### NARRATIVE REPORT

#### 1.0 **BUILDING INFORMATION**

Auxiliary Enterprises was originally constructed in 1971; an addition in 1979 installed coolers in the building, an addition in 1985 extended the building to the east, and an addition in 1994 extended the building to the northeast. Although specific information could not be located, several small renovations are evident.

Auxiliary Enterprises is a one-story, 29,116 ft<sup>2</sup> building which primarily serves as office areas and work areas for support personnel.

The interior floor finishes included carpet, sheet vinyl flooring, floor tile, clay tile, and linoleum; the interior wall finishes included wood, gypsum wallboard, concrete block, metal, and ceramic tile; and the interior ceiling finishes included ceiling tile, gypsum wallboard, metal, and wood. The roofing system is a peaked rubber-membrane roof and the exterior of the structure is stucco.

The piping systems were insulated; fiberglass insulation (with and without hard fittings) is located throughout the building. Steam and domestic water enter the building in room 130. HVAC systems located in the building consisted of steam unit heaters and forced air furnaces equipped with heating/cooling coils.

#### 2.0 ASBESTOS SURVEY INFORMATION

Auxiliary Enterprises was surveyed as part of a larger project on NDSU's Fargo, ND Campus. This report is part of "Volume 7" of a nine volume series. This report includes building specific information only; please refer to the opening section of "Volume 7" for methodologies, definitions, and other pertinent supporting information.

A total of 69 samples were collected from suspect asbestos-containing materials (ACM) from Auxiliary Enterprises on August 27, 2007 and an additional 14 samples were collected on January 25, 2008. Laboratory analysis results indicate **18 of these samples tested positive for asbestos**.

#### 2.1 Suspect Materials Identified and Sampled

Linoleum Floor Tile (3 types) Hard Fittings on Fiberglass Insulation Ceiling Tile (9 types) Thin Set (for clay floor tile) Carpet Mastic Joint Compound (4 types) Exterior Garage Door Caulk Exterior Garage Door Caulk Exterior Window Glazing Exterior Down Spout Caulk Exterior Gutter Caulk Exterior Stucco (2<sup>nd</sup> layer) Window Glazing on Door Sink/Counter Undercoating (2 types) Underlayment Paper for Linoleum Floor Tile Mastic (3 types) Encapsulant on Fiberglass Insulation Oven Vent Caulk Baseboard Adhesive (2 types) Gypsum Wallboard (3 types) Sheet Vinyl Flooring Exterior Window Caulk Exterior Door Caulk (2 types) Exterior Building Seam Caulk (4 types) Exterior Stucco (1<sup>st</sup> layer) Window Glazing (4 types) Sink Undercoating (2 types)

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AUXILIARY ENTERPRISES (A075)

The Asbestos Bulk Sample Results Table includes asbestos sampling data.

#### 2.2 Asbestos Containing Materials

12" Beige Spotted Floor Tile and Mastic Joint Compound (3 types) Window Glazing (4 types) Window Glazing on Door Pink Sink Undercoating Silver/Tan Sink/Counter Undercoating Black Sink/Counter Undercoating Gray Sink Undercoating

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 Auxiliary Enterprises as follows:

ACM	QUANTITY	UNIT COST	TOTAL COST
Asbestos Floor Tile and Mastic	174 ft <sup>2</sup>	\$4.00/ft <sup>2</sup>	\$696.00
Asbestos Joint Compound	12,948 ft <sup>2</sup>	\$5.00/ft <sup>2</sup>	\$64,740.00
Asbestos Window Glazing (all types)	27 ea	\$225.00/ea	\$6,075.00
Asbestos Sink/Counter Undercoating	4 ea	\$150.00/ea	\$600.00
Total Estimated Abater	ment Costs:		\$72,111.00

#### 2.4 Survey Notes

Joint Compound on gypsum wallboard was sampled throughout the building from: the original vintage; the 1985 addition; the 109/109A1/109A2/188D area; and several small renovations throughout the building. The original vintage joint compound tested positive for asbestos for asbestos, only (the original vintage consists of up to three different layers of joint compound). The original vintage joint compound is either white, cream, or pink and is present on gypsum wallboard with a yellow/brownish paper.

