

NARRATIVE REPORT

1.0 BUILDING INFORMATION

Residence Dining Center was originally constructed in 1964; the building has had several renovations; notably, a 2003 renovation throughout the 1st floor.

Residence Dining Center is a two-story, 28,240 ft² building which primarily serves as a cafeteria area for students. Reed Hall (A055) is attached via a walkway to the north side of Residence Dining Center and North Weible (A057) is attached via a walkway to the east side of Residence Dining Center; each is reported separately. Both walkways are included in this report.

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

The piping systems were insulated; fiberglass pipe insulation (with and without hard fittings) and neoprene are located in the building. Steam and domestic water enter the building from the tunnel system into room 2. HVAC systems located in the building consisted of forced air furnaces equipped with heating/cooling coils and steam radiators.

2.0 ASBESTOS SURVEY INFORMATION

Residence Dining Center 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.

A total of 54 samples were collected from suspect asbestos-containing materials (ACM) from Residence Dining Center on June 1, 2007, an additional 3 samples were collected on May 24, 2007, an additional 3 samples were collected on May 23, 2007, an additional 8 samples were collected on April 7, 2008, and an additional 2 samples were collected on April 18, 2008. Laboratory analysis results indicate **15 of these samples tested positive for asbestos**.

A total of 3 samples were collected from suspect asbestos-containing materials (ACM) from Residence Dining Center on May 25, 2007 by NDSU personnel. NDSU records indicate **1 of these samples tested positive for asbestos**. Refer to Appendix A for further information.

2.1 Suspect Materials Identified and Sampled

Hard Fittings on Fiberglass Insulation	Foam Wall Panel Adhesive
Rainleader Bowl Insulation	Cooler Insulation (in wall)
Penetration Putty (3 types)	Floor Tile (4 types)
Floor Tile Mastic (4 types)	HVAC Duct Caulk
Ceiling Tile (3 types)	Hard Plaster- Skimcoat
Hard Plaster- Basecoat	Floor Filler Material
Baseboard Adhesive (2 types)	Carpet Mastic
Joint Compound (2 types)	Gypsum Wallboard (2 types)
Exterior Air Vent Caulk	Exterior Door Caulk

Exterior Building Seam Caulk
 Encapsulant on Fiberglass Insulation
 Ceiling Texture (2 types)
 Sink Undercoating (2 types)

Exterior Overhang Surfacing
 Fireproofing (on concrete ceiling)
 Exterior Window Glazing (2 types)
 Window Glazing

The Asbestos Bulk Sample Results Table includes asbestos sampling data.

2.2 **Asbestos Containing Materials**

Hard Fittings on Fiberglass Insulation
 Penetration Putty (3 types)
 Floor Filler Material
 Popcorn Ceiling Texture
 Exterior Window Glazing (1 type)
 Window Glazing
 Mastic for 12" Off-White Floor Tile
 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 Residence Dining Center Hall as follows:

ACM	QUANTITY	UNIT COST	TOTAL COST
Asbestos Hard Fittings on Fiberglass Insulation	210 ea	\$60.00/ea	\$12,600.00
Asbestos Penetration Putty (all types)	8 ea	\$60.00/ea	\$480.00
Asbestos Floor Filler Material	220 ft ²	\$4.00/ft ²	\$880.00
Asbestos Ceiling Texture	1,048 ft ²	\$7.50/ft ²	\$7,860.00
Asbestos Window Glazing (all types)	16 ea	\$225.00/ea	\$3,600.00
Asbestos Floor Tile and/or Mastic (all types)	212 ft ²	\$4.00/ft ²	\$848.00
Total Estimated Abatement Costs:			\$26,268.00

2.4 **Survey Notes**

LEGEND collected 12 samples of hard fittings on fiberglass insulation in Residence Dining Center from domestic water, steam, and rainleader pipes; throughout the basement, tunnels, and room 135. Samples #1, 2, 3, 4, 67, and 68 tested positive for asbestos and samples # 5, 6, 7, 8, 9, and 12 tested negative for asbestos. A review of the data indicates that no definable homogeneous areas of ACM and/or non-ACM hard fittings on fiberglass insulation exist in the building. LEGEND considers all hard fittings on fiberglass insulation in Residence Dining Center to be ACM.

