

NARRATIVE REPORT

1.0 BUILDING INFORMATION

Wiidakas Laboratory was originally constructed in 1949; although specific information could not be located, renovations are evident.

Wiidakas Laboratory is a three-story, 9,899 ft² building which primarily serves as office and work areas for agriculture personnel.

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

The piping systems were insulated; aircell and millboard insulation (both with hard fittings) and fiberglass insulation (without hard fittings) are located in the building. Steam and water enter the building in room 1. HVAC systems located in the building consisted of steam unit heaters and radiators; in addition, there is a forced air furnace on the second floor.

2.0 ASBESTOS SURVEY INFORMATION

Wiidakas Laboratory was surveyed as part of a larger project on NDSU's Fargo, ND Campus. This report is part of "Volume 4" of a nine volume series. This report includes building specific information only; please refer to the opening section of "Volume 4" for methodologies, definitions, and other pertinent supporting information.

A total of 46 samples were collected from suspect asbestos-containing materials (ACM) from Wiidakas Laboratory on May 14, 2007. Laboratory analysis results indicate **16 of these samples tested positive for asbestos.**

2.1 Suspect Materials Identified and Sampled

Millboard Pipe Insulation	Hard Fittings on Millboard Insulation
Aircell Pipe Insulation	Hard Fittings on Aircell Insulation
Encapsulant on Fiberglass Insulation (2 types)	Silver Paint/Coating on Concrete
Cooler Wall Material	Cooler Wall Insulation
Window Caulk (2 types)	HVAC Duct Caulk
Tar Pipe Wrap	Baseboard Adhesive (2 types)
Sink Undercoating	Penetration Putty (on AHU)
Hard Plaster- Monocoat	Floor Tile (2 types)
Floor Tile Mastic (2 types)	Gypsum Wallboard
Joint Compound	Exterior Air Vent Caulk
Exterior Window Glazing	Exterior Window Caulk (2 types)
Exterior Window Seam Packing	

The Asbestos Bulk Sample Results Table includes asbestos sampling data.

2.2 Asbestos Containing Materials

Millboard Pipe Insulation
Hard Fittings on Millboard Insulation
Aircell Pipe Insulation
Hard Fittings on Aircell Pipe Insulation
Window Caulk
Pink Sink Undercoating
12" Brown Floor Tile w/ Gray Marks and Mastic
Exterior Air Vent Caulk
Exterior Window Caulk

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 Wiidakas Laboratory as follows:

ACM	QUANTITY	UNIT COST	TOTAL COST
Asbestos Millboard Pipe Insulation	59 ft	\$25.00/ft	\$1,475.00
Asbestos Hard Fittings on Millboard Insulation	6 ea	\$25.00/ea	\$150.00
Asbestos Aircell Pipe Insulation	246 ft	\$25.00/ft	\$6,150.00
Asbestos Hard Fittings on Aircell Insulation	25 ea	\$25.00/ea	\$625.00
Asbestos Window Caulk	26 ea	\$125.00/ea	\$3,250.00
Asbestos Sink Undercoating	4 ea	\$150.00/ea	\$600.00
Asbestos Floor Tile and Mastic	2902 ft ²	\$4.00/ft ²	\$11,608.00
Asbestos Exterior Air Vent Caulk	2 ea	\$125.00/ea	\$250.00
Asbestos Exterior Window Caulk	28 ea	\$125.00/ea	\$3,500.00
Total Estimated Abatement Costs:			\$27,608.00

2.4 Survey Notes

Prior asbestos sampling records, provided to LEGEND by NDSU, indicated there was an asbestos containing paint/coating in the north cooler in the basement (room 4). LEGEND collected 3 samples of the material, all 3 samples tested negative for asbestos. LEGEND considers the material **not** to be an ACM.

Prior asbestos sampling records also indicated the 12" White/Tan/Gray Floor Tile and associated mastic in the north cooler in the basement (rooms 4) has been assumed to be an asbestos containing material. LEGEND sampled the floor tile and the associated mastic, both tested negative for asbestos. LEGEND considers the material **not** to be an ACM.

