

NARRATIVE REPORT

1.0 BUILDING INFORMATION

Sugar Beet Research Facility was originally constructed in 1971; a 1980 addition extended the building to west, adding a mechanical hallway and a cold storage room.

Sugar Beet Research Facility is a single-story, 5,269 ft² building which primarily serves as work areas for agricultural personnel.

The interior floor finishes included concrete and floor tile; the interior wall finishes included concrete block, transite panels, and brick; and the interior ceiling finishes included ceiling texture, concrete, and transite panels. 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), neoprene, and limited quantity of tar pipe wrap are located in the building. Domestic water enters the building in room 102; the building does not utilize steam. HVAC systems located in the building consisted of a forced air furnace.

2.0 ASBESTOS SURVEY INFORMATION

Sugar Beet Research Facility was surveyed as part of a larger project on NDSU's Fargo, ND Campus. This report is part of "Volume 8" of a nine volume series. This report includes building specific information only; please refer to the opening section of "Volume 8" for methodologies, definitions, and other pertinent supporting information.

A total of 39 samples were collected from suspect asbestos-containing materials (ACM) from Sugar Beet Research Facility on September 21, 2007. Laboratory analysis results indicate **15 of these samples tested positive for asbestos.**

2.1 Suspect Materials Identified and Sampled

Roof Flashing (3 types)	Popcorn Ceiling Texture
Ceiling Caulk (between concrete slabs)	Floor Tile
Floor Tile Mastic	Tar Pipe Wrap
Hard Pack Encapsulant on Fiberglass Insulation	Hard Fittings on Fiberglass Insulation
Encapsulant on Fiberglass Insulation	Black Lab Countertop
HVAC Canvas Connector	Transite Panels
Baseboard Adhesive (2 types)	Penetration Putty
Building Seam Caulk (2 types)	Door Caulk (3 types)
Exterior Air Vent Caulk	Exterior Garage Door Caulk
Exterior Building Seam Caulk (2 types)	Exterior Door Caulk (2 types)
Exterior Penetration Putty (3 types)	

The Asbestos Bulk Sample Results Table includes asbestos sampling data.

2.2 Asbestos Containing Materials

Popcorn Ceiling Texture
Ceiling Caulk (between concrete slabs)

12" Olive Green Mottled Floor Tile and Mastic
 Tar Pipe Wrap
 Transite Panels
 Penetration Putty
 Tan Building Seam 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 Sugar Beet Research Facility as follows:

ACM	QUANTITY	UNIT COST	TOTAL COST
Asbestos Ceiling Texture	592 ft ²	\$7.50/ ft ²	\$4,440.00
Asbestos Ceiling Caulk	154 ft	\$6.25/ ft	\$962.50
Asbestos Floor Tile and Mastic	592 ft ²	\$4.00/ ft ²	\$2,368.00
Asbestos Tar Pipe Wrap	1 ft	\$60.00/ft	\$60.00
Asbestos Transite Panels	4,182 ft ²	\$5.00/ ft ²	\$20,910.00
Asbestos Penetration Putty	10 ea	\$60.00/ea	\$600.00
Asbestos Building Seam Caulk	194 ft	\$6.25/ ft	\$1,212.50
Total Estimated Abatement Costs:			\$30,553.00

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

LEGEND No. 0700048 (NDSU)
SUGAR BEET RESEARCH FACILITY (BUILDING A081)

ROOM/ ACM	ASBESTOS TYPE	EST. QUANTITY	ACM TYPE	MATERIAL CONDITION	DAMAGE POTENTIAL	LOW MOD HIGH	ASSESS. CAT. ¹	NOTES
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Hallway 88

Transite Panels	15% Chrysotile	840 ft ²	Non-Friable Miscellaneous	N/A*	N/A*		N/A*	The transite panels cover all the west wall and the part of the ceiling.
Penetration Putty	15% Chrysotile	2 ea	Non-Friable Miscellaneous	N/A*	N/A*		N/A*	There are two penetrations on the east wall at ceiling level.
Tar Pipe Wrap	5% Chrysotile	1 ft	Non-Friable TSI	N/A*	N/A*		N/A*	The tar pipe wrap is on the output pipe of compressor 81-150-01. There is approx. 6" on either side of the "Suction Line Filter Dryer".

