

NARRATIVE REPORT

1.0 BUILDING INFORMATION

Engineering Administration was originally constructed in 1965; the building has had no major renovations.

Engineering Administration is a three-story, 9,579 ft² building which primarily serves as office space for architecture and engineering personnel. Dolve Hall (A018) and Architecture (A064) are attached via skyways to the east side of Engineering Administration, Civil Engineering (A066) is attached via a skyway to the north side of Engineering Administration, and Electrical Engineering (A065) is attached via a skyway to the west side of Engineering Administration and are each reported separately; the skyways do not contain suspect asbestos containing materials.

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

The piping systems were insulated; fiberglass insulation (with hard fittings) and mag block insulation (with hard fittings) are located in the building. Two tanks with hard insulation are located in the basement. Steam and domestic water enter the building via a tunnel into the basement. HVAC systems located in the building consisted of steam radiators and forced air furnaces equipped with heating/cooling coils.

2.0 ASBESTOS SURVEY INFORMATION

Engineering Administration 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 90 samples were collected from suspect asbestos-containing materials (ACM) from Engineering Administration on May 2, 2007 and an additional 4 samples were collected on March 12, 2008. Laboratory analysis results indicate **32 of these samples tested positive for asbestos.**

2.1 Suspect Materials Identified and Sampled

| | |
|--|-----------------------------|
| Hard Fittings on Fiberglass Insulation | Mag Block Pipe Insulation |
| Rainleader Bowl Insulation | Flooring Panels |
| Flooring Tar | Flooring Tarpaper |
| Flooring/Wall Tar | Black HVAC Canvas Connector |
| HVAC Duct Caulk (3 types) | Roof Crowning Caulk |
| Exterior Air Vent Caulk | Roof Flashing (3 types) |
| Hard Plaster- Monocoat | Hard Plaster- Basecoat |
| Hard Plaster- Skimcoat | Gypsum Wallboard |
| Joint Compound | Ceiling Texture (2 types) |
| Wall Texture (2 types) | Window Glazing |
| Window Caulk | Door Caulk |
| Exterior Awning Ceiling Texture | Exterior Window Caulk |

Exterior Walkway Caulk
 White Sealant (above ceiling joists)
 Hard Pack on Fiberglass Insulation
 Sink Undercoating

Tank Insulation (2 types)
 Exterior Window Glazing
 Hard Fittings on Mag Block Insulation

The Asbestos Bulk Sample Results Table includes asbestos sampling data.

2.2 **Asbestos Containing Materials**

Hard Fittings on Fiberglass Insulation
 Mag Block Pipe Insulation
 Rainleader Bowl Insulation
 Hard Fittings on Mag Block Insulation
 White HVAC Duct Caulk
 Gray HVAC Duct Caulk
 Gray Sink Undercoating
 Rough Ceiling Texture
 Popcorn Wall Texture
 Acoustical Ceiling Texture
 Tank #63-997-01 Insulation
 Small Vertical Tank Insulation
 Exterior Window Glazing
 Tan HVAC Duct Caulk
 Hard Pack on Fiberglass Insulation

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 Engineering Administration as follows:

| ACM | QUANTITY | UNIT COST | TOTAL COST |
|---|-----------------------|-------------------------|--------------------|
| Asbestos Hard Fittings on Fiberglass Insulation | 181 ea | \$60.00/ea | \$10,860.00 |
| Asbestos Rainleader Bowl Insulation | 1 ea | \$60.00/ea | \$60.00 |
| Asbestos Mag Block Pipe Insulation | 100 ft | \$25.00/ft | \$2,500.00 |
| Asbestos Hard Fittings on Mag Block Insulation | 29 ea | \$25.00/ea | \$725.00 |
| Asbestos Tank Insulation (all types) | 6 ft ² | \$50.00/ft ² | \$3,000.00 |
| Asbestos Sink Undercoating | 2 ea | \$150.00/ea | \$300.00 |
| Asbestos Window Glazing | 31 ea | \$225.00/ea | \$6,975.00 |
| Asbestos Hard Pack on Fiberglass Insulation | 37 ea | \$60.00/ea | \$2,220.00 |
| Asbestos HVAC Duct Caulk | 3 ea | \$100.00/ea | \$300.00 |
| Asbestos Ceiling Texture (all types) | 5,386 ft ² | \$7.50/ft ² | \$40,395.00 |
| Asbestos Wall Texture | 217 ft ² | \$7.50/ft ² | \$1,627.50 |
| Total Estimated Abatement Costs: | | | \$68,422.50 |

