NARRATIVE REPORT

1.0 **BUILDING INFORMATION**

Burgum Hall was originally constructed in 1961; the building has had no major renovations.

Burgum Hall is a four-story, 35,266 ft² building which primarily serves as dormitory areas for students.

The interior floor finishes included ceramic tile, floor tile, concrete, and carpet; the interior wall finishes included ceramic tile, plaster, concrete, gypsum wallboard, concrete block, and brick; and the interior ceiling finishes included ceiling tile, concrete, plaster, and gypsum wallboard. The roofing system is a flat rubber-membrane roof and the exterior of the structure is brick.

The piping systems were insulated; fiberglass insulation (both with and without hard fittings) is located in the building. Steam enters the building via a tunnel into room 6 and domestic water enters the building in room 8. HVAC systems located in the building consisted of steam radiators and a forced air furnace equipped with heating/cooling coils.

2.0 ASBESTOS SURVEY INFORMATION

Burgum Hall was surveyed as part of a larger project on NDSU's Fargo, ND Campus. This report is part of "Volume 6" of a nine volume series. This report includes building specific information only; please refer to the opening section of "Volume 6" for methodologies, definitions, and other pertinent supporting information.

LEGEND was granted full access to Burgum Hall during the initial walk-through and sampling of the building. During subsequent walk-throughs of the building, for resampling and reporting purposes, LEGEND was granted access to the common areas and to 2-4 dormitory rooms per floor, only. For the remainder of the dormitory rooms, LEGEND identified the locations of ACMs using survey notes taken during the initial walk-through of the building.

A total of 80 samples were collected from suspect asbestos-containing materials (ACM) from Burgum Hall on June 11, 2007 and an additional 4 samples were collected on February 26, 2008. Laboratory analysis results indicate **10 of these samples tested positive for asbestos**.

2.1 Suspect Materials Identified and Sampled

- Hard Fittings on Fiberglass Insulation (2 types) Floor Tile (5 types) Ceiling Tile (5 types) Fiberglass Panel Adhesive Carpet Mastic (2 types) Sandy Material (pouring out of wall) Wall Patch Material Hard Plaster- Basecoat (3 types) Joint Compound Exterior Door Caulk Exterior Building Seam Caulk Hard Pack on Fiberglass Insulation
- Encapsulant on Fiberglass Insulation Floor Tile Mastic (5 types) Sink Undercoating (2 types) Baseboard Adhesive (4 types) Window Caulk Acoustical Texture Hard Plaster- Skimcoat (3 types) Tar Pipe Wrap Gypsum Wallboard Exterior Overhand Surfacing Exterior Window Caulk

The Asbestos Bulk Sample Results Table includes asbestos sampling data.

2.2 Asbestos Containing Materials

Hard Fittings on Fiberglass Insulation (1 type) Mastic for 12" Pink Floor Tile Mastic for 12" Tan/Gray/Brown Mottled Floor Tile Black Sink Undercoating Mastic for 12" Gray Floor Tile with Dark Gray Marks Mastic for 12" Beige Floor Tile with Gray/White Streaks 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 Burgum Hall as follows:

ACM	QUANTITY	UNIT COST	TOTAL COST
Asbestos Hard Fittings on Fiberglass Insulation	26 ea	\$60.00/ea	\$1,560.00
Asbestos Floor Tile and/or Mastic	28,732 ft ²	\$4.00/ft ²	\$114,928.00
Asbestos Sink Undercoating	1 ea	\$150.00/ea	\$150.00
Total Estimated Abater	ment Costs:		\$116,638.00

2.4 Survey Notes

LEGEND sampled Hard Fittings on Fiberglass Insulation on domestic water pipes, steam pipes, and chilled water pipes. The domestic water pipes and steam pipes were installed in 1961 during the construction of the building; they were positive for asbestos. The chilled water pipes were installed in 1966 during an HVAC upgrade; they were negative for asbestos.

During the survey, LEGEND identified a small area on the building diagram on 1st, 2nd, and 3rd floors that is now inaccessible. The area is in the east hallway on each floor next to the north stairway; it may have been an old telephone booth. The areas have since been closed up with gypsum wallboard. LEGEND anticipates 9" floor tile and mastic will be identified in these areas (10 ft² each) during renovation activities.

LEGEND was able to visually quantify hard fittings on fiberglass insulation throughout the basement on steam and domestic water pipes. However, on floors 1-3 inaccessible ceilings and pipe chases prevented LEGEND from verifying the presence of possible additional hard fittings. LEGEND assumes additional hard fittings will be discovered during renovation or demolition activities on the water pipes supplying the laundry rooms, custodial rooms, and bathrooms. LEGEND recommends assuming an additional 50-100 hard fittings on fiberglass insulation on each of the 1st, 2nd, and 3rd floors.