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

LEGEND No. 0700048 (NDSU)
 WIIDAKAS LABORATORY (BUILDING A036)

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

Aircell Pipe Insulation	85% Chrysotile	88 ft	Friable TSI	Good	Physical Air Erosion Vibration	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	6	Straight run insulation crosses the room on the south and east ends of the room.
Hard Fittings on Aircell Insulation	40% Chrysotile	10 fittings	Friable TSI	Good	Physical Air Erosion Vibration	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	6	None
Millboard Pipe Insulation	35% Chrysotile	39 ft	Friable TSI	Good	Physical Air Erosion Vibration	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	6	Straight run insulation crosses the room on the south end.
Hard Fittings on Millboard Insulation	40% Chrysotile	3 fittings	Friable TSI	Good	Physical Air Erosion Vibration	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	6	None

Room 1A

Glass Block Window Caulk	5% Chrysotile	3 windows	Non-Friable Miscellaneous	N/A*	N/A*	N/A*	N/A*	The three windows are on the south wall. They are covered by the newer refrigerator walls.
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Room 1B

Aircell Pipe Insulation	85% Chrysotile	44 ft	Friable TSI	Damaged	Physical Air Erosion Vibration	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	1	Straight run insulation crosses the room on the south and west ends of the room.
Hard Fittings on Aircell Insulation	40% Chrysotile	3 fittings	Friable TSI	Good	Physical Air Erosion Vibration	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	6	None
Millboard Pipe Insulation	35% Chrysotile	20 ft	Friable TSI	Good	Physical Air Erosion Vibration	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	6	Straight run insulation crosses the center of the room.
Hard Fittings on Millboard Insulation	40% Chrysotile	3 fittings	Friable TSI	Good	Physical Air Erosion Vibration	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	6	None

* = Non-Friable materials were not assessed

LEGEND TECHNICAL SERVICES, INC.

ACM LOCATIONS/FRIABLE MATERIALS ASSESSMENTS TABLE

LEGEND No. 0700048 (NDSU)
WIIDAKAS LABORATORY (BUILDING A036)

ROOM/ ACM	ASBESTOS TYPE	EST. QUANTITY	ACM TYPE	MATERIAL CONDITION	DAMAGE POTENTIAL	LOW MOD HIGH	ASSES. CAT. ¹	NOTES
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Room 2

Glass Block Window Caulk	5% Chrysotile	1 window	Non-Friable Miscellaneous	N/A*	N/A*		N/A*	The window is on the east wall.
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Room 4

Glass Block Window Caulk	5% Chrysotile	4 windows	Non-Friable Miscellaneous	N/A*	N/A*		N/A*	Two windows are on the east wall, two on the west wall. All four are covered by the newer refrigerator walls.
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Room 100

Aircell Pipe Insulation	85% Chrysotile	30 ft	Friable TSI	Damaged	Physical <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>		1	Straight run insulation is in northeast and northwest corner of the room, provided unit heaters.
Hard Fittings on Aircell Insulation	40% Chrysotile	4 fittings	Friable TSI	Damaged	Physical <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>		1	None

Room 100E

Glass Block Window Caulk	5% Chrysotile	3 windows	Non-Friable Miscellaneous	N/A*	N/A*		N/A*	The three windows are on the south wall spread out across the width of the building (behind rooms 100A-100D1)
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Room 101

12" Brown Floor Tile with Gray Marks and Black Mastic	2-8% Chrysotile	168 ft ²	Non-Friable Miscellaneous	N/A*	N/A*		N/A*	Both the floor tile and the mastic contain asbestos.
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Room 102

12" Brown Floor Tile with Gray Marks and Black Mastic	2-8% Chrysotile	35 ft ²	Non-Friable Miscellaneous	N/A*	N/A*		N/A*	Both the floor tile and the mastic contain asbestos.
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* = Non-Friable materials were not assessed

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 ACM LOCATIONS/FRIABLE MATERIALS ASSESSMENTS TABLE

LEGEND No. 0700048 (NDSU)
 WIIDAKAS LABORATORY (BUILDING A036)

ROOM/ ACM	ASBESTOS TYPE	EST. QUANTITY	ACM TYPE	MATERIAL CONDITION	DAMAGE POTENTIAL	LOW MOD HIGH	ASSESS. CAT. ¹	NOTES
Aircell Pipe Insulation	85% Chrysotile	25 ft	Friable TSI	Significantly Damaged	Physical Air Erosion Vibration	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	1	Straight run insulation is above the ceiling.
Hard Fittings on Aircell Insulation	40% Chrysotile	2 fittings	Friable TSI	Significantly Damaged	Physical Air Erosion Vibration	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	1	The hard fittings are located above the ceiling.

