00/ ea	\$500.00
Asbestos Penetration Putty	1 ea	\$60.00/ ea	\$60.00
Asbestos Seam Filler	61 ft	\$20.00/ ft	\$1,220.00
Asbestos Roof Flashing	14 ft^2	\$25.00/ ft^2	\$350.00
Total Estimated Abatement Costs:			**\$12,105.00**

2.4 Survey Notes

Several areas of the Longwell Building are used for storage of surplus or replacement floor tile and ceiling tile; including ceiling tile in the ceiling of the room 101 being used for ordering information. For the purpose of this survey, these materials are not considered building materials and were not sampled or quantified by LEGEND during the asbestos survey. LEGEND recommends assuming these materials to be ACM.

LEGEND TECHNICAL SERVICES, INC.

ACM LOCATIONS/FRIABLE MATERIALS ASSESSMENTS TABLE

LEGEND No. 0700048 (NDSU)
LONGWELL BUILDING (BUILDING A047)

ROOM/ ACM	ASBESTOS TYPE	EST. QUANTITY	ACM TYPE	MATERIAL CONDITION	DAMAGE POTENTIAL LOW MOD HIGH	ASSESS. CAT.[1]	NOTES
East Entry							
Residual Caulk (on metal siding)	2% Chrysotile	10 ft	Non-Friable Miscellaneous	N/A*	N/A*	N/A*	The caulk is in the southwest corner of the entry. It is on the metal siding (residual).
Room 101							
Joint Compound	3% Chrysotile	663 ft^2	Non-Friable Surfacing	N/A*	N/A*	N/A*	The joint compound is on the west wall and the in the northeast corner of the room.
Transite Ceiling Tile	15% Chrysotile	1 ea	Non-Friable Miscellaneous	N/A*	N/A*	N/A*	The transite ceiling tile is along the east end of the room, it is the ceiling tile the natural gas unit heater's exhaust passes through.
Room 101B							
Joint Compound	3% Chrysotile	446 ft^2	Non-Friable Surfacing	N/A*	N/A*	N/A*	The joint compound is on all walls and the ceiling in this room.
9" Floor Tile and Mastic	Assumed	110 ft^2	Non-Friable Miscellaneous	N/A*	N/A*	N/A*	The floor tile and mastic were assumed to be ACMs.
Room 101A1							
Joint Compound	3% Chrysotile	495 ft^2	Non-Friable Surfacing	N/A*	N/A*	N/A*	The joint compound is on the east wall in this room.
Window Glazing on Door	2% Chrysotile	1 ea	Non-Friable Miscellaneous	N/A*	N/A*	N/A*	The door is in the southeast corner of the room.

* = Non-Friable materials were not assessed

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ACM LOCATIONS/FRIABLE MATERIALS ASSESSMENTS TABLE

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Exterior							
Window Glazing	2% Chrysotile	4 ea	Non-Friable Miscellaneous	N/A*	N/A*	N/A*	The glazing is on an older style window, there are 2 on the west end and 2 on the north end.
Window Caulk	2% Chrysotile	4 ea	Non-Friable Miscellaneous	N/A*	N/A*	N/A*	The caulk is around an older style window, there are 2 on the west end and 2 on the north end.
Penetration Putty (on electric conduit)	10% Chrysotile	1 ea	Non-Friable Miscellaneous	N/A*	N/A*	N/A*	The penetration is on the east wall on an electric conduit by the northeast office.
Building Seam Caulk	3% Chrysotile	24 ft	Non-Friable Miscellaneous	N/A*	N/A*	N/A*	The building seam caulk is on the west end of the building where the wood siding (from an older larger garage door) meets the metal siding.
Base Caulk	3% Chrysotile	10 ft	Non-Friable Miscellaneous	N/A*	N/A*	N/A*	The base caulk is on the west end of the building where the concrete walkway meets the building north of the garage door.
Corrugated Metal Seam Filler (at exposed ends)	35% Chrysotile	61 ft	Non-Friable Miscellaneous	N/A*	N/A*	N/A*	It is under 4 windows on the north end, under 3 on the south end, around 2 on the west end, and around the wood siding on the west end.
Roof							
Flashing	15% Chrysotile	14 ft[2]	Non-Friable Miscellaneous	N/A*	N/A*	N/A*	The flashing is connecting the east entry roof to the main building.

[1]Assessment Categories:
1) Damaged or Significantly Damaged TSI ACM
2) Damaged Friable Surfacing ACM
3) Significantly Damaged Friable Surfacing ACM
4) Damaged or Significantly Damaged Friable Miscellaneous ACM
5) ACM with Potential for Damage
6) ACM with Potential for Significant Damage
7) Any Remaining Friable ACM or Friable Suspected ACM

End

* = Non-Friable materials were not assessed