LEGEND No. 0700048 (NDSU) Burgum Hall (BUILDING A056)

ROOM/ ACMS	ASBESTOS TYPE	EST. QUANTITY	ACMS TYPE	MATERIAL CONDITION	DAMAGE 등 종 표 POTENTIAL ^동 용 표	ASSESS. CAT. ¹	NOTES				
Room 2 (and baseme	Room 2 (and basement hallway) Abated Summer 2015										
Hard Fittings on Fiberglass Insulation .	25% Chrysotile Abated August 20	7 fittings		Good	PhysicalImage: Image: Imag	6	The hard fittings on fiberglass insulation run along the east and south walls.				
9" Floor Tile and Mastic	Assumed	1,073 ft ²	Non-friable Miscellaneous	N/A*	N/A*	N/A*	The 9" floor tile and mastic were assumed to be ACMs.				
Black Sink Undercoating	10% Chrysotile	1 sink	Non-friable Miscellaneous	N/A*	N/A*	N/A*	The asbestos containing sink undercoating is on the west wall.				

Room 2B

Hard Fittings on Fiberglass Insulation	25% Chrysotile	6 fittings	Friable TSI	Good	Air Erosion		The hard fittings on fiberglass insulation are above the ceiling tile.
9" Floor Tile and Mastic Abated	Assumed Summer 2015	130 ft ²	Non-friable Miscellaneous	N/A*	N/A*	N/A*	The 9" floor tile and mastic were assumed to be ACMs.

Room 4 Abated Summer 2015

9" Floor	Tile and	Assumed	90 ft ²	Non-friable	N/A*	N/A*	N/A*	The 9" floor tile and mastic were assumed to be
Mastic				Miscellaneous				ACMs.

Room 5 Abated Summer 2015

9" Floor	file and	Assumed	64 ft ²	Non-friable	N/A*	N/A*	N/A*	The 9" floor tile and mastic were assumed to be
Mastic				Miscellaneous				ACMs.

LEGEND No. 0700048 (NDSU) Burgum Hall (BUILDING A056)

ROOM/ ACMS	ASBESTOS TYPE	EST. QUANTITY	ACMS TYPE	MATERIAL CONDITION	DAMAGE POTENTIAL	HIGH MOD LOW	ASSESS. CAT. ¹	NOTES
Room 6								
Hard Fittings on Fiberglass Insulation	25% Chrysotile	1 fitting	Friable TSI	Good	Physical Air Erosion Vibration		6	The hard fitting on fiberglass line is along the south wall.
Room 7	·	·						

Hard Fittings on	25% Chrysotile	4 fittings	Friable	Good	Physical	6	The hard fittings on fiberglass line are along the
Fiberglass Insulation			TSI		Air Erosion		northwest wall.
					Vibration		

Room 8

Hard Fittings on Fiberglass Insulation	25% Chrysotile	8 fittings	Friable TSI	Good	Physical □□■ Air Erosion ■□□ Vibration □■□	6	The hard fittings on fiberglass line are along the east wall.
9" Floor Tile and Mastic Abated St	Assumed ummer 2015	240 ft ²	Non-friable Miscellaneous	N/A*	N/A*	N/A*	The 9" floor tile and mastic were assumed to be ACMs.

Basement Stairway

9" Floor Tile and	Assumed	32 ft ²	Non-friable	N/A*	N/A*	N/A*	The 9" floor tile and mastic were assumed to be
Mastic			Miscellaneous				ACMs.

Room 100 Abated Summer 2015

9" Floor Tile and	Assumed	176 ft ²	Non-friable	N/A*	N/A*	N/A*	The 9" floor tile and mastic were assumed to be
Mastic			Miscellaneous				ACMs; they are under the carpet in this room.

Dorm Rooms 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, and 123 Abated Summer 2015

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9" Floor Tile and Ass	sumed 176 ft ²	Non-friable	N/A*	N/A*	N/A*	The 9" floor tile and mastic in the dorm rooms
Mastic	each	Miscellaneous				were assumed to be ACMs.