Room 103

12" Brown Floor Tile with Gray Marks and Black Mastic	2-8% Chrysotile	35 ft ²	Non-Friable Miscellaneous	N/A*	N/A*	N/A*	N/A*	Both the floor tile and the mastic contain asbestos.
Aircell Pipe Insulation	85% Chrysotile	10 ft	Friable TSI	Significantly Damaged	Physical Air Erosion Vibration	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	1	Straight run insulation is above the ceiling.

Room 104

Glass Block Window Caulk	5% Chrysotile	2 windows	Non-Friable Miscellaneous	N/A*	N/A*	N/A*	N/A*	The two windows are on the north wall.
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Room 106

Glass Block Window Caulk	5% Chrysotile	2 windows	Non-Friable Miscellaneous	N/A*	N/A*	N/A*	N/A*	The two windows are on the west wall. Both windows are partially covered by newer walls.
12" Brown Floor Tile with Gray Marks and Black Mastic	2-8% Chrysotile	459 ft ²	Non-Friable Miscellaneous	N/A*	N/A*	N/A*	N/A*	Both the floor tile and the mastic contain asbestos.
Pink Sink Undercoating	10% Chrysotile	1 sink	Non-Friable Miscellaneous	N/A*	N/A*	N/A*	N/A*	Only one sink in the room, it is located along the south wall.

* = Non-Friable materials were not assessed

LEGEND TECHNICAL SERVICES, INC.

ACM LOCATIONS/FRIABLE MATERIALS ASSESSMENTS TABLE

LEGEND No. 0700048 (NDSU)
 WIIDAKAS LABORATORY (BUILDING A036)

ROOM/ ACM	ASBESTOS TYPE	EST. QUANTITY	ACM TYPE	MATERIAL CONDITION	DAMAGE POTENTIAL	LOW MOD HIGH	ASSESS. CAT. ¹	NOTES
Aircell Pipe Insulation	85% Chrysotile	27 ft	Friable TSI	Damaged	Physical	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	1	Straight run insulation is along the west wall.
Hard Fittings on Aircell Insulation	40% Chrysotile	2 fittings	Friable TSI	Significantly Damaged	Air Erosion	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	1	None.
					Vibration	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>		
					Physical	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>		
					Air Erosion	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>		
					Vibration	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>		

Room 107

Glass Block Window Caulk	5% Chrysotile	2 windows	Non-Friable Miscellaneous	N/A*	N/A*	N/A*		One window is on the west wall, one is on the north wall. Both windows are partially covered by newer walls.
12" Brown Floor Tile with Gray Marks and Black Mastic	2-8% Chrysotile	136 ft ²	Non-Friable Miscellaneous	N/A*	N/A*	N/A*		Both the floor tile and the mastic contain asbestos.
Aircell Pipe Insulation	85% Chrysotile	10 ft	Friable TSI	Good	Physical	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	6	Straight run insulation is along the west wall.
					Air Erosion	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		
					Vibration	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>		

Room 107A

Aircell Pipe Insulation	85% Chrysotile	12 ft	Friable TSI	Good	Physical	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	6	Straight run insulation is located above the ceiling.
Hard Fittings on Aircell Insulation	40% Chrysotile	4 fittings	Friable TSI	Damaged	Air Erosion	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1	The hard fittings are located above the ceiling.
					Vibration	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		

Room 188

12" Brown Floor Tile with Gray Marks and Black Mastic	2-8% Chrysotile	188 ft ²	Non-Friable Miscellaneous	N/A*	N/A*	N/A*		Both the floor tile and the mastic contain asbestos.
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ROOM/ ACM	ASBESTOS TYPE	EST. QUANTITY	ACM TYPE	MATERIAL CONDITION	DAMAGE POTENTIAL	LOW MOD HIGH	ASSESS. CAT. ¹	NOTES
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Room 200