Room 103

12" Olive Green Mottled Floor Tile and Mastic	3-10% Chrysotile	30 ft ²	Non-Friable Miscellaneous	N/A*	N/A*		N/A*	The floor tile and mastic both contain asbestos.
Ceiling Caulk (between concrete slabs)	3% Chrysotile	5 ft	Non-Friable Miscellaneous	N/A*	N/A*		N/A*	The caulk is between the ceiling concrete slabs. There is one seam in the room, running east-west.
Tan Building Seam Caulk	5% Chrysotile	22 ft	Non-Friable Miscellaneous	N/A*	N/A*		N/A*	The tan building seam caulk is at the top of all the walls at the seam to the ceiling.
Popcorn Ceiling Texture	3% Chrysotile	30 ft ²	Friable Surfacing	Good	Physical <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> Air Erosion <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Vibration <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		5	None

Room 104

Ceiling Caulk (between concrete slabs)	3% Chrysotile	5 ft	Non-Friable Miscellaneous	N/A*	N/A*		N/A*	The caulk is between the ceiling concrete slabs. There is one seam in the room, running east-west.
Tan Building Seam Caulk	5% Chrysotile	15 ft	Non-Friable Miscellaneous	N/A*	N/A*		N/A*	The tan building seam caulk is at the top of all the walls at the seam to the ceiling.

* = Non-Friable materials were not assessed

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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 105

12" Olive Green Mottled Floor Tile and Mastic	3-10% Chrysotile	171 ft ²	Non-Friable Miscellaneous	N/A*	N/A*		N/A*	The floor tile and mastic both contain asbestos.
Ceiling Caulk (between concrete slabs)	3% Chrysotile	32 ft	Non-Friable Miscellaneous	N/A*	N/A*		N/A*	The caulk is between the ceiling concrete slabs. There are two seams in the room, running east-west.
Tan Building Seam Caulk	5% Chrysotile	54 ft	Non-Friable Miscellaneous	N/A*	N/A*		N/A*	The tan building seam caulk is at the top of all the walls at the seam to the ceiling.
Popcorn Ceiling Texture	3% Chrysotile	171 ft ²	Friable Surfacing	Good	Physical <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> Air Erosion <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Vibration <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		5	None

Room 106

12" Olive Green Mottled Floor Tile and Mastic	3-10% Chrysotile	391 ft ²	Non-Friable Miscellaneous	N/A*	N/A*		N/A*	The floor tile and mastic both contain asbestos.
Ceiling Caulk (between concrete slabs)	3% Chrysotile	92 ft	Non-Friable Miscellaneous	N/A*	N/A*		N/A*	The caulk is between the ceiling concrete slabs. There are four seams in the room, running east-west.
Tan Building Seam Caulk	5% Chrysotile	80 ft	Non-Friable Miscellaneous	N/A*	N/A*		N/A*	The tan building seam caulk is at the top of all the walls at the seam to the ceiling.
Popcorn Ceiling Texture	3% Chrysotile	391 ft ²	Friable Surfacing	Good	Physical <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> Air Erosion <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Vibration <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		5	None

Room 107

Ceiling Caulk (between concrete slabs)	3% Chrysotile	20 ft	Non-Friable Miscellaneous	N/A*	N/A*		N/A*	The caulk is between the ceiling concrete slabs. There are four seams in the room, running east-west.
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* = Non-Friable materials were not assessed

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ROOM/ ACM	ASBESTOS TYPE	EST. QUANTITY	ACM TYPE	MATERIAL CONDITION	DAMAGE POTENTIAL	LOW MOD HIGH	ASSESS. CAT. ¹	NOTES
Tan Building Seam Caulk	5% Chrysotile	23 ft	Non-Friable Miscellaneous	N/A*	N/A*		N/A*	The tan building seam caulk is at the top of the west and south walls at the seam to the ceiling.

Room 108

Transite Panels	15% Chrysotile	3,342 ft ²	Non-Friable Miscellaneous	N/A*	N/A*		N/A*	The transite panels cover all the walls and the ceiling.
Penetration Putty	15% Chrysotile	3 ea	Non-Friable Miscellaneous	N/A*	N/A*		N/A*	There is one penetration on the east wall at chest height and two on the west wall at the ceiling level.

Room 109

Penetration Putty	15% Chrysotile	5 ea	Non-Friable Miscellaneous	N/A*	N/A*		N/A*	There is one penetration on the east wall at chest height, three on the east wall at the ceiling level, and one in the ceiling along the south wall.
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¹Assessment Categories:

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| <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> 5) ACM with Potential for Damage 6) ACM with Potential for Significant Damage 7) Any Remaining Friable ACM or Friable Suspected ACM |
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End