LEGEND No. 0700048 (NDSU) Burgum Hall (BUILDING A056)

ROOM/ ACMS	ASBESTOS TYPE	EST. QUANTITY	ACMS TYPE	MATERIAL CONDITION	DAMAGE 등 종 분 POTENTIAL ^{등 용 문}	ASSESS. CAT. ¹	NOTES
Dorm Room 110 No	ow room 127 May	2012					
9" Floor Tile and Mastic	Assumed	358 ft ²	Non-friable Miscellaneous	N/A*	N/A*	N/A*	The 9" floor tile and mastic were assumed to be ACMs; they are under the carpet in this room.
9" Floor Tile and Mastic	Assumed	25 ft ²	Non-friable Miscellaneous	N/A*	N/A*	N/A*	The 9" floor tile and mastic were assumed to be ACMs; they are under a layer of 12" floor tile in the bathroom.
Mastic for 12" Pink Floor Tile	8% Chrysotile	60 ft²	Non-friable Miscellaneous	N/A*	N/A*	N/A*	The mastic contains asbestos; the floor tile is negative in the kitchen.

Dorm Room 124 Abated Summer 2015

9" Floor Tile and	Assumed	297 ft ²	Non-friable	N/A*	N/A*	N/A*	The 9" floor tile and mastic in the dorm rooms
Mastic			Miscellaneous				were assumed to be ACMs.

Dorm Room 125 Abated Summer 2015

9" Floor Tile and	Assumed	120 ft ²	Non-friable	N/A*	N/A*	N/A*	The 9" floor tile and mastic in the dorm rooms
Mastic			Miscellaneous				were assumed to be ACMS.

Room 126 Abated March 2008

9" Floor Tile and	Assumed	440 ft ²	Non-friable	N/A*	N/A*	N/A*	The 9" floor tile and mastic were assumed to be
Mastic			Miscellaneous				ACMs; they are under the carpet in this room.

Room 128 Abated June 2015

9" Floor Tile and	Assumed	25 ft ²	Non-friable	N/A*	N/A*	N/A*	The 9" floor tile and mastic were assumed to be
Mastic			Miscellaneous				ACMs.

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ROOM/ ACMS	ASBESTOS TYPE	EST. QUANTITY	ACMS TYPE	MATERIAL CONDITION	DAMAGE	ASSESS. CAT. ¹	NOTES
Room 129 Abated	Summer 2015						
Mastic for 12" Gray Floor Tile w/ Dark Gray Marks	5% Chrysotile	145 ft²	Non-friable Miscellaneous	N/A*	N/A*	N/A*	The mastic contains asbestos; the floor tile was negative.
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Room 131 Abated Summer 2015

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Mastic for 12" Gray	5% Chrysotile	35 ft ²	Non-friable	N/A*	N/A*	N/A*	The mastic contains asbestos; the floor tile was
Floor Tile w/ Dark			Miscellaneous				negative.
Gray Marks							

Room 132 Abated June 2014

	Floor Tile and	Assumed	1,250 ft ²	Non-friable	N/A*	N/A*	N/A*	The 9" floor tile and mastic were assumed to be
ħ	vlastic			Miscellaneous				ACMs; they are under the carpet in this room.

Room 142

9" Floor Tile and	Assumed	279 ft ²	Non-friable	N/A*	N/A*	N/A*	The 9" floor tile and mastic were assumed to be
Mastic			Miscellaneous				ACMs.

Room 144

9" Floor Tile and	Assumed	220 ft ²	Non-friable	N/A*	N/A*	N/A*	The 9" floor tile and mastic were assumed to be
Mastic			Miscellaneous				ACMs.

9" Floor Tile and	Assumed	96 ft ²	Non-friable	N/A*	N/A*	N/A*	The 9" floor tile and mastic were assumed to be
Mastic			Miscellaneous				ACMs.

LEGEND No. 0700048 (NDSU) Burgum Hall (BUILDING A056)

ROOM/ ACMS	ASBESTOS TYPE	EST. QUANTITY	ACMS TYPE	MATERIAL CONDITION	DAMAGE 등 종 표 POTENTIAL ^{등 중 표}	ASSESS. CAT. ¹	NOTES
Room 150 Abated	Summer 2015						
9" Floor Tile and Mastic	Assumed	72 ft ²	Non-friable Miscellaneous	N/A*	N/A*	N/A*	The 9" floor tile and mastic were assumed to be ACMs.
Room 156 Abated	Summer 2015		1	1			,
9" Floor Tile and Mastic	Assumed	28 ft ²	Non-friable Miscellaneous	N/A*	N/A*	N/A*	The 9" floor tile and mastic were assumed to be ACMs.
Room 158 Abated	Summer 2015		1				
9" Floor Tile and Mastic	Assumed	54 ft ²	Non-friable Miscellaneous	N/A*	N/A*	N/A*	The 9" floor tile and mastic were assumed to be ACMs.
Room 160 Abated	Summer 2015	7	I				
9" Floor Tile and Mastic	Assumed	42 ft ²	Non-friable Miscellaneous	N/A*	N/A*	N/A*	The 9" floor tile and mastic were assumed to be ACMs.
1 st . Floor Elevator En	trv Abated Sumn	ner 2015	·		<u> </u>		
9" Floor Tile and Mastic	Assumed	24 ft ²	Non-friable Miscellaneous	N/A*	N/A*	N/A*	The 9" floor tile and mastic were assumed to be ACMs.
Hallway 188 (includi	ng all hallways and	Abated Apri	l 2008	nd the storage	closet by room 111)	Abated S	Summer 2015
9" Floor Tile and Mastic	Assumed	2,182 ft ²	Non-friable Miscellaneous	N/A*	N/A*	N/A*	The 9" floor tile and mastic were assumed to be ACMs.