### LEGEND No. 0700048 (NDSU) AUXILIARY ENTERPRISES (BUILDING A075)

ROOM/ ACM	ASBESTOS TYPE	EST. QUANTITY	ACM TYPE	MATERIAL CONDITION	DAMAGE	ASSESS. CAT. <sup>1</sup>	NOTES
oom 101 Now R	oom 102						
Joint Compound	2-3% Chrysotile	840 ft <sup>2</sup>	Non-Friable Surfacing	N/A*	N/A*	N/A*	The joint compound is on the west wall and parts of the north and <del>east</del> walls in this room. Abated Jan 2014
Room 101A Now	Room 102A1						
Joint Compound	2-3% Chrysotile	240 ft <sup>2</sup>	Non-Friable Surfacing	N/A*	N/A*	N/A*	The joint compound is on the north and east walls in this room.
Room 101B Now F	Room 102B		1				1
Joint Compound	2-3% Chrysotile	280 ft <sup>2</sup>	Non-Friable Surfacing	N/A*	N/A*	N/A*	The joint compound is on the north, east, and south walls in this room.
Room 101C Now I	Room 102C		1				
Joint Compound	2-3% Chrysotile	240 ft <sup>2</sup>	Non-Friable Surfacing	N/A*	N/A*	N/A*	The joint compound is on the east and south walls in this room.
Room 101D Now	Room 102G						
Room 101D Now	Room 102G 2-3% Chrysotile	380 ft <sup>2</sup>	Non-Friable Surfacing	N/A*	N/A*	N/A*	The joint compound is on the north, east, and south walls in this room.
Joint Compound		380 ft <sup>2</sup>		N/A*	N/A*	N/A*	

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Room 102A Now	Room 102D						
Joint Compound	2-3% Chrysotile	80 ft <sup>2</sup>	Non-Friable Surfacing	N/A*	N/A*	N/A*	The joint compound is on the north wall in this room.
Room 102B Now	Part of 102: N of	102D, W of	102E				
Joint Compound	2-3% Chrysotile	300 ft <sup>2</sup>	Non-Friable	N/A*	N/A*	N/A*	The joint compound is on the north, east, and
			Surfacing				south walls in this room. Abated Jan 2014
Room 102C Abate	ed Jan 2014	I	1				1
Joint Compound	2-3% Chrysotile	560 ft <sup>2</sup>	Non-Friable Surfacing	N/A*	N/A*	N/A*	The joint compound is all the walls in this room.
Room 102G nov	w has sink with gr	ay undercoa	ating. It is the	one describ	ed under room 115	5 and was	s moved to 102D during a remodel.
	ed Jan 2014			-	1		
Joint Compound	<del></del>	280 ft <sup>2</sup>	Non-Friable Surfacing	N/A*	N/A*	N/A*	The joint compound is on the north, east, and south walls in this room.

Room 105 Abated Jan 2014

Joint Compound	2-3% Chrysotile	300 ft <sup>2</sup>	Non-Friable	N/A*	N/A*	N/A*	The joint compound is on the south wall in this
			Surfacing				room.

# Room 106 Now Room 146A

W	/indow Glazing	3% Chrysotile	5 Ea	Non-Friable	N/A*	N/A*	N/A*	Four windows are on the east wall and one
				Miscellaneous				window is on the south wall of this room.

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ROOM/ ACM	ASBESTOS TYPE	EST. QUANTITY	ACM TYPE	MATERIAL CONDITION	DAMAGE	ASSESS. CAT. <sup>1</sup>	NOTES
Room 109 Now R	Room 150						
Pink Sink Undercoating	15% Chrysotile	1 ea	Non-Friable Miscellaneous	N/A*	N/A*	N/A*	The sink is along the west wall in this room.
Room 111 Abated	April 2013		1	I	1		1
Joint Compound	2-3% Chrysotile	900 ft <sup>2</sup>	Non-Friable Surfacing	N/A*	N/A*	N/A*	The joint compound is on the east, south, and west walls in this room.
<del>Sliver/Tan</del> <del>Sink/Counter</del> <del>Undercoating</del>	15% Chrysotile	1 ea	Non-Friable Miscellaneous	N/A*	N/A*	N/A*	The sink/counter system is in the southwest corner of the room. The sink/counter system is approx 2ft x 12ft.
Room 111B Abate	ed April 2013						
Joint Compound	2-3% Chrysotile	500 ft <sup>2</sup>	Non-Friable Surfacing	N/A*	N/A*	N/A*	The joint compound is on the east, south, and west walls in this room.
Room 112 Abated	d April 2013		1		1		
bnuoqmo2 thiot	2-3% Chrysotile	1,080 ft <sup>2</sup>	Non-Friable Surfacing	N/A*	N/A*	N/A*	The joint compound is on all the walls in this room.
Black Sink/Counter Undercoating	10% Chrysotile	1 ea	Non-Friable Miscellaneous	N/A*	N/A*	N/A*	The sink/counter system is in the northeast corner of the room. The sink/counter system is approx 2ft x 6ft.

# Room 112A Abated April 2013

Joint Compound	2-3% Chrysotile	600 ft <sup>2</sup>	Non-Friable	N/A*	N/A*	N/A*	The joint compound is on the north, east, and
			Surfacing				south walls in this room.