2.4 **Survey Notes**

LEGEND was unable to visually quantify hard fittings on fiberglass insulation throughout the basement, hallway 188, and room 399. However, on floors 1-2 inaccessible ceilings and pipe chase prevented LEGEND from verifying the presence of all possible additional hard fittings. LEGEND assumes additional hard fittings, whose presence is indicated on original mechanical drawings for the structure, will be discovered during renovation or demolition activities. LEGEND recommends assuming an additional 50-75 hard fittings on fiberglass insulation on each of the 1st and 2nd floors.

LEGEND was also able to visually quantify asbestos rainleader bowl insulation in room 399; original mechanical drawings for the structure indicate the presence of 3 additional rainleader bowls inside the awning above the 2nd floor exterior walkway. LEGEND was unable to visually verify the existence of the ACM insulation on the rainleader bowls and recommends assuming the ACM insulation is present in these 3 locations.

Several types (homogeneous areas) of HVAC Duct Caulk were identified and visually quantified in room 399. LEGEND inspected the remainder of the building for the presence of the HVAC Duct Caulk; however, the ductwork throughout the building is wrapped in fiberglass insulation. LEGEND located several areas in the access panels above hallway 188 where the fiberglass insulation was damaged and/or removed and was unable to identify HVAC Duct Caulk on the ducts. LEGEND assumes the HVAC Duct Caulks were isolated to room 399 and does not anticipate further quantities of HVAC Duct Caulk in the building. However, the potential exists that further quantities will be discovered during renovation or demolition activities.

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

LEGEND No. 0700048 (NDSU)
ENGINEERING ADMINISTRATION (BUILDING A063)

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

Basement

| | | | | | | | | |
|---|-----------------------------|--|----------------|---------|--------------------------------------|---|---|---|
| Hard Fittings on Fiberglass Insulation | 25% Amosite | 101 fittings | Friable TSI | Good | Physical Air Erosion Vibration | <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> | 6 | The hard fittings on fiberglass insulation are throughout the basement mechanical area. |
| | | 93 remain after October 2007 abatement | | | | | | |
| Tank #63-997-01 Insulation | 25% Amosite | 4 ft ² | Friable TSI | Good | Physical Air Erosion Vibration | <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> | 6 | Tank #63-997-01 is a small horizontal tank in the center of the basement mechanical area. |
| Small Vertical Tank Insulation | 8% Chrysotile | 2 ft ² | Friable TSI | Damaged | Physical Air Erosion Vibration | <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> | 1 | The small vertical tank is in the center of the basement mechanical area. |
| Mag Block Pipe Insulation | 25% Amosite | 64 ft. | Friable TSI | Good | Physical Air Erosion Vibration | <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> | 6 | The mag block pipe insulation is throughout the basement mechanical area. |
| Hard Fittings on Mag Block Pipe Insulation | 25% Amosite | 21 fittings | Friable TSI | Good | Physical Air Erosion Vibration | <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> | 6 | The hard fittings on mag block insulation are throughout the basement mechanical area. |
| Hard Pack on Fiberglass Insulation | 3% Chrysotile 2% Amosite | 24 each | Friable TSI | Good | Physical Air Erosion Vibration | <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> | 6 | The hard pack on fiberglass insulation is throughout the basement mechanical area. |

Room 101

| | | | | | | | | |
|-------------------------------|----------------|---------------------|----------------------|---------|--------------------------------------|---|---|-------|
| Acoustical Ceiling Texture | 10% Chrysotile | 197 ft ² | Friable Surfacing | 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 checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | 2 | None. |
|-------------------------------|----------------|---------------------|----------------------|---------|--------------------------------------|---|---|-------|