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ROOM/ ACMS ASBESTOS TYPE EST. QUANTITY ACMS TYPE MATERIAL CONDITION DAMAGE 등 등 표 오이 만 TIAL ASSESS. CAT. ¹ NOTES

Dorm Rooms 201, 215, and 230

ſ	9" Floor Tile and	Assumed	297 ft ²	Non-friable	N/A*	N/A*	N/A*	The 9" floor tile and mastic were assumed to be
	Mastic		each	Miscellaneous				ACMs.

Dorm Rooms 202, 203, 204, 205, 206, 208, 209, 210, 211, 212, 213, 214, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, and 229

9" Floor Tile and	Assumed	176 ft ²	Non-friable	N/A*	N/A*	N/A*	The 9" floor tile and mastic were assumed to be
Mastic		each	Miscellaneous				ACMs.

Room 207

Mastic for 12"	5% Chrysotile	176 ft ²	Non-friable	N/A*	N/A*	N/A*	The mastic contains asbestos; the floor tile is
Tan/Gray/Brown			Miscellaneous				negative.
Mottled Floor Tile							

Room 216

Mastic for 12" Beige	5% Chrysotile	297 ft ²	Non-friable	N/A*	N/A*	N/A*	The mastic contains asbestos; the floor tile is
Floor Tile with			Miscellaneous				negative.
Gray/White Streaks							

Room 231

9" Floor Tile and	Assumed	440 ft ²	Non-friable	N/A*	N/A*	N/A*	The 9" floor tile and mastic were assumed to be
Mastic			Miscellaneous				ACMs; they are under the carpet in this room.

9" Floor Tile and	Assumed	279 ft ²	Non-friable	N/A*	N/A*	N/A*	The 9" floor tile and mastic were assumed to be
Mastic			Miscellaneous				ACMs.

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ROOM/ ACMS	ASBESTOS TYPE	EST. QUANTITY	ACMS TYPE	MATERIAL CONDITION	DAMAGE	ASSESS. CAT. ¹	NOTES
Room 244							
9" Floor Tile and Mastic	Assumed	220 ft ²	Non-friable Miscellaneous	N/A*	N/A*	N/A*	The 9" floor tile and mastic were assumed to be ACMs.
Room 246		1	1	1	L	-	
9" Floor Tile and Mastic	Assumed	96 ft ²	Non-friable Miscellaneous	N/A*	N/A*	N/A*	The 9" floor tile and mastic were assumed to be ACMs.

Room 250

9" Floor Tile and	Assumed	72 ft ²	Non-friable	N/A*	N/A*	N/A*	The 9" floor tile and mastic were assumed to be
Mastic			Miscellaneous				ACMs.

Room 252

9" Floor Tile and	Assumed	10 ft ²	Non-friable	N/A*	N/A*	N/A*	The 9" floor tile and mastic were assumed to be
Mastic			Miscellaneous				ACMs.

Room 254

9" Floor Tile and	Assumed	28 ft ²	Non-friable	N/A*	N/A*	N/A*	The 9" floor tile and mastic were assumed to be
Mastic			Miscellaneous				ACMs.

Γ	9" Floor Tile and	Assumed	54 ft ²	Non-friable	N/A*	N/A*	N/A*	The 9" floor tile and mastic were assumed to be
	Mastic			Miscellaneous				ACMs.

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EST. QUANTITY ACMS TYPE MATERIAL DAMAGE 등 몰 ASSESS. CONDITION POTENTIAL 온 문 문 ASSESS. CAT. ¹ NOTES
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2nd Floor Elevator Entry

9" Floor Tile and	Assumed	24 ft ²	Non-friable	N/A*	N/A*	N/A*	The 9" floor tile and mastic were assumed to be
Mastic			Miscellaneous				ACMs.

Hallway 288

9" Floor Tile and	Assumed	1,040 ft ²	Non-friable	N/A*	N/A*	N/A*	The 9" floor tile and mastic were assumed to be
Mastic			Miscellaneous				ACMs; they are under the carpet in this room.