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ROOM/ ACM	ASBESTOS TYPE	EST. QUANTITY	ACM TYPE	MATERIAL CONDITION	DAMAGE 다 전 프 POTENTIAL 전 인 및	ASSESS. CAT. <sup>1</sup>	NOTES
Room 113 Abated	April 2013						
Joint Compound	2-3% Chrysotile	150 ft <sup>2</sup>	Non-Friable Surfacing	N/A*	N/A*	N/A*	The joint compound is on all the walls in this room.
Room 114 Now Ro	oom 142		1	1			
Joint Compound	2-3% Chrysotile	720 ft <sup>2</sup>	Non-Friable Surfacing	N/A*	N/A*	N/A*	The joint compound is on the west wall in this room.
Room 114A Now F	Room 142A			I		_I	
Window Glazing on Door	8% Chrysotile	1 ea	Non-Friable Miscellaneous	N/A*	N/A*	N/A*	The door with the asbestos glazing is in the northwest corner of this room.
Room 115 Now R	oom 140		1	I		1	1
Joint Compound Abated April 2	2-3% Chrysotile	200 ft <sup>2</sup>	Non-Friable Surfacing	N/A*	N/A*	N/A*	The joint compound is on the west wall in this room.
Window Glazing on Door	8% Chrysotile	4 ea	Non-Friable Miscellaneous	N/A*	N/A*	N/A*	2 doors with the asbestos glazing are in the northwest corner of this room and 2 are in the southwest corner of this room.
Gray Sink Undercoating Abate	10% Chrysotile ed April 2013	1 ea	Non-Friable Miscellaneous	N/A*	N/A*	N/A*	The sink is in the south end of the room.

# Room 115A Now Room 140A

Window Glazing	5% Chrysotile	4 ea	Non-Friable	N/A*	N/A*	N/A*	Two windows are on the north wall and two
			Miscellaneous				windows are on the east wall of this room.

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ROOM/ ACM	ASBESTOS TYPE	EST. QUANTITY	ACM TYPE	MATERIAL CONDITION	DAMAGE	ASSESS. CAT. <sup>1</sup>	NOTES
Room 118 Now roo	m 199M Aba	ated Fall 201	3				
Joint Compound	2-3% Chrysotile	640 ft <sup>2</sup>	Non-Friable Surfacing	N/A*	N/A*	N/A*	The joint compound is on all the walls in this room.
12" Beige Spotted Floor Tile and Mastic	2-5% Chrysotile	134 ft <sup>2</sup>	Non-Friable Miscellaneous	N/A*	N/A*	N/A*	The floor tile and mastic contain asbestos.
Room 119 Now roo	om 199W Aba	ated Januar	y 2014	1		-	
Joint Compound	2-3% Chrysotile	640 ft <sup>2</sup>	Non-Friable Surfacing	N/A*	N/A*	N/A*	The joint compound is on all the walls in this room.
Room 120A Abated	April 2013						
Joint Compound	2-3% Chrysotile	880 ft <sup>2</sup>	Non-Friable Surfacing	N/A*	N/A*	N/A*	The joint compound is on the north and east walls in this room and on a small wall protruding from the west wall.
Room 120C Abated	April 2013						
12" Beige Spotted Floor Tile and Mastic	2-5% Chrysotile	40 ft <sup>2</sup>	Non-Friable Miscellaneous	N/A*	N/A*	N/A*	The floor tile and mastic contain asbestos.
Room 120G Now R	oom 112						
Joint Compound	2-3% Chrysotile	380 ft <sup>2</sup>	Non-Friable Surfacing	N/A*	N/A*	N/A*	The joint compound is on the north and west walls in this room.
Room 120H Abated	d April 2013		<u> </u>	1			1
Joint Compound	2-3% Chrysotile	460 ft <sup>2</sup>	Non-Friable Surfacing	N/A*	N/A*	N/A*	The joint compound is on all the walls in this room.

\* = Non-Friable materials were not assessed

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ROOM/ ACM	ASBESTOS TYPE	EST. QUANTITY	ACM TYPE	MATERIAL CONDITION	DAMAGE 다 전 프 프 POTENTIAL	ASSESS. CAT. <sup>1</sup>	NOTES					
Hallway 188 Abate												
<del>Joint Compound</del>	2-3% Chrysotile	2,248 ft <sup>2</sup>	Non-Friable Surfacing	N/A*	N/A*	N/A*	The joint compound is on all the walls in this hallway.					
	Jallway 1994 Now Room 188G Abated Jap 2015											

bruoqmo2 third	2-3% Chrysotile	190 ft <sup>2</sup>	Non-Friable Surfacing	N/A*	N/A*	N/A*	The joint compound is on the south and west walls in this room.
Window Glazing	5% Chrysotile	2 ea	Non-Friable Miscellaneous	N/A*	N/A*	N/A*	Two windows on the east walls of this room have the asbestos window glazing.
Window Glazing on Door	8% Chrysotile	1 ea	Non-Friable Miscellaneous	N/A*	N/A*	N/A*	The door with the asbestos glazing is on the east end of this room.

# Room 188C Now Room 188E Door/window replaced Fall 2014

	Window Glazing	5% Chrysotile	10 ea	Non-Friable	N/A*	N/A*	N/A*	The ten windows in the entry around the doors
				Miscellaneous				have asbestos glazing on them.

<sup>1</sup>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

End

5) ACM with Potential for Damage

6) ACM with Potential for Significant Damage

7) Any Remaining Friable ACM or Friable Suspected ACM