Room 103

| | | | | | | | | |
|-------------------------------|----------------|---------------------|----------------------|---------|--------------------------------------|---|---|-------|
| Acoustical Ceiling Texture | 10% Chrysotile | 574 ft ² | Friable Sufficing | 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 checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | 2 | None. |
|-------------------------------|----------------|---------------------|----------------------|---------|--------------------------------------|---|---|-------|

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

LEGEND No. 0700048 (NDSU)
ENGINEERING ADMINISTRATION (BUILDING A063)

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

Room 106 Abated Feb 2013

| | | | | | | | | |
|-------------------------------|----------------|---------------------|----------------------|---------|--------------------------------------|---|---|-------|
| Acoustical Ceiling Texture | 10% Chrysotile | 587 ft ² | Friable Surfacing | 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 checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | 2 | None. |
|-------------------------------|----------------|---------------------|----------------------|---------|--------------------------------------|---|---|-------|

Room 108

| | | | | | | | | |
|-------------------------------|----------------|---------------------|----------------------|------|--------------------------------------|---|---|-------|
| Acoustical Ceiling Texture | 10% Chrysotile | 239 ft ² | Friable Surfacing | 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 checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | 5 | None. |
|-------------------------------|----------------|---------------------|----------------------|------|--------------------------------------|---|---|-------|

Hallway 188

| | | | | | | | | |
|---|-----------------------------|---------------------|----------------------|---------|--------------------------------------|---|---|--|
| Acoustical Ceiling Texture | 10% Chrysotile | 264 ft ² | Friable Surfacing | 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 checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | 2 | None. |
| Hard Fittings on Fiberglass Insulation | 25% Amosite | 63 fittings | Friable TSI | Good | Physical Air Erosion Vibration | <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> | 6 | The hard fittings on fiberglass insulation are above the ceiling and accessible through several panels (includes area above room 104). |
| Hard Pack on Fiberglass Insulation | 3% Chrysotile 2% Amosite | 10 each | Friable TSI | Good | Physical Air Erosion Vibration | <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> | 6 | The hard pack on fiberglass insulation is above the ceiling and accessible through several panels (includes area above room 104). |

Hallway 188A

| | | | | | | | | |
|-------------------------------|----------------|---------------------|----------------------|------|--------------------------------------|---|---|-------|
| Acoustical Ceiling Texture | 10% Chrysotile | 140 ft ² | Friable Surfacing | 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 checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | 5 | None. |
|-------------------------------|----------------|---------------------|----------------------|------|--------------------------------------|---|---|-------|

Room 199M

| | | | | | | | | |
|-------------------------------|----------------|--------------------|----------------------|------|--------------------------------------|---|---|-------|
| Acoustical Ceiling Texture | 10% Chrysotile | 99 ft ² | Friable Surfacing | 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 checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | 5 | None. |
|-------------------------------|----------------|--------------------|----------------------|------|--------------------------------------|---|---|-------|

* = Non-Friable materials were not assessed

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

LEGEND No. 0700048 (NDSU)
ENGINEERING ADMINISTRATION (BUILDING A063)

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

Room 199W

| | | | | | | | | |
|-------------------------------|----------------|--------------------|----------------------|------|--------------------------------------|---|---|-------|
| Acoustical Ceiling Texture | 10% Chrysotile | 99 ft ² | Friable Surfacing | 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 checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | 2 | None. |
|-------------------------------|----------------|--------------------|----------------------|------|--------------------------------------|---|---|-------|

Room 201

| | | | | | | | | |
|-------------------------------|----------------|---------------------|----------------------|------|--------------------------------------|---|---|-------|
| Acoustical Ceiling Texture | 10% Chrysotile | 332 ft ² | Friable Surfacing | 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 checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | 5 | None. |
|-------------------------------|----------------|---------------------|----------------------|------|--------------------------------------|---|---|-------|