Dorm Rooms 301, 315, 316, and 330

9" Floor Tile and	Assumed	297 ft ²	Non-friable	N/A*	N/A*	N/A*	The 9" floor tile and mastic were assumed to be
Mastic		each	Miscellaneous				ACMs.

Dorm Rooms 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, and 329

Ī	9" Floor Tile and	Assumed	176 ft ²	Non-friable	N/A*	N/A*	N/A*	The 9" floor tile and mastic were assumed to be
	Mastic		each	Miscellaneous				ACMs.

Room 331

9" Floor Tile and	Assumed	440 ft ²	Non-friable	N/A*	N/A*	N/A*	The 9" floor tile and mastic were assumed to be
Mastic			Miscellaneous				ACMs; they are under the carpet in this room.

9" Floor Tile and	Assumed	297 ft ²	Non-friable	N/A*	N/A*	N/A*	The 9" floor tile and mastic were assumed to be
Mastic			Miscellaneous				ACMs.

LEGEND No. 0700048 (NDSU) Burgum Hall (BUILDING A056)

ROOM/ ACMS	ASBESTOS TYPE	EST. QUANTITY	ACMS TYPE	MATERIAL CONDITION	DAMAGE	ASSESS. CAT. ¹	NOTES
Room 344							
9" Floor Tile and Mastic	Assumed	304 ft ²	Non-friable Miscellaneous	N/A*	N/A*	N/A*	The 9" floor tile and mastic were assumed to be ACMs.
Room 346 9" Floor Tile and	Assumed	96 ft ²	Non-friable	N/A*	N/A*	N/A*	The 9" floor tile and mastic were assumed to be
Mastic	Assumed	9611-	Miscellaneous	N/A [*]	N/A	N/A*	ACMs.

Room 350

9" Floor Tile and	Assumed	72 ft ²	Non-friable	N/A*	N/A*	N/A*	The 9" floor tile and mastic were assumed to be
Mastic			Miscellaneous				ACMs.

Room 352

9" Floor Tile and	Assumed	10 ft ²	Non-friable	N/A*	N/A*	N/A*	The 9" floor tile and mastic were assumed to be
Mastic			Miscellaneous				ACMs.

Room 354

9" Floor	Tile and	Assumed	28 ft ²	Non-friable	N/A*	N/A*	N/A*	The 9" floor tile and mastic were assumed to be
Mastic				Miscellaneous				ACMs.

Γ	9" Floor Tile and	Assumed	54 ft ²	Non-friable	N/A*	N/A*	N/A*	The 9" floor tile and mastic were assumed to be
	Mastic			Miscellaneous				ACMs.

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EST. QUANTITY ACMS TYPE MATERIAL DAMAGE 등 몰 ASSESS. CONDITION POTENTIAL 온 문 문 ASSESS. CAT. ¹ NOTES
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3rd. Floor Elevator Entry

9" Floor Tile and	Assumed	24 ft ²	Non-friable	N/A*	N/A*	N/A*	The 9" floor tile and mastic were assumed to be
Mastic			Miscellaneous				ACMs.

Hallway 388

Ī	9" Floor Tile and	Assumed	1,040 ft ²	Non-friable	N/A*	N/A*	N/A*	The 9" floor tile and mastic were assumed to be
	Mastic			Miscellaneous				ACMs; they are under the carpet in this room.

North Stairway (1st through 3rd floors)

9" Floor Tile	and Assumed	504 ft ²	Non-friable	N/A*	N/A*	N/A*	The 9" floor tile and mastic were assumed to be
Mastic			Miscellaneous				ACMs, includes stairwell.

South Stairway (1st through 3rd floors)

9" Floor Tile and	Assumed	316 ft ²	Non-friable	N/A*	N/A*	N/A*	The 9" floor tile and mastic were assumed to be
Mastic			Miscellaneous				ACMs, includes stairwell.

Elevator

9" Floor Tile and Mastic	Assumed	30 ft ²	Non-friable Miscellaneous	N/A*	N/A*	N/A*	The 9" floor tile and mastic were assumed to be ACMs.

¹Assessment Categories:

1) Damaged or Significantly Damaged TSI ACMS

2) Damaged Friable Surfacing ACMS

3) Significantly Damaged Friable Surfacing ACMS

4) Damaged or Significantly Damaged Friable Miscellaneous ACMS

End

* = Non-Friable materials were not assessed

5) ACMS with Potential for Damage

6) ACMS with Potential for Significant Damage

7) Any Remaining Friable ACMS or Friable Suspected ACMS