LEGEND TECHNICAL SERVICES, INC.
ACM LOCATIONS/FRIABLE MATERIALS ASSESSMENTS TABLE

LEGEND No. 0700048 (NDSU)
RESIDENCE DINING CENTER (BUILDING A059)

ROOM/ ACM	ASBESTOS TYPE	EST. QUANTITY	ACM TYPE	MATERIAL CONDITION	DAMAGE POTENTIAL	LOW MOD HIGH	ASSES. CAT. ¹	NOTES
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Tunnel

Hard Fittings on Fiberglass Insulation	0-5% Chrysotile 0-5% Amosite	96 fittings	Friable TSI	Damaged	Physical Air Erosion Vibration	<input type="checkbox"/> ■ <input type="checkbox"/> <input type="checkbox"/> ■ <input type="checkbox"/> <input type="checkbox"/> ■ <input type="checkbox"/>	1	The asbestos hard fittings are in the east, north, and south tunnels.
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Room 1

Hard Fittings on Fiberglass Insulation	0-5% Chrysotile 0-5% Amosite	8 fittings	Friable TSI	Damaged	Physical Air Erosion Vibration	<input type="checkbox"/> ■ <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> ■ <input type="checkbox"/> <input type="checkbox"/> ■	1	The asbestos hard fittings are along the east end of room 1.
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Room 2

Hard Fittings on Fiberglass Insulation	0-5% Chrysotile 0-5% Amosite	12 fittings	Friable TSI	Damaged	Physical Air Erosion Vibration	<input type="checkbox"/> ■ <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> ■ <input type="checkbox"/> <input type="checkbox"/> ■	1	The asbestos hard fittings are along the southeast corner of room 2.
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Room 3

Hard Fittings on Fiberglass Insulation	0-5% Chrysotile 0-5% Amosite	62 fittings	Friable TSI	Good	Physical Air Erosion Vibration	<input type="checkbox"/> <input type="checkbox"/> ■ ■ <input type="checkbox"/> <input type="checkbox"/> ■ <input type="checkbox"/> <input type="checkbox"/>	6	The asbestos hard fittings are throughout the room.
Penetration Putty (on thermostat)	10% Chrysotile	1 ea	Non-Friable Miscellaneous	N/A*	N/A*	N/A*	N/A*	The asbestos penetration putty is on the west wall bordering room 3C; it is on a wire for a thermostat, it is black.
Penetration Putty (on pipes)	5% Chrysotile	1 ea	Non-Friable Miscellaneous	N/A*	N/A*	N/A*	N/A*	The asbestos penetration putty is on the west wall bordering room 3C; it is on refrigerant pipes, it is white.

Room 3C

Penetration Putty (on thermostat)	10% Chrysotile	1 ea	Non-Friable Miscellaneous	N/A*	N/A*	N/A*	N/A*	The asbestos penetration putty is on the east wall; it is on a wire for a thermostat, it is black.
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* = Non-Friable materials were not assessed

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Penetration Putty (on pipes)	5% Chrysotile	1 ea	Non-Friable Miscellaneous	N/A*	N/A*		N/A*	The asbestos penetration putty is on the east wall; it is on refrigerant pipes, it is white.

Room 3E

Hard Fittings on Fiberglass Insulation	0-5% Chrysotile 0-5% Amosite	16 fittings	Friable TSI	Good	Physical <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>		6	The asbestos hard fittings are along the south end of the room.
					Air Erosion <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>			
					Vibration <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>			

Hallway 88

Hard Fittings on Fiberglass Insulation	0-5% Chrysotile 0-5% Amosite	2 fittings	Friable TSI	Good	Physical <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>		6	The asbestos hard fittings are along the west end of the room.
					Air Erosion <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			
					Vibration <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			

Room 110: Mastic was discovered under the floor tile during a renovation in July 2011

Room 125 (including the freezer in the room)

9" Floor Tile and Mastic	Assumed	60 ft ²	Non-Friable Miscellaneous	N/A*	N/A*		N/A*	The asbestos 9" floor tile and mastic are assumed ACMs.
Penetration Putty	8% Chrysotile	4 ea	Non-Friable Miscellaneous	N/A*	N/A*		N/A*	It is in the se corner of the freezer (floor), nw corner of the freezer (ceiling), on top of the freezer, and in rm 125 by the freezer door.