Room 202

| | | | | | | | | |
|-------------------------------|----------------|--------------------|------------------------------|------|--------------------------------------|---|------|---|
| Acoustical Ceiling Texture | 10% Chrysotile | 33 ft ² | Friable Surfacing | 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 checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | 5 | None. |
| Gray Sink Undercoating | 15% Chrysotile | 1 each | Non-Friable Miscellaneous | N/A* | N/A* | N/A* | N/A* | The gray sink undercoating is on the west wall. |

Room 203

| | | | | | | | | |
|-------------------------------|----------------|---------------------|----------------------|------|--------------------------------------|---|---|---|
| Acoustical Ceiling Texture | 10% Chrysotile | 274 ft ² | Friable Surfacing | 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 checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | 5 | None. |
| Popcorn Wall Texture | 3% Chrysotile | 217 ft ² | Friable Surfacing | 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 checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | 5 | The wall texture is on the middle partition wall and along the wall in the south west corner. |
| Rough Ceiling Texture | 3% Chrysotile | 44 ft ² | Friable Surfacing | Good | Physical Air Erosion Vibration | ^{OR} <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | 5 | The ceiling texture is in the south west corner of the room. |

* = Non-Friable materials were not assessed

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

LEGEND No. 0700048 (NDSU)
ENGINEERING ADMINISTRATION (BUILDING A063)

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

Room 204

| | | | | | | | | |
|-------------------------------|----------------|--------------------|------------------------------|------|-------------|---|------|---|
| Acoustical Ceiling Texture | 10% Chrysotile | 96 ft ² | Friable Surfacing | Good | Physical | <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> | 5 | None. |
| | | | | | Air Erosion | <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> | | |
| | | | | | Vibration | <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | | |
| Gray Sink Undercoating | 15% Chrysotile | 1 each | Non-Friable Miscellaneous | N/A* | N/A* | | N/A* | The gray sink undercoating is located along the north wall. |

Room 207

| | | | | | | | | |
|-------------------------------|----------------|---------------------|----------------------|------|-------------|---|---|-------|
| Acoustical Ceiling Texture | 10% Chrysotile | 205 ft ² | Friable Surfacing | Good | Physical | <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> | 5 | None. |
| | | | | | Air Erosion | <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> | | |
| | | | | | Vibration | <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | | |

Room 208

| | | | | | | | | |
|-------------------------------|----------------|---------------------|----------------------|------|-------------|---|---|-------|
| Acoustical Ceiling Texture | 10% Chrysotile | 245 ft ² | Friable Surfacing | Good | Physical | <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> | 5 | None. |
| | | | | | Air Erosion | <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> | | |
| | | | | | Vibration | <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | | |

Room 209 (entry area)

| | | | | | | | | |
|-------------------------------|----------------|--------------------|----------------------|------|-------------|---|---|-------|
| Acoustical Ceiling Texture | 10% Chrysotile | 42 ft ² | Friable Surfacing | Good | Physical | <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> | 5 | None. |
| | | | | | Air Erosion | <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> | | |
| | | | | | Vibration | <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | | |

Room 210

| | | | | | | | | |
|-------------------------------|----------------|---------------------|----------------------|------|-------------|---|---|-------|
| Acoustical Ceiling Texture | 10% Chrysotile | 258 ft ² | Friable Surfacing | Good | Physical | <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> | 5 | None. |
| | | | | | Air Erosion | <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> | | |
| | | | | | Vibration | <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | | |

Room 211

| | | | | | | | | |
|-------------------------------|----------------|--------------------|----------------------|------|-------------|---|---|-------|
| Acoustical Ceiling Texture | 10% Chrysotile | 32 ft ² | Friable Surfacing | Good | Physical | <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> | 5 | None. |
| | | | | | Air Erosion | <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> | | |
| | | | | | Vibration | <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | | |

* = Non-Friable materials were not assessed

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

LEGEND No. 0700048 (NDSU)
ENGINEERING ADMINISTRATION (BUILDING A063)