12" Brown Floor Tile with Gray Marks and Black Mastic Abated February 2022	2-8% Chrysotile	448 ft ²	Non-Friable Miscellaneous	N/A*	N/A*		N/A*	Both the floor tile and the mastic contain asbestos.
Glass Block Window Caulk	5% Chrysotile	2 windows	Non-Friable Miscellaneous	N/A*	N/A*		N/A*	The windows are on the west wall. Both windows are partially covered by newer walls.
Pink Sink Undercoating Abated February 2022	10% Chrysotile	1 sink	Non-Friable Miscellaneous	N/A*	N/A*		N/A*	Only one sink in the room, it is located along the south wall.

Room 201

12" Brown Floor Tile with Gray Marks and Black Mastic Abated February 2022	2-8% Chrysotile	294 ft ²	Non-Friable Miscellaneous	N/A*	N/A*		N/A*	Both the floor tile and the mastic contain asbestos.
Glass Block Window Caulk	5% Chrysotile	2 windows	Non-Friable Miscellaneous	N/A*	N/A*		N/A*	One window is on the north wall, one is on the west wall. Both windows are covered by newer walls.

Room 202

12" Brown Floor Tile with Gray Marks and Black Mastic	2-8% Chrysotile	483 ft ²	Non-Friable Miscellaneous	N/A*	N/A*		N/A*	Both the floor tile and the mastic contain asbestos.
Glass Block Window Caulk	5% Chrysotile	3 windows	Non-Friable Miscellaneous	N/A*	N/A*		N/A*	Two windows are on the north wall, one is on the east wall. All three windows are partially covered by newer walls.
Pink Sink Undercoating	10% Chrysotile	1 sink	Non-Friable Miscellaneous	N/A*	N/A*		N/A*	Only one sink in the room, it is located along the south wall.

* = Non-Friable materials were not assessed

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ACM LOCATIONS/FRIABLE MATERIALS ASSESSMENTS TABLE

LEGEND No. 0700048 (NDSU)
WIIDAKAS LABORATORY (BUILDING A036)

ROOM/ ACM	ASBESTOS TYPE	EST. QUANTITY	ACM TYPE	MATERIAL CONDITION	DAMAGE POTENTIAL	LOW MOD HIGH	ASSESS. CAT. ¹	NOTES
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Room 203

12" Brown Floor Tile with Gray Marks and Black Mastic	2-8% Chrysotile	504 ft ²	Non-Friable Miscellaneous	N/A*	N/A*		N/A*	Both the floor tile and the mastic contain asbestos.
Glass Block Window Caulk	5% Chrysotile	2 windows	Non-Friable Miscellaneous	N/A*	N/A*		N/A*	The windows are on the east wall. Both windows are partially covered by newer walls.
Pink Sink Undercoating	10% Chrysotile	1 sink	Non-Friable Miscellaneous	N/A*	N/A*		N/A*	Only one sink in the room, it is located along the west wall.

Room 204

12" Brown Floor Tile with Gray Marks and Black Mastic	2-8% Chrysotile	40 ft ²	Non-Friable Miscellaneous	N/A*	N/A*		N/A*	Both the floor tile and the mastic contain asbestos.
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Hallway 288

12" Brown Floor Tile with Gray Marks and Black Mastic	2-8% Chrysotile	112 ft ²	Non-Friable Miscellaneous	N/A*	N/A*		N/A*	Both the floor tile and the mastic contain asbestos.
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Exterior

Exterior Glass Block Window Caulk	10% Chrysotile	26 windows	Non-Friable Miscellaneous	N/A*	N/A*		N/A*	6 windows are on the north end, 6 windows are on the east end, 6 windows are on the south end, and 8 windows are on the west end.
Exterior Window Caulk (on other windows)	10% Chrysotile	2 windows	Non-Friable Miscellaneous	N/A*	N/A*		N/A*	The caulk around the large window for room 101 and the small window for room 102.
Exterior Air Vent Caulk	10% Chrysotile	2 air vents	Non-Friable Miscellaneous	N/A*	N/A*		N/A*	One vent is on the south wall (SW corner) and one vent is on the east wall (SE corner).

Abated June 2013

* = Non-Friable materials were not assessed

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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