Room 126

Floor Filler Material	2% Chrysotile	220 ft ²	Non-Friable Miscellaneous	N/A*	N/A*		N/A*	The asbestos floor filler material is under the carpet.
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Room 128

9" Floor Tile and Mastic	Assumed	96 ft ²	Non-Friable Miscellaneous	N/A*	N/A*		N/A*	The asbestos 9" floor tile and mastic are assumed to be ACMs; they are under the carpet.
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ACM LOCATIONS/FRIABLE MATERIALS ASSESSMENTS TABLE

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Window Glazing	3% Chrysotile	1 window	Non-Friable Miscellaneous	N/A*	N/A*		N/A*	The asbestos glazing is on the window in the west end of room 128.
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Room 130A

Mastic for 12" Off-White Floor Tile	3% Chrysotile	48 ft ²	Non-Friable Miscellaneous	N/A*	N/A*		N/A*	The mastic contains asbestos; the floor tile is negative. Refer to Appendix A for further information.
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Room 135

Hard Fittings on Fiberglass Insulation	0-5% Chrysotile 0-5% Amosite	3 fittings	Friable TSI	Good	Physical Air Erosion Vibration	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	6	Refer to the ACM Locations Map for further information.
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Janitor's Closet (by room 118)

9" Floor Tile and Mastic	Assumed	8 ft ²	Non-Friable Miscellaneous	N/A*	N/A*		N/A*	The asbestos 9" floor tile and mastic are assumed to be ACMs.
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Southeast Stairway (Basement-1st floor)

Hard Fittings on Fiberglass Insulation	0-5% Chrysotile 0-5% Amosite	8 fittings	Friable TSI	Damaged	Physical Air Erosion Vibration	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1	The asbestos hard fittings are in the basement landing along the east end of the room.
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West Stairway (Basement-1st floor)

Hard Fittings on Fiberglass Insulation	0-5% Chrysotile 0-5% Amosite	3 fittings	Friable TSI	Good	Physical Air Erosion Vibration	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	6	The asbestos hard fittings are in the basement landing in the southwest corner of the room.
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* = Non-Friable materials were not assessed

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 ACM LOCATIONS/FRIABLE MATERIALS ASSESSMENTS TABLE

LEGEND No. 0700048 (NDSU)
 RESIDENCE DINING CENTER (BUILDING A059)

ROOM/ ACM	ASBESTOS TYPE	EST. QUANTITY	ACM TYPE	MATERIAL CONDITION	DAMAGE POTENTIAL	LOW MOD HIGH	ASSESS. CAT. ¹	NOTES
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North Weible Walkway

Popcorn Ceiling Texture	3% Chrysotile	1,048 ft ²	Friable Surfacing	Good	Physical	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	6	The asbestos texture is on the ceiling throughout the walkway to North Weible Hall.
					Air Erosion	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		
					Vibration	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		

Exterior

Window Glazing	5% Chrysotile	15 windows	Non-Friable Miscellaneous	N/A*	N/A*	N/A*		The asbestos glazing is on 15 windows on the east end of the building by rooms 111 and 116.
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¹Assessment Categories:

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|---|---|
| 1) Damaged or Significantly Damaged TSI ACM | 5) ACM with Potential for Damage |
| 2) Damaged Friable Surfacing ACM | 6) ACM with Potential for Significant Damage |
| 3) Significantly Damaged Friable Surfacing ACM | 7) Any Remaining Friable ACM or Friable Suspected ACM |
| 4) Damaged or Significantly Damaged Friable Miscellaneous ACM | |

End