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

Room 213

| | | | | | | | | |
|-------------------------------|----------------|--------------------|----------------------|------|--------------------------------------|---|---|-------|
| Acoustical Ceiling Texture | 10% Chrysotile | 63 ft ² | Friable Surfacing | 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 checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | 5 | None. |
|-------------------------------|----------------|--------------------|----------------------|------|--------------------------------------|---|---|-------|

Hallway 288

| | | | | | | | | |
|-------------------------------|----------------|-----------------------|----------------------|------|--------------------------------------|---|---|-------|
| Acoustical Ceiling Texture | 10% Chrysotile | 1,424 ft ² | Friable Surfacing | 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 checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | 5 | None. |
|-------------------------------|----------------|-----------------------|----------------------|------|--------------------------------------|---|---|-------|

Hallway 288A

| | | | | | | | | |
|-------------------------------|----------------|---------------------|----------------------|------|--------------------------------------|---|---|-------|
| Acoustical Ceiling Texture | 10% Chrysotile | 139 ft ² | Friable Surfacing | 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 checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | 5 | None. |
|-------------------------------|----------------|---------------------|----------------------|------|--------------------------------------|---|---|-------|

Room 399

| | | | | | | | | |
|---|------------------------------|------------|------------------------------|------|--------------------------------------|---|---|--|
| Gray HVAC Duct Caulk | 20% Chrysotile | 1 ea. | Non-Friable Miscellaneous | N/A* | N/A* | N/A* | The gray HVAC duct caulk is on the topside of a duct along the west end of the room, where the duct turns. | |
| White HVAC Duct Caulk | 20% Chrysotile | 1 ea. | Non-Friable Miscellaneous | N/A* | N/A* | N/A* | The white HVAC duct caulk is located on the south end of the large AHU where the clean air intake duct meets the AHU. (very thin layer) | |
| Tan HVAC Duct Caulk | 3% Chrysotile 2% Amosite | 1 ea. | Non-Friable Miscellaneous | N/A* | N/A* | N/A* | The tan HVAC duct caulk is around the heating coils on the duct along the west end of the room. | |
| Mag Block Insulation | 15% Amosite | 36 ft. | 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 type="checkbox"/> <input checked="" type="checkbox"/> | 6 | The mag block insulation is located throughout room 399. |
| Hard Fittings on Mag Block Insulation. | 3% Chrysotile 10% Amosite | 8 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 type="checkbox"/> <input checked="" type="checkbox"/> | 6 | The hard fittings are on mag block insulation are located throughout room 399. |

* = Non-Friable materials were not assessed

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

LEGEND No. 0700048 (NDSU)
ENGINEERING ADMINISTRATION (BUILDING A063)

| ROOM/ ACM | ASBESTOS TYPE | EST. QUANTITY | ACM TYPE | MATERIAL CONDITION | DAMAGE POTENTIAL | LOW MOD HIGH | ASSESS. CAT. ¹ | NOTES |
|---|------------------------------|------------------|----------------|--------------------------|--------------------------------------|---|------------------------------|---|
| Hard Fittings on Fiberglass Insulation | 3% Chrysotile 10% Amosite | 17 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 type="checkbox"/> <input checked="" type="checkbox"/> | 6 | The hard fittings on fiberglass insulation are located throughout room 399. |
| Hard Pack on Fiberglass Insulation | 3% Chrysotile 2% Amosite | 3 ea. | 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 type="checkbox"/> <input checked="" type="checkbox"/> | 6 | The hard pack on fiberglass insulation is on steam pipes leading to heating coils in duct work on the west end of room 399. |
| Rainleader Bowl Insulation | 5% Chrysotile 3% Amosite | 1 each | 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 rainleader bowl insulation is located in the center of room 399. |

Exterior

| | | | | | | | |
|----------------|---------------|---------------|------------------------------|------|------|------|--|
| Window Glazing | 2% Chrysotile | 31 windows | Non-Friable Miscellaneous | N/A* | N/A* | N/A* | The asbestos window glazing is on the exterior windows. Refer to the ACM locations diagrams for exact locations. |
|----------------|---------------|---------------|------------------------------|------|------|------|--|

¹Assessment Categories:

- | | |
|---|---|
| 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